Annex A
Stakeholder Engagement Plan

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A.1. INTRODUCTION

A.1.1. PURPOSE AND OBJECTIVES

A.1.1.1. Purpose

This document describes the Stakeholder Engagement Plan (SEP) for the Offshore Cape Three Points (OCTP) Phase 2 Development (the Project).

The value of engagement with stakeholders affected by development is widely recognized and discussed in the literature. There is clear evidence that the greater the level of stakeholder engagement, the more thorough the identification of potential impacts. Early engagement and ongoing dialogue with stakeholders also allows for earlier identification of potential stakeholder issues and risks as or before they arise, and informs more appropriate project design. This all contributes to a stronger more sustainable relationship between stakeholders and the project proponent. This is particularly true for the groups and individuals most directly affected by planned projects. Establishing trust between parties through a participatory process that allows for open and constructive engagement is acknowledged as key for satisfactory resolution of grievances and issues which, if left unmanaged, can present risks to a development in terms of unplanned delays and costs.

For a project to obtain and continually maintain its "social license to operate" (1), a two-way process of engagement between all parties is highly important. Achieving and maintaining a social license is a key objective of a stakeholder engagement process.

A.1.1.2. Objectives

The overarching goal of this SEP is to define a suitable programme and plan for stakeholder engagement that will apply across the Project's life and that will support the Project in achieving and maintaining a social license to operate.

The specific objectives for the plan are summarised in Table A.1.1.

Table A.1.1 Objectives of the Stakeholder Engagement Plan

Objective	Rationale
Identify all relevant stakeholders for this Project	Involving as many stakeholders as possible will facilitate inclusive communication and capture a wide range of issues and concerns.
Distribute accurate project information in an open and transparent manner	Ensuring that stakeholders, particularly those directly affected by the proposed development, have information at their disposal with which to make informed comments and enable them to plan for the future. This reduces levels of uncertainty and anxiety. Information should allow affected parties to develop an understanding of potential impacts, risks and benefits and an open and transparent approach is central to achieving this aim.
Gather information that will contribute to the environmental and technical	Identifying issues through people familiar with the local environment and incorporating these into the Terms of Reference (TOR) for specialist investigations meets legislative requirements and ensures that specialists

(1) The social license is the level of acceptance or approval continually granted to an organization's operations or project by local communities and other stakeholders.

Objective	Rationale
investigations	focus on all relevant issues. It is also critical in ensuring the most appropriate project design and management measures possible.
Form partnerships to promote constructive interaction between all parties	Developing relationships of trust between the developer and stakeholders will contribute to proactive interactions and avoid, where possible, unnecessary conflicts based on rumour and misinformation. Identifying structures and processes through which to deal with conflicts and grievances, in contrast to attempting to quash any disputes, would allow the Project a better understanding of stakeholder concerns and expectations thereby increasing the opportunities to increase the Project's value to local stakeholders.
Record and address public concerns, issues and suggestions	Documenting stakeholder issues allows project decisions to be traced and motivated and lets stakeholders see where their input has been incorporated into planning and design. This approach addresses potential concerns that stakeholder engagement may be a token gesture by the developer that meets legislative requirements but that it is not taken seriously in the project planning.
Manage stakeholders' expectations	Expectations, both positive and negative, are often out of proportion to the realities of a project. This is particularly so in areas of extreme poverty with limited development, infrastructure and service provision. Ensuring that expectations are kept at realistic levels (e.g. around job opportunities; provision of local infrastructure; social development; disruption and resettlement) limits the disappointment and frustration of directly affected parties at later stages of project implementation. Frustration and unfulfilled expectations are key triggers of conflict and require mitigation and management that might otherwise be avoided.
Fulfill national and international requirements consultation	Ensuring regulatory compliance can avoid potential project delays based on procedural issues rather than substantive ones.

A.1.2. PROJECT DESCRIPTION

The proposed Project involves the development of the Sankofa and Gye Nyame Fields in the OCTP license block located approximately 60 km offshore of the Western Region of the Republic of Ghana (Figure A.1.1). The fields will be developed in two Phases:

- **Phase 1**: Oil Development Project
- **Phase 2**: Gas Development Project

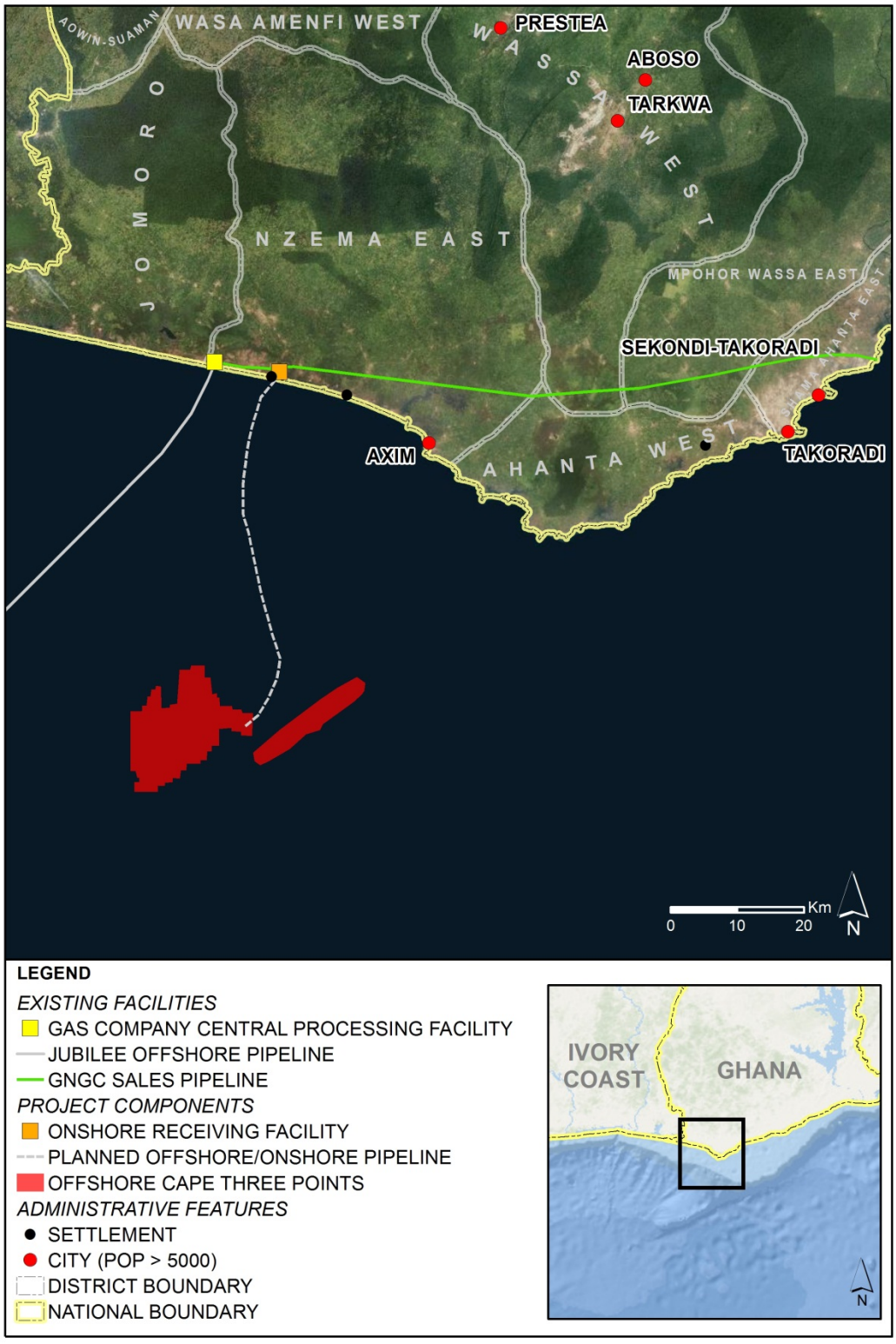
This document is the SEP for the Phase 2 Development.

The Phase 2 Development is a gas production project. First gas production is planned for 2018. The development infrastructure will consist of:

- Five subsea Non-Associated Gas (NAG) wells;
- Subsea umbilicals, risers and flowlines from the NAG wells to an FPSO;
- 63 Km subsea gas pipeline from the FPSO to shore;
- Onshore pipeline from the shore to an Onshore Receiving Facility (ORF);
- ORF including a compression station, accommodation camp, warehouse, workshop, firefighting station and medical facility

- Gas from the ORF will be exported via a direct connection between the ORF and the existing GNGC gas pipeline.

Figure A.1.1 Project Location



Source: eni, 2014

Activities associated with the Phase 2 Development construction phase include drilling, completion and connection of the wells, laying and testing of the subsea facilities and pipeline to ORF, site clearance and construction of the ORF.

Once operational, gas will be produced, transferred, and gathered at the FPSO unit. Gas will be sent from the FPSO by pipeline to the ORF. At the ORF the gas will be combined with the gas from the GNPC gas plant and sent to users.

A.1.3. AREA OF INFLUENCE

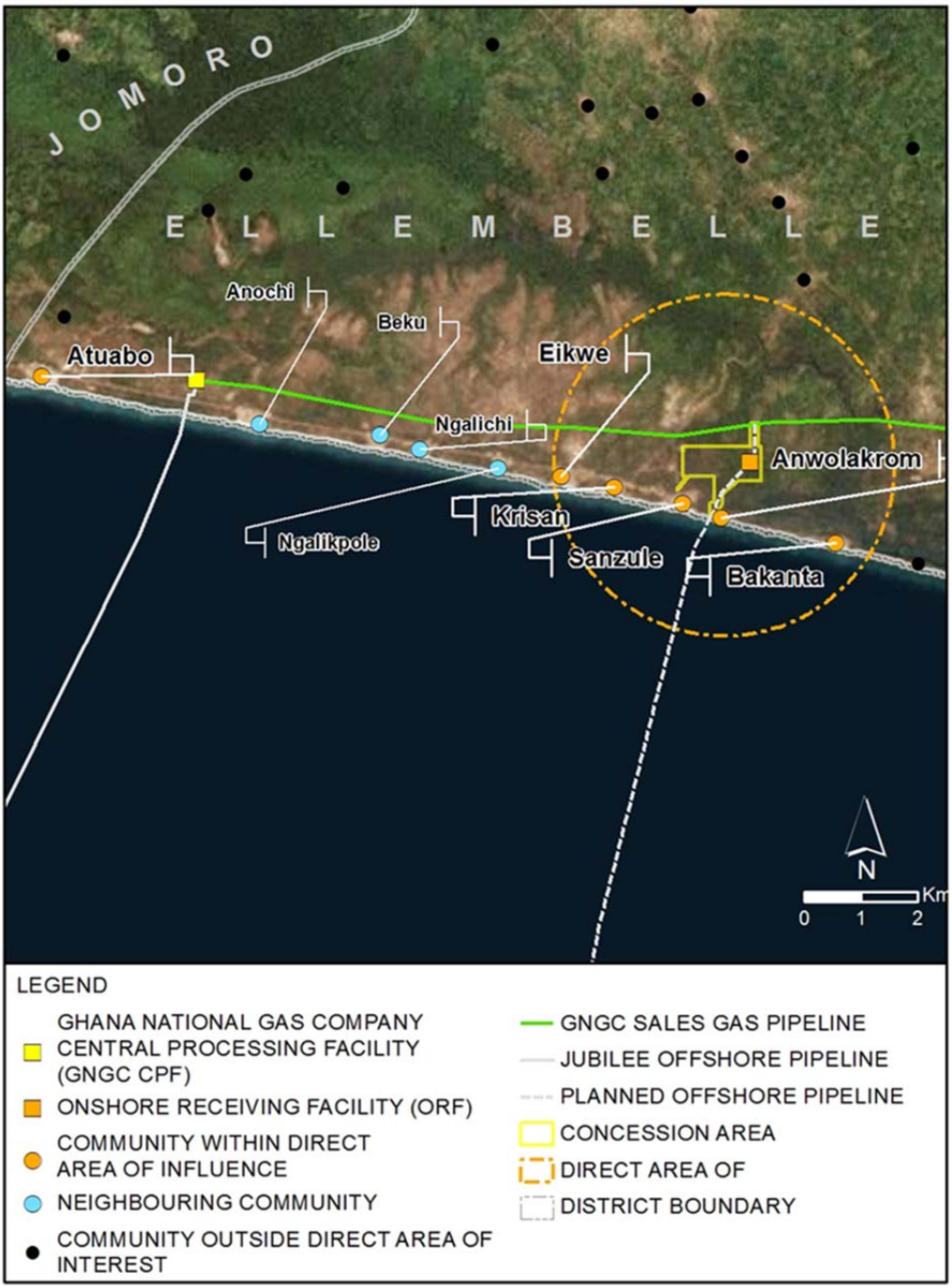
This area of influence includes the Project sites (ORF, offshore and onshore pipelines, subsea facilities and NAG wells), the area surrounding the site and the local communities between Mpein in the East, Atuabo in the West and Amis Hibiebo Kaso in the North as well as the Ghana marine and socio-economic environment at a wider scale. The Project and Project activities will affect receptors in the Direct Area of Influence (DAoI) and the Extended Area of Influence (EAoI).

The Direct Area of influence (DAoI) for engagement includes communities in a 3 km buffer zone around ORF (Figure A.1.2).

The Extended Area of influence (EAoI) includes selected key localities, communities and stakeholder groups (eg, District Assemblies and Chief Fishermen) close to the ORF site in the six wider coastal Districts. The selection of these communities was based on a set of criteria which are fully explained in the Project's EIS.

It should be noted that when stakeholder engagement activities took place in the context of the Scoping of the EIA the project included the possibility of the construction of a pipeline to transfer gas from the ORF to the GNGN CPF in Atuabo. Although this is no longer considered an option, stakeholder engagement activities also took place at Anochi, Beku, Ngalichi and Ngalikpole which were considered potentially affected by that development.

Figure A.1.2 Direct Area of Influence



Source: ERM, 2015

A.1.4. STAKEHOLDER ENGAGEMENT APPROACH

A.1.4.1. Definitions

The following terms are used in this SEP:

Consultation

Consultation involves two-way communication between the client and the affected communities. The consultation process is undertaken in a manner that is inclusive and culturally appropriate. It provides the affected communities with opportunities to express their views on project risks, impacts and mitigations measures, and in turn allows the client to consider and respond to them.

Stakeholders

Stakeholders are persons or groups of people who are directly or indirectly affected by a project, as well as those who may have interests in or the ability to influence the Project's outcome, either positively or negatively. Stakeholders may include locally affected communities and their formal and informal representatives, national, provincial or local government authorities, religious leaders, civil society organizations and special interest groups such as the academic community, amongst others.

Stakeholder Engagement

Stakeholder engagement is a process whereby efforts are made by one party to understand and involve the other parties' (the stakeholders') concerns in the first party's activities and decision-making processes.

A.1.4.2. Principles

The key principles that guide the approach for stakeholder engagement are as follows:

- **Transparency**: to be open and transparent with stakeholders.
- **Accountability**: to be willing to accept responsibility as a corporate citizen and to account for impacts associated with the Project activities.
- **Trust**: to have a relationship with stakeholders that is based on mutual commitment to acting in good faith.
- **Mutual respect**: to respect stakeholders' interests, opinions and aspirations.
- **Collaboration**: to work cooperatively with stakeholders to find solutions that meet common interests.
- **Responsiveness**: to coherently respond in good time to stakeholders.
- **Pro-activeness**: to act in anticipation of the need for information or potential issues.
- **Fairness**: to engage with stakeholders such that they feel they are treated fairly and their issues and concerns are afforded fair consideration.
- **Accessibility**: to be within reach of stakeholders so that they feel heard and to provide comprehensive information.
- **Inclusivity**: to proactively anticipate, identify and include all stakeholders.

A.1.4.3. Levels of engagement

There are various levels of engagement and types of engagement that can often involve a combination of approaches. Box A.1.1 shows the various levels of stakeholder engagement appropriate in a given situation and the objectives of that engagement and Box A.1.2 describes the key types of engagement outline in eni. As part of stakeholder identification

and analysis, the level of engagement per stakeholder was determined as appropriate to the phase of the Project and taking into account the issues pertinent to the specific stakeholder.

Box A.1.1 Levels of Stakeholder Engagement

Level of Stakeholder Engagement	Objective	Direction of Information Exchange
Inform	To provide balanced and objective information to improve understanding of the issues, alternatives and/or solutions.	One way
Consult	To obtain feedback from stakeholder on issues, alternatives and/or decisions.	Two way
Collaborate	To partner with stakeholders and enable their participation in each aspect of a decision-making process.	Two way
Empower	To place final decision-making in the hands of the stakeholders.	Two way

Source: International Association for Public Participation (IAP2), 2004

Box A.1.2 Types of Engagement

Types of Engagement	Description
Information Disclosure	Disclosure means making information accessible to interested and affected parties. Communicating such information in a manner that is understandable to the interested stakeholders is an important first (and ongoing) step in the process of stakeholder engagement.
Stakeholder Consultation and Public Consultation	Stakeholder consultation requires more effort than just informing and should not be seen as one-off activity. It is an interactive process of engaging stakeholders using participatory methodologies, that begins during the conceptual design of a Project and continues throughout construction and operations. The feedback from consultation will feed the management process. Initial public consultation is often used to assist in stakeholder analysis to ensure that no relevant groups are excluded and to develop culturally appropriate and effective engagement with relevant groups.
Consultation with Vulnerable Groups	It is important to keep in mind that eni's activities and projects are likely to affect the vulnerable groups differently than the rest of the population. Normally these groups, individuals or social groups who are potentially disadvantaged compared to the rest of the population - vulnerability may be based on, among other things: age, gender, ethnicity, income level, physical and/or mental disabilities) will have fewer opportunities to make their voice heard and less power to negotiate.
Establishing Collaborations	Identifying potential collaborating stakeholders, assessing their suitability for collaborating with eni, and identifying what areas of mutual interest are shared with the regional community development programs.

Source: opi sums ssc 001 eni spa UPS r00 Stakeholder Engagement 18-12-2014

A.1.4.4. Developing the Approach

This SEP outlines a technical and culturally appropriate approach to consultation and disclosure in the project area of influence to ensure that adequate and timely information is provided to all stakeholders. This approach allows groups sufficient opportunity to voice opinions, concerns and issues which need to be taken into account in Project design and when making Project decisions. In addition, the process has been designed to encourage early and active participation of stakeholders so that suggestions can be incorporated into Project design and so that concerns and conflicts can be openly addressed in an ongoing manner both during the EIS process and continuing into the construction, operation and decommissioning.

Various activities/steps have been undertaken and are planned as part of this stakeholder engagement planning process. These include:

- Stakeholder identification and analysis (development of stakeholder register);
- Development of appropriate engagement and information dissemination tools;
- Notification and invitation to participate and comment;
- Scoping and baseline engagement meetings with key informants and affected community representatives;
- Recording issues raised and commitments;

- Recording activities undertaken within the process;
- Development of SEP appropriate to the scope of the project to guide the engagement process during the Project's lifetime;
- Update of SEP following EIS disclosure and throughout the life of the project;
- Facilitating ongoing stakeholder input into Project design and implementation;
- Ongoing engagement of stakeholders throughout construction, operation and through to decommissioning of the Project.

A.2. REGULATIONS AND REQUIREMENTS

This Section describes the legal, regulatory, policy and guidance that relates directly to stakeholder engagement activities. Refer to Chapter 2 of the EIS for a broader legal and policy context for the Project.

The stakeholder engagement process has been designed to ensure compliance with Ghana's legal and regulatory requirements, the IFC Performance Standards (2012), and industry good practice guidance such as that developed by IPEICA.

A.2.1. NATIONAL LEGISLATION

Stakeholder engagement is an integral part of the Environmental Impact Assessment (EIA) process. The EIA process is legislated through the Environmental Assessment Regulations (LI1 652, 1999) as amended (2002), the principal enactment within the Environmental Protection Act (Act 490 of 1994). The Regulations require that activities likely to have an adverse effect on the environment must be subject to environmental assessment and issuance of a permit before commencement of the activity.

The Regulations (1999) require that a scoping notice be advertised to relevant Ministries and in at least one national and one local (in the DAoI) newspaper. Copies of the Scoping Report must be made available to the general public in the project locality for inspection, and the Project must advertise in a local and national paper on the release of the EIS Report.

Once the Environmental Impact Statement (EIS) is published it must be advertised and made available to the general public, public agencies, organisations, NGOs, Metropolitan, Municipal and District Assemblies and local communities and mechanisms must be put in place so that stakeholders can make comments and suggestions on the Project, as required by the Environmental Protection Agency (EPA). There is also provision within the Regulations for the EPA to hold public hearings if there is an adverse public reaction to the Project, there is a need for resettlement, or the project could have extensive effects on the environment.

Stakeholder engagement activities during the EIS process are informed by the EIA regulations and guidelines, although these activities are required also at the discretion of the EPA.

A.2.2. LENDER STANDARDS

A.2.1.1. IFC PERFORMANCE STANDARDS

The IFC Performance Standards on Environmental and Social Sustainability (2012) are generally accepted as the benchmark of good practice for environmental and social sustainability risk management in private sector developments. The Performance Standards include specific detail on conducting stakeholder engagement both during the impact assessment process and throughout a Project's life-cycle, and are a key source of guidance in planning for engagement activities.

The Performance Standards require clients to engage with affected communities through disclosure of information, consultation, and informed participation, in a manner commensurate with the risks to and impacts of the Project on the affected communities.

Box A.2.1 outlines the main requirements for consultation and disclosure under Performance Standard 1: Assessment and Management of Environmental and Social Risks and Impacts.

The IFC Good Practice Manuals (1) highlight issues that should be considered in undertaking engagement with affected communities. These are reinforced by the details contained within the Performance Standards, including written and oral communication in local languages, accessibility to information, the use of oral and visual methods, respect of local traditions, care that vulnerable groups are included in the process, and mechanisms are employed to respond to peoples' needs, fears and expectations.

Box A.2.1 Performance Standards Requirements for Stakeholder Engagement

IFC PS1: Assessment and Management of Environmental and Social Risks and Impacts

Stakeholder engagement is an on-going process that may involve, in varying degrees, the following elements: stakeholder analysis and planning, disclosure and dissemination of information, consultation and participation, grievance mechanism, and on-going reporting to Affected Stakeholders.

Disclosure of relevant project information

Provide affected stakeholders with access to relevant information on: (i) the purpose, nature, and scale of the project; (ii) the duration of proposed project activities; (iii) any risks to and potential impacts on such stakeholders and relevant mitigation measures; (iv) the envisaged stakeholder engagement process; and (v) the grievance mechanism.

Informed Consultation and Participation

For projects with potentially significant adverse impacts on affected stakeholders, conduct an informed consultation and participation process. It should involve deep exchange of views and information, and an organized and iterative consultation, leading to the project incorporating into their decision-making process the views of the affected stakeholders on matters that affect them directly, such as the proposed mitigation measures, the sharing of development benefits and opportunities, and implementation issues.

The process should be documented, in particular the measures taken to avoid or minimize risks to and adverse impacts on the affected stakeholders. The stakeholders should be informed about how their concerns have been considered.

External Communications

Implement and maintain a procedure for external communications that includes methods to (i) receive and register external communications from the public; (ii) screen and assess the issues raised and determine how to address them; (iii) provide, track, and document responses, if any; and (iv) adjust the management program, as appropriate. In addition, clients are encouraged to make publicly available periodic reports on their environmental and social sustainability.

Grievance Mechanism for Affected Stakeholders

Establish a grievance mechanism to receive and facilitate resolution of affected stakeholders' concerns and grievances about the client's environmental and social performance.

On-going Reporting to Affected Stakeholders

(1) IFC. (1998). Doing Better Business through Effective Public Consultation and Disclosure; IFC (2007) Stakeholder Engagement: A Good Practice Handbook for Companies Doing Business in Emerging Markets.

Provide periodic reports to the affected stakeholders that describe progress with implementation of the project Action Plans on issues that involve on-going risk to or impacts on affected stakeholders and on issues that the consultation process or grievance mechanism have identified as a concern to those stakeholders.

The Performance Standards require that after completion of an environmental assessment the consultation and disclosure must continue throughout the life cycle (construction and operation phase) of the project.

Source: IFC Performance Standard 1, January 2012.

In addition to the requirements for stakeholder engagement outlined in PS1, the additional standards that contain requirements for stakeholder consultation and participation and have been considered in developing this SEP include PS 2, 4, 5, 6 and 8 (see Table A.2.1). The development and implementation of a Grievance Resolution Procedure is also referenced within PS 1, 2, 4 and 5.

Table A.2.1 Stakeholder Engagement Requirements from PS 2, 4, 5, 6 and 8

Standard	Key Components
Performance Standard 2: Labour and Working Conditions	Recognizes that the pursuit of economic growth through employment creation and income generation should be balanced with the protection of basic rights for workers. Acknowledges that constructive worker-management relationship and safe and healthy working conditions may enhance the efficiency and productivity of operations.
Performance Standard 4: Community Health, Safety & Security	Recognizes that project activities, equipment and infrastructure bring benefits to communities including employment, services and opportunities for economic development. However, the project can also increase the potential for community exposure to risks from development. Where project activities pose risks of adverse impacts on the health and safety of affected communities the developer is required to make available relevant information (including the details of an Action Plan), in an appropriate form, to affected parties and government authorities so that they can fully understand the nature and extent of the risks.

Performance Standard 5: Land Acquisition and Involuntary Resettlement	In such instances the developer will undertake extensive consultation and negotiation with affected parties. Such communication will include transparent access to project related information in a timely fashion to enable people to plan for the future. Here public participation will include the establishment of appropriate representative forums through which resettlement and compensation are discussed. Most of this consultation is part of the SIA and Livelihood Restoration Plan (LRP) but it should be recognized as a component of the SEP. Although resettlement is ALWAYS seen as a last resort, this Standard recognizes that involuntary resettlement occurs as a result of projects and refers to both physical and economic displacement as a result of project related land acquisition. Resettlement is considered involuntary when affected individuals or communities do not have the right to refuse land acquisition that result in their displacement. Consultation shall also take place with host communities.
Performance Standard 6: Biodiversity Conservation and Sustainable Natural Resource Management	Recognizes that protecting and conserving biodiversity in all its forms is fundamental to sustainable development. Where the project has potential impacts on legally protected or critical habitats consultation with relevant authorities, specialists and communities must be undertaken.
Performance Standard 8: Cultural Heritage	Recognizes the importance of cultural heritage for current and future generations and is consistent with the convention concerning the protection of the world's cultural and natural heritage. Where sites of cultural heritage are potentially impacted by the project the developer will consult with local communities as well as relevant national authorities responsible for the maintenance of such sites.

A.2.1.2. EQUATOR PRINCIPLES

The Equator Principles (EPs) are an environmental and social risk management framework voluntarily adopted by 79 member financial institutions (Equator Principle Financial Institutions - EPFIs). They are intended to provide a minimum standard for due diligence to support responsible risk decision-making by financiers to private-sector projects. The Equator Principles were developed by private-sector banks and launched in June 2003. They were first revised in July 2006 and new revisions, referred to as EP III, took effect in June 2013.

The EPs emphasise that lenders involved with the Project will seek to ensure that the Project is developed in a manner that is socially responsible and reflects sound environmental management practices. They further stipulate that host country legislation must be adhered to and provide requirements for stakeholder engagement and disclosure.

Table A.2.2 Stakeholder Engagement Requirements from PS 2, 4, 5, 6 and 8

Principle	Requirement
Principle 2	Highlights the requirements for "*consultation and participation of affected parties in the design, review and implementation of the project*".
Principle 5	To facilitate stakeholder engagement, the client will, commensurate to the Project's risks and impacts, make the appropriate Assessment Documentation readily available to the Affected Communities, and where relevant Other Stakeholders, in the local language and in a culturally appropriate manner .
	There's an overall requirement for the EPFI to require the borrower to demonstrate effective stakeholder engagement as an on-going process in a structured and culturally appropriate manner with Affected Communities and where appropriate with Other Stakeholders.
	States that for Projects with potentially significant adverse impacts on Affected Communities, the client will conduct an Informed Consultation and Participation process.
Principle 6	Specifically highlights the need for a Grievance Mechanism that includes requirements for engagement during the construction and operation of the Project *"…to ensure that consultation, disclosure and community engagement continues throughout construction and operation of the project, the borrower will, scaled to the risks and adverse impacts of the project, establish a grievance mechanism as part of the management system. This will allow the borrower to receive and facilitate resolution of concerns and grievances about the project's social and environmental performance raised by individuals or groups, from among project-affected communities".* An important component is the project-level grievance mechanism for all Cat A and, as appropriate, Cat B Projects - designed to receive and facilitate resolution of concerns and grievances about the Project's E&S performance. Requires that the client will inform the Affected Communities about the mechanism in the course of the Stakeholder Engagement process.

Source: Equator Principles Financial Institutions - EPFIs, 2012

A.3. SUMMARY OF PREVIOUS STAKEHOLDER ENGAGEMENT ACTIVITIES

This Chapter describes the stakeholder activities that have already been conducted as part of the Project development. The engagements occurred mainly as part of the EIS for the Phase 2 Development, but also previously as part of the of the EIS for the related Phase 1 Development.

A.3.1. PHASE 1 DEVELOPMENT STAKEHOLDER ENGAGEMENT

Stakeholder engagements were carried out as part of the EIS for the Phase 1 Development. The stakeholder engagement planning and actions for Phase 1 were used to inform this stakeholder engagement plan, especially the stakeholder identification process. This facilitated a more efficient engagement process for the Phase 2 Development.

A.3.2. SCOPING PHASE STAKEHOLDER ENGAGEMENT

A.3.2.1. Objectives

Scoping phase consultations were undertaken from 01 to 05 December 2014 as part of a combined scoping and baseline data gathering site visit. The other objectives of the scoping phase engagements were as follows:

- Inform the government and traditional authorities and communities about the Project;
- Gather and record the communities' initial issues and concerns about the Project;
- Inform people about the upcoming public participation process for the Project (ie, future consultations and information disclosure);
- Re-open dialogue and strengthen relationships between stakeholders and eni Ghana; and
- Understand and refine the approach and methodology of engaging the communities in the area for the future phases of the Project.

A.3.2.2. Notifications

The stakeholder mapping exercise identified those stakeholders that should be notified and engaged through face-to-face meetings. Table A.3.1 below demonstrates the types of notification undertaken.

Table A.3.1 Stakeholder Notification

Type of Notification	Action Taken
Invitation letters	Formal letters of invitation and Background Information Documents (BIDs) were sent or given by hand to national, regional, and district authorities as well as to the Chiefs informing them of the consultation process and proposing a date and time for a meeting with the relevant people. Copies of the invitation letters sent are in Appendix A
Distribution of the Background Information Document (BID)	A Background Information Document (BID) was prepared in English and distributed by hand at all meetings. The BID provides a description of the proposed project, an overview of the EIS process and contact details in order for stakeholders to provide comments on the Project. See Appendix B for a copy of the BID.
Through word of mouth via headmen/women	Chiefs and Chiefs' linguists (spokespersons) were given prior notification about community meetings, and they informed the people within their villages

A copy of a Background Information Document (BID) and a covering letter requesting a meeting were hand-delivered to stakeholders and in certain cases meetings were confirmed through subsequent telephone and email communication. A copy of the transmittal letter and the BID is provided in Appendix B. The BID provides an overview of the Project and outlines the key potential environmental, social and health issues that have been identified. It also provides stakeholders with information on how to formally register additional issues and comments on the EIS process and the Project with eni Ghana.

Additional stakeholders identified later will be engaged with through written communication that includes the up to date BID, an invitation to submit written comment and detail on the Project's Grievance Mechanism.

A.3.2.3. Stakeholder Engagements

During scoping, a total of 30 meetings were held with 30 national and regional stakeholder groups or organisations. Stakeholders included national, regional, district and local authorities, Non-Governmental Organisations (NGOs), international organisations and fisher association. A list of the scoping consultation meetings undertaken is provided in Table A.3.2

A further 10 scoping consultations with directly affected communities were conducted in the form of Village Meetings. Due to the parallel scheduling of the scoping and baseline study activities these meetings took place just prior to the commencement of Focus Groups and Key Informant Meetings for the purposes of baseline data gathering. Since they were conducted by the baseline EIS team these meetings are listed in both Table A.3.2 and again in Table A.3.3.

Each of the face-to-face meetings followed this general format:

- Introduction by the meeting facilitator;
- Introduction to eni Ghana and the EIS team;
- Description of the proposed Phase 2 development and the Project's components; and
- Discussion of the key issues and any information that may be relevant to the Project including identification of additional stakeholders that should be consulted as part of the EIS process.

All stakeholders that participated in consultation meetings during scoping and baseline data gathering activities were invited to sign an attendance register. Copies of the registers are found in Appendix C of this SEP. Minutes of the meetings are found in Appendix D of this SEP.

Table A.3.2 Scoping Consultations

No.	Organisation'/Group	Date	Location	Attendees
1-10	Directly Affected Communities (Village scoping consultation meeting see Table A.3.3)	02-Dec-14 to 05-Dec-14	Asemdesauzo, Krisan, Bakanta, Eikwe, Sanzule, Atuabo, Ngalekpole, Ngaliki, Anoyki, Beku	N/K* (1)
11	EPA	02-Dec-14	Accra	3
12	Ministry of Energy & Petroleum	02-Dec-14	Accra	2
13	Wildlife Division of Forestry Commission	02-Dec-14	Accra	3
1	Fisheries Commission	02-Dec-14	Accra	7
15	Petroleum Commission	03-Dec-14	Accra	4
16	Ricerca e Cooperazione	04-Dec-14	Accra	1
17	Ghana National Petroleum Corporation (GNPC)	04-Dec-14	Tema	8
18	Ghana Ports & Harbour Authority	04-Dec-14	Tema	3
19	Friends of the Nation	05-Dec-14	Takoradi	2
20	Conservation Foundation	05-Dec-14	Takoradi	1
21	EPA: Western Region	08-Dec-14	Takoradi	5
22	Ghana Ports & Harbour Authority: Western Region	08-Dec-14 and 17-Dec-14	Takoradi	4
23	Marine Police	08-Dec-14	Takoradi	5
24	Fisheries Commission	08-Dec-14	Takoradi	3
25	Western Region Coordinating council (WRCC)	08-Dec-14	Takoradi	6
26	Enterprise Development Center (Jubilee & Ministry of Energy)	08-Dec-14	Takoradi	3
27	Ghana Tourism Authority	09-Dec-14	Takoradi	3
28	Museums and Monument Board	09-Dec-14	Cape Coast	5
29	Jomoro District Assembly	03-Dec-14	Half Assini	9
30	Ellembelle District Assembly	03-Dec-14	Nkroful	10
31	Sekondi Takoradi Metropolitan Assembly	08-Dec-14	Takoradi	3
32	Shama District Assembly	09-Dec-14	Shama	3
33	Nzema East District Assembly	08-Dec-14	Axim	8

(1) These meetings were held in public locations (e.g. Chief's Palace) in each village and although majority of attendees noted their names in the circulated registers, many additional attendees also arrived and left during the proceedings or listened at the edges of the group and did not formally register their presence. It was therefore not possible to accurately capture total attendance in each case.

No.	Organisation'/Group	Date	Location	Attendees
34	Western Region Regional Health Director	02-Dec-14	Sekondi	3
35	Ellembelle District Health Director	02-Dec-14	Nkroful	4
36	Fisherman of Shama	05-Dec-14	Shama	24
37	Fisherman of Essiama	09-Dec-14	Essiama	15
38	Chief Fisherman of Upper Dixcove	08-Dec-14	Dixcove	2
39	Chief Fisherman of Upper Axim	08-Dec-14	Axim	6
40	Chief Fisherman of Half Assini	03-Dec-14	Half Assini	4
41	Chief Fisherman of Sekondi	09-Dec-14	Sekondi	2

A.3.2.4. Disclosure

This Scoping Report was submitted to the EPA for review on 30th December 2014. On review of the Scoping Report, the EPA indicates the requirements to be undertaken by the proponent for disclosure of the Scoping Report to stakeholders, including other Ministries.

The anticipated disclosure process is expected to include an advertisement announcing the release of the Scoping Report for comment published in two newspapers and placement of the Scoping Report at central locations for public review such as:

- EPA library in Accra;
- Public Library in Sekondi;
- Ellembelle District Assembly office in Nkroful; and
- Paramount Chief's palace in Atuabo.

A.3.3. STAKEHOLDER ENGAGEMENT DURING BASELINE STUDIES

A.3.3.1. Objectives

Baseline studies were conducted as part of the EIS to develop an up-to-date description of the existing environmental and social conditions. Specifically to the social aspects the studies were intended to:

- Identify the key social conditions in areas potentially affected by the Project and highlight those that may be vulnerable to aspects of the Project;
- Describe the characteristics (nature, condition, quality, and extent) now and in the future in the absence of the Project; and
- Provide sufficient data to inform judgments about the importance, value and sensitivity/ vulnerability of resources and receptors to allow the prediction and evaluation of potential impacts.

The objective of baseline stakeholder engagement activities was therefore to gather recent supporting primary data and information from directly affected stakeholders in the area to inform the development of an accurate baseline description. Stakeholder views and concerns on the proposed project were also gathered during these engagements.

A.3.3.2. Stakeholder Engagements

Table A.3.3 below provides a summary and schedule of meetings with affected communities. Baseline Stakeholder Engagement activities took place in the following communities Sanzule, Bakanta, Krisan, Eikwe, Ngalekpole, Ngaliki Beku, Anochi, Atuabo and Asemda-Suazo. A total of 49 engagement meetings were held across the 10 communities and comprised the following:

- Village meetings, focus group discussions and key informant interviews at the ten communities located within the Direct Area of Influence, and selected key informants across 6 districts in the Extended Area of Influence.
- Focus group discussions were undertaken respectively with women groups, leaders and men, and fishermen groups (in some instances the latter FGDs were combined if the participants represented were clearly the same individuals). A structured social and health questionnaire was deployed during these FGDs.
- Finally, key informant interviews were used to engage representative individuals for health, education, and tourism.

The engagement team for the baseline engagements included translators who speak Fante and Nzema so that the key technical elements of the Project and the main issues arising could be described and discussed with non-English-speaking stakeholders.

Copies of the registers are found in Appendix C of this SEP. Minutes of the meetings are found in Appendix D of this SEP.

Table A.3.3 Summary of Baseline Data Gathering Engagements and Combined Scoping Meetings with Affected Communities

02/12/2014	**Team 1**	**Team 2**	**Team 3**	**Team 4**
Community	Sanzule, Bakanta, Krisan and Eikwe	Ngalekpole, Ngaliki Beku, and Anochi	Atuabo and Asemdasuazo	
Engagement	Introductory meeting with village Chiefs	Introductory meeting with village Chiefs	Introductory meeting with village Chiefs	
03/12/2014	**Team 1**	**Team 2**	**Team 3**	**Team 4**
Community	Asemdesauzo	Krisan	Bakanta	Eikwe
Engagement	Village scoping consultation meeting, FGD with women, and FGD with men (Scoping Meetings)	Village scoping consultation meeting, FGD with women, and FGD with men Education KII- Headmaster at Ngalichi and Supervisor of the schools at district level and Assemblyman Chief)	Village scoping consultation meeting, FGD with women, and FGD with men Education KII- Teachers at Bakanta Kindergarten and Bakanta primary school	Village scoping consultation meeting, FGD with women, and FGD with men Education KII: Educators of the Catholic Primary School, Eikwe Health KII's- Hospital Administrator, Health Information Officer, Sub-District Public Health Nurse and HR Manager at Eikwe Hospital
04/12/2014	**Team 1**	**Team 2**	**Team 3**	**Team 4**
Community	Sanzule	Atuabo	Ngalekpole	Ngaliki

Engagement	Village scoping consultation meeting, FGD with women, and FGD with men KII Education: Teachers from Sanzule/Krisan Primary School Vice head at Sanzule vocational school KII Health: Health Workers at the Sanzule CHPS Compound (Dr Eric Odei (SRC))	KII's Education- Head Teacher Atuabo Methodist Junior High School and Assistant Head Teacher Atuabo Methodist Primary School KII Health: Health workers at the Atuabo CHPS Compound (Dr Eric Odei (SRC))	Village scoping consultation meeting, FGD with women, and FGD with men KII Education: Kindergarten Teachers at Ngalekpole	Village scoping consultation meeting, FGD with women, and FGD with men Education KII: Head Teacher Ngaliki/ Beku JHS and Head Teacher at Ngaliki/ Beku Primary School
05/12/2014	**Team 1**	**Team 2**		**Team 3**
Community	Anoyki	Beku		(ORF Site visit)
Engagement	Village scoping consultation meeting, FGD with women, and FGD with men	Village scoping consultation meeting, FGD with women, and FGD with men KII Education: Headmaster and the Asemdesauzo Primary School		KII Krisan Refugee Camp Manager
08/12/2014	**Team 1**	**Team 2**		**Team 3**
Community	Atuabo	Eikwe		(Scoping Meetings)
Engagement	Village scoping consultation meeting, FGD with women, and FGD with men, and meeting with Paramount Chief	KII Health: District Health Administration(Ghana Heath Service Outstanding Scoping Meetings in EAoI see **Error! Reference source not found.**		(Outstanding Scoping Meetings in EAoI see **Error! Reference source not found.**)

Figure A.3.1, Figure A.3.2, Figure A.3.3 and Figure A.3.4 illustrate some of the baseline data gathering engagement activities:

Figure A.3.1 Community Meeting at Sanzule



Source: ERM, December 2014

Figure A.3.2 FGD with Teacher Group in Sanzule



Source: ERM, December 2014

Figure A.3.3 FGD with Men and Women Ngalikpole



Source: ERM, December 2014

Figure A.3.4 Community Meeting at Bakanta



Source: ERM, December 2014

A.3.4. SUMMARY OF CONCERNS

Table A.3.4 provides a summary of the issues raised by stakeholders during the scoping and baseline consultations.

Table A.3.4 Summary of Scoping and Baseline Consultation Issues

Issue Group	Summary of issues	Addressed in EIS
Accidents	Several stakeholders mentioned concerns over accidental damage to gas pipeline and possible gas leakage.	
Employment and Local Content	Several stakeholders emphasized the need for local content and youth employment.	Section 10.7.1
Security	Several stakeholders mentioned that the offshore gas pipeline should be buried to prevent any damage from ships dropping anchors. They also added that the offshore pipeline route needs to be clearly marked and updated in the (admiral chart) navigational chart so the sea farers (including fishers) will avoid the ROW. Stakeholders highlighted that policing of the offshore pipeline ROW and FPSO exclusion zones from encroachment from other uses could cause conflict.	Chapter 4, and Chapter 10, Section 10.7.7
Livelihoods and compensation	Stakeholders indicated that the proposed Project area is currently used for fishing, farming and grazing and expressed concern regarding the loss of livelihoods and the stressed the need for compensation of any lost livelihood.	Chapter 10, Section 10.7.2
Cultural heritage	Stakeholders expressed concern over the affection to the cemeteries and potential archaeological resources currently located within the Project area. Stakeholders identified those cultural resources in the area need to be preserved and buffer areas should be implemented.	Chapter 10, Section 10.7.4
In-migration	Stakeholders expressed concern that there would be in-migration of people (especially job-seekers) into the area resulting in impacts to the socio-economic structure, traditional values, demographics and cultural heritage.	Chapter 10, Section 10.7.3 and 10.9.7
Tourism impacts	Some stakeholders expressed concern regarding the conflicting proposed industrial land use and activities with the plans for the development of the Western Region coastline as an area for sustainable tourism. They also expressed concern over the project activities and their potential effect on the tourism potential of the area.	Chapter 10, Section 10.7.1
Sensitive biodiversity	The impacts on marine fauna (fish, marine mammals) and onshore wildlife were raised as important aspects for consideration, and that biodiversity offsets should be implemented if appropriate. Concerns were also raised regarding the Project's impacts on the annual algae bloom.	Chapter 10, Section 10.4
Fisheries Impact Assessment	Several stakeholders mentioned the need for the EIS Team to undertake a separate Fisheries Impact Assessment.	Chapter 10, Section 10.6
Pollution and waste management	Stakeholders highlighted the importance of marine and onshore pollution control and ensuring responsible waste management.	Chapter 10, Section 10.4
Fishing	Apart from the livelihoods aspects (above), stakeholders indicated their concerns regarding disturbance to fishing activities including access to fishing areas (exclusion zones) and potential catch reduction. Stakeholders expressed concerns related to increased exclusion zones as a result of additional FPSOs in the area.	Chapter 10, Section 10.7.2 and 10.9.7
Air emissions	Stakeholders were concerned about the potential air emissions from the onshore receiving facilities and from vessels, including potential for gas leaks and the resultant impacts on human health and marine fauna.	Chapter 10, Section 10.4.1

Issue Group	Summary of issues	Addressed in EIS
EIS process and stakeholder engagement	A number of stakeholders highlighted the requirements for thorough stakeholder consultation process as part of the EIS. Some also mentioned that the planned timing for the EIS process could impact the quality of the process. The stakeholders highlighted that engagement is needed in collaboration with local, district and regional authorities. Stakeholders indicated that there should be thorough engagement with the local fishers regarding security measures and restrictions, as well as social investment needs.	Chapter 5 and Annex A - SEP
Alignment with regional planning, industrial growth and other developments	Stakeholders indicated that the planning and design for the Project should be integrated with other local and regional planning processes. Planning for the Project was encouraged to include and anticipate future or other developments in the area.	Chapter 10, Section 10.9
Operational safety	Stakeholders suggested that the location of the helipad should consider the proximity to any waste disposal sites due to the operational interactions of the helicopters with avian fauna which are attracted to the disposal site.	Chapter 10, Section 10.4.8
Community Health and Safety	Stakeholders indicated that there should be clear warning signs along the onshore pipeline right of way.	Chapter 10, Section 10.7.7
Cumulative impacts	Stakeholders highlighted that cumulative impacts need to be thoroughly assessed in the EIS.	Chapter 10, Section 10.9

A.3.5. ENGAGEMENT TOOLS

Stakeholder engagement activities used all or some of the following information dissemination and data gathering tools and methodologies:

- During introductory village meetings and description of the Project was given using the Background Information Document. In addition, an A3 map in colour poster form showing the project footprint in relation to communities in the DAoI, was also used to illustrate to community members the key locations and planned siting of Project infrastructure.
- A structured questionnaire was used to conduct FGDs with women, men and elders and fishing groups. Each group was engaged separately and asked a series of questions (See Appendix E). The questions followed several themes for example; demographics of the village; leadership; land tenure and land use; health, education; livelihoods; heritage, policing and crimes, and concerns and expectations of the project.
- Key Informant Interviews (KIIs) with selected stakeholders included healthcare professionals, educators, and tourism business people used structured questionnaires as well as open ended discussion (See Appendix F). Themes and topics covered during health interviews include government policy on health in the area; heath facilities and practitioners; traditional medicine; lifestyle indicators; and diseases. Themes covered during education KII's include status of school infrastructure, information on pupil numbers, drop-out rates; and concerns and expectations in relation to the project.

A.4. PROJECT STAKEHOLDERS

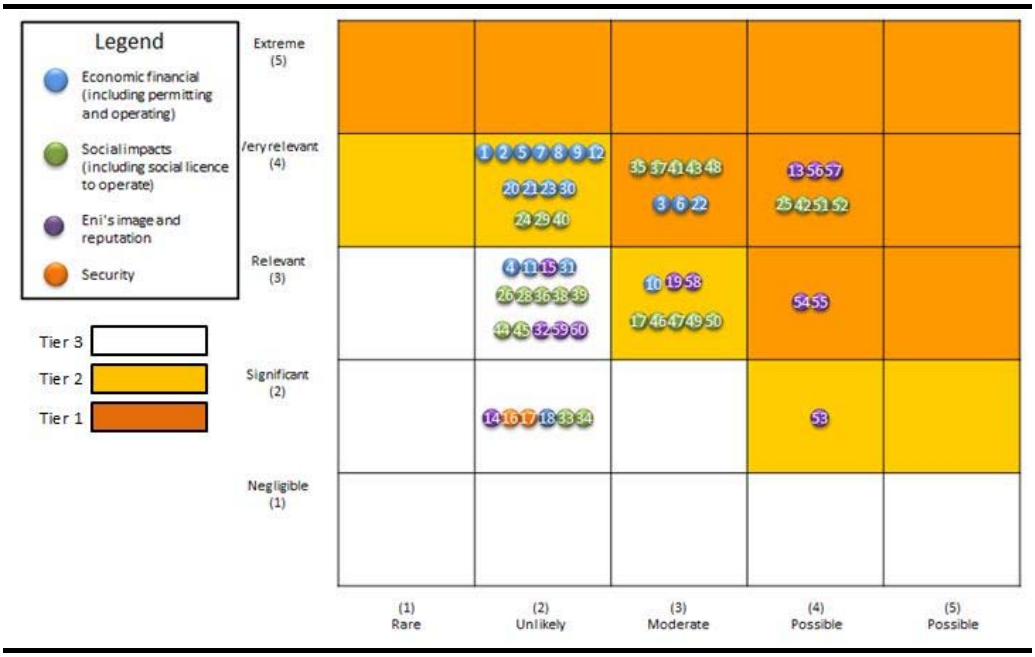
As part of the EIS scoping phase a stakeholder mapping categorization and analysis exercise was undertaken to identify key stakeholder groups and organisations and assess their potential to impact on and influence the Project, based on ERM's experience in similar EISs in Ghana and the Western Region and previous engagement activities by eni Ghana. These stakeholders were selected on the basis that they would have an interest in the Project and would also have knowledge through which to provide insight into possible issues and concerns related to the Project. For example stakeholders can be identified by geography (or location in which the stakeholder is located or exerts its influence), its potential impact over the project, and the perceived degree of awareness that the stakeholder has about eni's project or future operations. In addition, further stakeholder groups were identified through the consultation process

An EIS stakeholder register has been developed (Appendix G) listing all possible Project stakeholders (individuals and organisations) with interest in or potential to influence on the Project. The stakeholders are categorized in the register according to eni's level I and level II categories as defined within the eni corporate guidance on developing a stakeholder register (See Table A.4.1). Category Level I is the primary stakeholder category and category level II is the Secondary stakeholder category or subcategory. eni has established categories for both level one and level two stakeholders. For example, institutions are one of the category level one delineations and Local agency and authorities, Provincial Agencies and authorities, and Governments and Ministries are category level two delineations. Stakeholders are classified according to these categories and the power, disposition and potential risks associated with each group analysed. Tailored strategies are developed for engaging each group/sub-category based on this analysis

Vulnerable groups are not classified under a separate category within the eni guidance but these groups were identified to exist largely within the Directly Affected Communities category and include: women, the elderly, children, sharecroppers, refugees and fishermen.Table A.4.2 provides a summary list of the stakeholders that were engaged as part of the scoping and baseline data collection activity as contained in more detail in the register (Annex G).

A visual representation of the Stakeholder Mapping is presented in Figure A.4.1 showing each stakeholder represented by a number mapped according to their potential impacts on the Project. Impact categories include Economic/Financial impacts, Social impacts, impacts on Eni's image and reputation, Security impacts. Stakeholders mapped within Tier 1 are considered high risk to the Project, those in Tier 2 are medium risk and in those in Tier 3, low risk. Please refer to Annex G for a more detailed explanation of the stakeholder analysis mapping methodology used as a basis for the development of this matrix.

Figure A.4.1 Stakeholder Map



The stakeholder register is a "live" document: stakeholder mapping will be ongoing throughout the life cycle of the Project, and stakeholder mapping updated periodically.

Table A.4.1 Stakeholder Categories

Stakeholders were identified and classified according to the following categories.

A more detailed breakdown of stakeholder Categories (Level I and Level II) are described in the Stakeholder Register.

- *National government:* these stakeholders are of primary national political importance to the project and the EIA process.
- *Regional government and District Assemblies:* these stakeholders are of Regional and local importance to the project.
- *Traditional Authorities, chiefs and elders*: these stakeholders are the key leadership figures representing communities at a local level and as such are highly influential;
- *Directly affected communities:* communities at local level, living in settlements or towns that will be directly impacted (positive and/or negative) by the project.
- *National and Local NGOs:* these are local NGOs (based mainly in Accra) and Community Based Organisations (CBOs) with potential interests in the project. NGOs may also have useful data or insights into the local and national issues raised by the project.
- *International organisations:* these comprise organisations based within and outside Ghana with an interest in the project. These include international NGOs, multilateral and bilateral organisations.
- *Academic institutions:* these are universities, colleges and research organisations which may have an interest in the project and may be able to provide useful baseline information related to the culture, history, or environment of the area.

- *Other interest groups:* these comprise, for example, media (both national and international), and political parties/groups, religious organisations.
- *Economically interested parties:* organisations, businesses and individuals with direct interest in the project e.g. running businesses or providing services and supplies to the project.

Table A.4.2 Summary Stakeholder List

Category	Stakeholder Group
Institutions	EPA
	Ministry of Energy & Petroleum
	Ministry of Roads and Highways
	Ministry Of Fisheries And Aquaculture Development
	Ministry of Environment, Science, Technology and Innovation
	Wildlife Division of Forestry Commission
	Fisheries Commission
	Petroleum Commission
	Ghana National Petroleum Corporation (GNPC)
	Ghana Maritime Authority
	Ghana Ports & Harbour Authority
	EPA: Western Region
	Ghana Ports & Harbour Authority: Western Region
	Ghana Navy
	Marine Police
	National Fisheries Commission
	Marine Fisheries Research Division
	Western Region Coordinating council (WRCC)
	Enterprise Development Center (Jubilee & Ministry of Energy)
	Ghana Tourism Authority
	Museums and Monument Board
	Jomoro District Assembly
	Ellembelle District Assembly
	Sekondi Takoradi Metropolitan Assembly
	Shama District Assembly

Category	Stakeholder Group
	Nzema East District Assembly
	Western Regional House of Chiefs
	Western Region Regional Health Director
	Ellembelle District Health Service, Director
	Ellembelle Education Service
Communities	Fisherman on Essiama
	Fisherman of Shama
	Chief Fisherman of Upper Dixcove
	Chief Fisherman of Upper Axim
	Chief Fisherman of Half Assini
	Chief Fisherman of Sekondi
	Anochi Community
	Asemda-Suazo Community
	Atuabo Communty
	Bakanta Community
	Beku Community
	Krisan Community
	Eikwe Community
	Ngalekpole Community
	Ngaliki Community
	Sanzule Community
Civil Society	Friends of the Nation
	Conservation Foundation
	Ricerca e Cooperazione
	Oil Watch Ghana
	Ghana National Canoe Fisherman Council
	Ghana Wildlife Society
	Current Large Marine Ecosystem (GCLME)

Category	**Stakeholder Group**
Contractors, Suppliers, Business Partners and Non-Partners	Kosmos
	Tullow Oil
	GNPC
	GNGC

On the basis of findings of the initial stakeholder consultation results (i.e. from screening and scoping activities), stakeholders logged in the stakeholder register were analysed as per the eni Upstream Stakeholder Engagement Operating Instructions.

Specifically, using the eni Stakeholder Assessment Matrix guidance all stakeholders have been assessed for:

- The level of stakeholders' power on the Project (low-medium-high);
- Stakeholders' disposition/attitude towards the project (positive –neutral- negative).

In addition, using the eni Stakeholder Risk Matrix guidance, an assessment of the primary key potential risk associated with each stakeholder has been undertaken, considering:

- The degree of the impact on the project of the identified risk; and
- The probability of its occurrence.

Each stakeholder's attendance at consultation activities and every interaction with stakeholders as part of this EIS process is recorded in this document, which along with the register will be updated following EIS disclosure process and then at key milestones in the lifecycle of the Project.

A.5. EIS STAKEHOLDER ENGAGEMENT PROGRAMME

The Stakeholder Engagement Plan for the EIS process comprises four key phases of activity:

- Scoping Phase Engagement and Disclosure of the Scoping Report (already completed);
- Stakeholder Engagement during Baseline Studies (already completed);
- Disclosure of the EIS Report and Public Hearings;
- Ongoing Stakeholder Engagement (construction and operation phases).

The programme for the EIS Consultation and Disclosure and Ongoing Engagement during the Construction and Operation Phases are described in more detail in the sections below.

A.5.1. DISCLOSURE OF EIS AND PUBLIC HEARINGS

Once the EIS has been completed it will be submitted in a draft form to the EPA for consideration. At this time the EPA will inform the Project of the required next steps for Stakeholder Engagement which may include public notification and public hearings prior to a final decision being taken.

A.5.1.1. OBJECTIVES OF THE ENGAGEMENT

The objectives of consultation with stakeholders during EIS disclosure are to:

- Promptly identify issues/concerns to avoid conflict in the future.
- Gain consensus on potential impacts identified and to proffer mitigation measures before the project gets underway.
- Avoid any misunderstanding about the project development and for stakeholders to be jointly and severally acquainted with the project.
- Ensure that any apprehension and fears expressed by stakeholders about the project, nature, scale and impact of the operation have been addressed.
- Collate all comments and recommendations of all stakeholders for incorporation into the EIS report as appropriate.
- Consult with host communities and minutes of such consultation incorporated into the EIS report.
- Consolidate any new information into the stakeholder register and key issues register.

A.5.1.2. DISCLOSURE AND FINAL OF THE EIS

Disclosure of the Draft EIS Report/ EIS will provide detailed information about the proposed Project activities, an assessment of the potential impacts and the planned mitigation and monitoring measures. The EIS will be published in mass media and announced in local media of the Western Region of Ghana. In addition, a Reconnaissance Survey will be carried out throughout 6 coastal regions, the Western Regional House of Chiefs and engagement of CSOs, Media and other Governmental Institutions. During the Reconnaissance Survey, all engaged stakeholders will be informed of the public hearing venues and where to access the

copies of the EIS (located mainly in District Assemblies, Regional EPA Offices, Main Libraries etc.). National regulation request the provision of twelve (12) copies of the document, but eni has agreed to extend the number to twenty (20) to maximize its distribution.

Public hearing will initially take place in Takoradi and divided in three venues, by type of stakeholders:

- CSOs (represented by the Relevant Ministries, Agencies and Department Heads), Media and the General Public
- Six (6) Coastal Districts (represented by MCEs, DCEs, Presiding Members of the six coastal Districts an Assembly Members)
- The Western Regional House of Chiefs (Traditional Leadership)

During public hearings, copies of the non-technical summaries will be available for the general public, facilitating the general access to the project.

In addition, a dedicated workshop shall be held at the Community of Sanzule, where the project will be presented to the Community and better interaction can be achieved.

Eni Ghana will collaborate with the EPA if necessary to ensure that the hearing meets objectives and requirements of stakeholder engagement under IFC PS1. EPA may grant provisional approval for commencement of the Project following review and the Public Hearing. The comments received on the EIS Report/ EIS from EPA will be addressed and a Final EIS Report/ EIS will be submitted to EPA.

A.5.2. ONGOING ENGAGEMENT (CONSTRUCTION AND OPERATION PHASES)

This section references current good practice guidance in outlining key objectives and activities planned for ongoing Stakeholder Engagement during the construction and operation phases:

A.5.2.1. CONSTRUCTION PHASE

Construction Phase

Ongoing Stakeholder Engagement during the construction phase has the following key objectives:

Key Objectives of Engagement

- Identify all stakeholders likely to be affected by construction activities and keep aware/abreast of any changes to stakeholder base e.g. through in-migration;
- Keep stakeholders regularly informed of construction activities and schedule, and progress in implementing environmental and social management programme;
- Maintain visibility and site presence of Community Liaison staff and keep open communication lines with stakeholders and their key representatives;
- Anticipate, receive and quickly respond to grievances; and

- Identify responsible contractors, and carefully manage and oversee contractors interactions with stakeholders.

Activities

In order to meet these objectives a number of key activities will be undertaken. The precise resourcing arrangements and schedule for these activities will be refined and finalised in consultation with stakeholders following the disclosure of the EIS:

Regular update of the stakeholder register and stakeholder risk analysis

In order to ensure all stakeholders affected by construction are identified and engaged the CLO will be responsible for ensuring the stakeholder register is regularly updated and risks associated with stakeholders are assessed and re-evaluated as necessary based on information revealed through interactions, engagement and grievance management. Any new stakeholders that may have arrived in the Project area or developed an interest or interest in the Project should be monitored, analysed and strategies developed for engaging them. The FLO and GO respectively will be responsible for feeding back information on new stakeholders or changing stakeholder issues/risks which arise through their stakeholder interactions, to the CLO as part of this process.

Regularly engage and inform stakeholders of construction activities and schedule

The CLO (supported by the FLO) will be responsible for designing and implementing regular proactive and structured, engagement with stakeholders through appropriate methods or forums. This engagement will be focused on informing and updating community members about the Project construction activities and schedule including anticipated delays or changes, in that given month, and on the potential impacts that can be expected to occur along with the measures planned to mitigate these.

These engagements may include:

- Face to face information dissemination meetings with local leadership and other key authorities;
- Community/group meetings or information sharing on topics of community concern such as community health and community safety awareness sessions;
- FGD's for special interest groups with particular concerns such as fishing groups and land users; and
- Targeted and appropriately designed activities will be conducted to engage vulnerable groups and individuals.

Where appropriate for special interest groups/vulnerable groups eni may need to facilitate and provide support in the establishment of a committee or representative forum through which to engage and share new information e.g. for those affected by economic displacement who will be receiving compensation. This should be done in coordination with the team responsible for the Land Acquisition process.

All engagements will be documented both in writing and photographically, with minutes taken in standardised format and attendance recorded. Minutes should be shared with and approved by participants.

Any issues and or grievances raised during engagements will be logged in the stakeholder issues register. Grievances raised in these engagements will be dealt with according to the steps described in Section 8 below.

Establish a site presence

In order to ensure the Community Liaison Team is visible and accessible to the affected stakeholder base, the Project will consider establishing a permanent site based Community Liaison Office at Sanzule to ensure easy access for the community during the construction phase to be staffed by a CLO. At least one of the two CLOs planned to be recruited by the Project will be a Sanzule resident. This will be publicised to the communities as a location where information is available to them about the Project construction activities and schedule and where their issues/grievances will be registered and if possible responded to.

If a physical office cannot be permanently or regularly staffed, then a schedule of visits at a regular pre agreed time/ location by CLO/FLOs/GOs at Sanzule will be made available to stakeholders.

It is recommended that the frequency of these engagements is at least weekly at the commencement of construction activities. The need for this engagement will be monitored and if required this frequency will be maintained into the operational phase of the Project. Based on this review this engagement may be reduced over time to less frequent (every other week or monthly) after the schedule of activities is well established and had been communicated.

Information Dissemination

Information dissemination tools will be used to support the above activities for example: distribution of printed material e.g. an accessible Project update document such as a newsletter will be considered as a medium for communicating changes to stakeholders concerning Project design, progress on meeting social and environmental management commitments, details of upcoming construction activities and or changes to schedule. The Project will also provide information to stakeholders through other media (newspaper, radio, etc.)

Receive, track and respond to grievances

Unresolved stakeholder grievances can quickly escalate, often leading to unforeseen work stoppages and delay. It will therefore be key during the construction phase to respond quickly and effectively to grievances raised, and work closely through regularly engaging with stakeholders to try and anticipate where stakeholder issues or concerns may arise before they do. The GO and FLO will be responsible for supporting the CLO in identifying, logging and responding to all grievances and resolving locally those that can be managed in the immediate term, or reporting and escalating more complex issues to eni management as appropriate.

The planned process for tracking and responding to stakeholder grievances is described in more detail in Section 8.

Oversee Contractor Stakeholder Engagement

Unmanaged or poorly documented contractor-stakeholder interaction or engagement can also present risks to the Project. It may result in inconsistent or contradictory messages or conflicting commitments from the contractor/Project representatives to stakeholders which can give rise to unmet expectations.

The CLO will liaise with and oversee the construction Contractor to ensure that any interaction taking place between contractor workforce and stakeholders is consistent with the standards, core principles and procedures for undertaking, recording and documenting stakeholder engagements, as is outlined in this SEP.

Operation Phase

Ongoing Stakeholder Engagement during the operation phase has the following key objectives:

Key Objectives:

- Achieve a smooth transition from construction to operations including the integration of social and environmental commitments into the operational management system;
- Maintain visibility (albeit a reduced presence) and continuity of stakeholder relationships;
- Continue with regular engagement and disclosure to stakeholders as required;
- Continue to review and update stakeholder information; and
- Continue to receive, track and respond to grievances.

Activities

The operation phase will consist of a continuation of many of the same Stakeholder Engagement activities that have been undertaken during construction, but at a reduced frequency. These are described below:

Continue Regular Engagements

Regular direct engagement will continue between the community liaison function and key project stakeholders, and will be aimed primarily at maintaining continuity of relationships, monitoring the effects of project impacts on stakeholders and particularly on vulnerable groups, and demonstrating long term organisational commitment to delivering on social and environmental mitigations or to resolving outstanding issues and grievances.

As at Construction Phase, the Community Investment Team (including CLOs (supported by the FLO) will be responsible for designing and implementing this engagement with stakeholders through appropriate methods or forums. This engagement will be focused on continuing to inform and update community members about the Project operation activities and schedule including anticipated delays or changes, in that given month, and on the potential impacts that can be expected to occur along with the measures planned to mitigate these.

These engagements may include:

- Face to face information dissemination meetings with local leadership and other key authorities;
- Community/group meetings or information sharing on topics of community concern such as community health and community safety awareness sessions;
- FGD's for special interest groups with particular concerns such as fishing groups and land users; and
- Targeted and appropriately designed activities will be conducted to engage vulnerable groups and individuals.

Regular scheduled engagement through an appropriate forum for special interest groups/vulnerable groups will continue (final schedule to be developed during the preparation of the detailed Annual implementation plan).

Information Dissemination

Information dissemination tools and media will continue be used to support engagement activities as detailed in the Construction Phase activities.

Design engagements to manage stakeholder expectations around the transition to operations

Operations phase engagement activities will be designed to clearly communicate anticipated changes brought by the transition from construction to operations and to manage community expectations around the associated impacts eg a reduction in employment and other economic opportunities, and an expected high turnover in Project staff.

Ensure continuity of community liaison staff or sufficient handover period

The loss of familiar project staff can impact on established stakeholder relationships and cause a loss of institutional knowledge and often a breakdown in trust. If possible, Community Liaison Officers/other staff employed during the construction phase will be retained and or an adequate handover period secured in order for any new personnel to be introduced and to establish relationships before taking over key liaison roles.

Regular update of the stakeholder register and stakeholder risk analysis

In order to ensure all stakeholders affected by operations are identified and engaged the CLO will be responsible for ensuring the stakeholder register is regularly updated and risks associated with stakeholders are assessed and re-evaluated as necessary based on information revealed through interactions, engagement and grievance management. Any new stakeholders that may have arrived in the Project area or developed an interest or interest in the Project should be monitored, analysed and strategies developed for engaging them. Specific changes in the Project design and economics, affecting Project demands and plans (e.g. levels of production, change of suppliers, improvements in operations, modifications of plans and procedures, etc.) will be monitored, and the stakeholder mapping adapted as necessary, as these can result in new stakeholders arising or lead to a change and stakeholder interest in and concerns about the Project. The FLO and GO respectively will be responsible for feeding back information on new stakeholders or changing stakeholder

issues/risks which arise through their stakeholder interactions, to the CLO as part of this process.

Continue documenting engagements and logging and responding to grievances

Engagements will continue to be recorded and documented in minutes, and all stakeholder issues and grievances logged and managed according to the given procedures.

Evaluate stakeholder perceptions towards continuous improvement

Finally, it may be helpful during operations as part of project monitoring activities, to assess and evaluate stakeholder perceptions towards the Project and how these may have changed during the course of the construction period. This information can help inform approaches to engagement and provide insights to facilitate continued relationship building with stakeholders through the operations phase of the Project.

Next Steps towards Implementation

An Annual or more detailed operation/implementation plan and a schedule detailing ongoing Stakeholder Engagement activities during both the construction and operation phases of the Project, and throughout its lifecycle through to decommissioning will be developed, following disclosure and submission of the final EIS report to EPA.

The plan will include detail on planned engagement activities and how they will be carried out and operationalised including:

- Frequency and location of engagements;
- Methods for summoning stakeholders for meetings and engagements;
- How meetings and meeting materials will be developed; and
- What methods and media will be used to disclose information (e.g. newspaper, local radio, pamphlets) including tools to ensure accessibility of information to non-literate or vulnerable groups.

The plan will contain additional detail on the type of information to be disclosed, how issues, comments and concerns of stakeholder will be incorporated into the Project and how feedback will be provided to stakeholders on issues and concerns.

Finally, a section on monitoring and evaluation including performance indicators will be included.

This SEP and the stakeholder register, along with the issues register will be updated at this point and iteratively at key milestones during the construction and operations phases.

Therefore, the next formal stakeholder engagement activities will occur under the auspices of the EPA when it holds public hearings before finalising a permitting decision on the Project.

A.6. SCHEDULE

Table A.6.1 illustrates the potential schedule for the EIS showing key milestones for disclosure:

Table A.6.1 EIS Stakeholder Engagement Schedule

Milestone	Approximate Date
Register Phase 2 Development Project EIS with EPA	December 2014
Scoping and Baseline Stakeholder Engagement	December 2014
Submit Scoping Report /TOR to EPA	December 2014
Receive acceptance of TOR from EPA	pending
Submission of Final Draft EIS to Authorities	March 2015
EIS Disclosure and Public Hearings	March 2015
Submission of Final EIS to Authorities	March 2015
Receive Environmental Permit for Project	March –April 2015
Ongoing engagement Construction Phase	2015-2019
Ongoing engagement Operations Phase	2019 onwards

A.7. RESOURCES AND RESPONSIBILITIES

Resources, roles and responsibilities for implementation of the SEP and of ongoing stakeholder engagement as part of the Project are not yet fully defined, but are likely to include:

A.7.1. COMMUNITY LIAISON OFFICER

Eni already has Community Liaison Officers (CLO) in place who is responsible for continued community engagement, facilitation of meetings, distribution of information to stakeholders and eliciting comments, translation of material into the local languages and record keeping. The CLO is a Ghanaian citizen who is fluent in the local languages and familiar with the local customs.

The CLO is and will continue to be responsible for:

- Interfacing with National, Regional and District Authorities, Traditional Authorities and Project Affected Villages;
- Responding to low priority grievances and initiating and coordinating responses from the appropriate managers to mid and high priority grievances;
- Reporting to the HSE Manager on a weekly or monthly basis regarding engagement activities and community issues and concerns including the management of grievances;
- Being present in and accessible to the communities and overseeing the Grievance Mechanism function; and
- Directing communication with stakeholders around the resolution of stakeholder issues and grievances.

A.7.2. COMMUNITY INVESTMENT COORDINATOR

Eni foresees and has planned hiring a "Community Investment Coordinator" to manage a team of at least three people (including the current CLO and one additional and one Community Investment Advisor).

- Coordinating local programs including local employment (recruiting), training, community investment;
- Organising of participatory monitoring programme with affected communities;
- Analysis of issues and grievances to propose actions to reduce potential conflicts;
- Organizing information sessions; and
- Delivering regular reports to Communities and stakeholders containing information regarding project activities and project environmental and social performance.

A.7.3. GRIEVANCE OFFICER

Should the need arise; the eni will appoint a Grievance Officer (GO) to assist the CLO. The Grievance Officer will be responsible for:

- Collection, logging and prioritising grievances;
- Coordinating and tracking timely responses;
- Monitoring corrective actions;
- Communicating with stakeholders around the resolution of grievances;
- Interfacing directly with the community at regular intervals in appropriate forums;
- Being based on site and available to the community at well publicized times and at accessible locations; and
- Reporting to the CLO on a weekly basis.

The CLOs and GOs should receive appropriate training in stakeholder engagement, facilitation, presentation skills and conflict management.

The Grievance Officer reports to the CLO, who, in turn reports to the Project Environmental Manager. While most of the stakeholder engagement activities are undertaken by a small number of junior staff within the organisation, it is important that there is senior level buy-in and oversight of the process. Without the support and buy-in of senior staff, the process will have limited success.

A.7.4. FISHERIES LIAISON OFFICER

Should the issues arising during the EIS process indicate a need the eni cold consider appointing a Fisheries Liaison Officer (FLO) to support the CLO and GO during the construction and operation phase. The FLO will be responsible for:

- Interfacing directly with Fishers/Fishmongers in Project Affected Villages and the DAoI and IAoI at regular intervals in appropriate forums;
- Reporting to the HSE Manager on a weekly or monthly basis regarding engagement activities and issues and concerns raised by Fishers/Fishmongers including the specific Fishing related grievances;
- Being present in and accessible to the fishers on site in both the onshore and if appropriate the offshore environment;
- Directing communication with fishers around the resolution of their specific issues and grievances;
- Responding to low priority fishers/fishmongers' grievances and initiating and coordinating responses from the CLO and appropriate managers to mid and high priority grievances.
- Reporting to the CLO on a weekly basis.

A.7.5. LAND ACQUISITION/RAP LIAISON OFFICER

Should the issues arising during the EIS process indicate a need the eni could consider appointing a Land Acquisition/RAP Liaison Officer (RLO) to support the CLO and GO during the construction and operation phases. The RLO will be responsible for:

- Interfacing with Traditional Authorities and Project Affected Villages undergoing resettlement;
    - The management of RAP specific Grievances including:
    - Collection, logging and prioritising of RAP specific grievances;
    - Coordinating and tracking timely responses;
    - Monitoring corrective actions;
    - Responding to low priority RAP related grievances and initiating and coordinating responses from the appropriate managers to mid and high priority grievances; and
    - Communicating with stakeholders around the resolution of grievances;
- Being present at site and accessible to the RAP affected communities and overseeing and providing support where required (e.g. with RAP related consultation activities) to the RAP implementation team;
- Reporting to the CLO on a weekly basis /or Reporting to the HSE Manager on a weekly or monthly basis regarding RAP engagement activities and community issues and concerns specific to the RAP process including the management of RAP related grievances.

A.7.6. FINANCIAL RESOURCES AND OTHER RESOURCES

A.8. GRIEVANCE MECHANISM

A.8.1. DEFINITIONS AND GOOD PRACTICE

The IFC's Good Practice Guide to addressing grievances from Project-affected communities describes a grievance as: 'a concern or complaint raised by an individual or a group within communities affected by company operations. Both concerns and complaints can result from either real or perceived impacts of a company's operations, and may be filed in the same manner and handled with the same procedure'.

It describes a project-level grievance mechanism for affected communities as: 'a process for receiving, evaluating, and addressing project-related grievances from affected communities at the level of the company, or project' (IFC, 2009) (1).

IPIECA also gives good practice guidance around the management of Project related grievances for Oil and Gas developments.

According to IPIECA a grievance is 'a specific incident and the alleged damage, impact or dissatisfaction that occurred as a result of company or contractor actions, perceived or actual' (IPIECA, 2014). Furthermore a grievance mechanism is: 'a proactive and structured approach to receive, acknowledge, investigate, respond to and remedy complaints and grievances from local stakeholders in a planned, timely and respectful manner' (IPIECA, 2014).

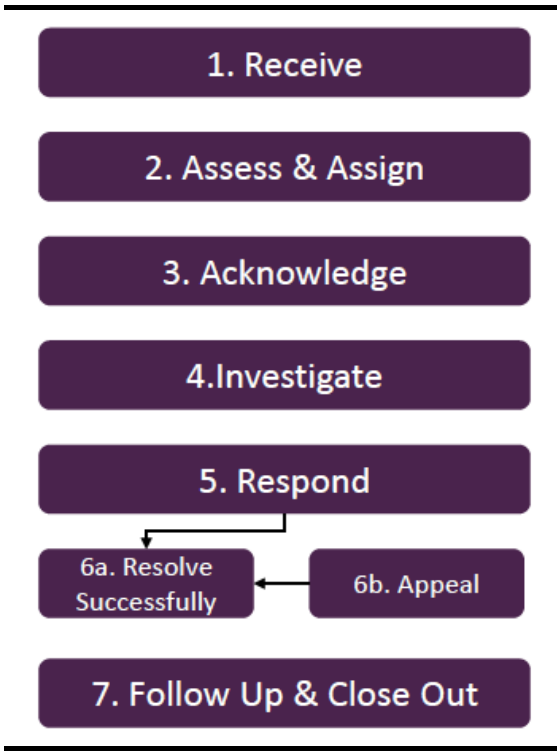
A.8.2. PURPOSE

For the Project Affected Community, a grievance mechanism provides a simple, accessible alternative to an external dispute resolution process, which is local and has the aim of finding mutually beneficial solutions to settle issues taking into account the specific context of the Project environment and the company-community relationship. Such a mechanism still recognizes the rights of the complaining party to seek help externally from a formal dispute body or legal/administrative system in the case of difficult or unresolved grievances. But it first aims to provide an initial port of call for less complex issues to be quickly resolved, to avoid involvement in more costly or time consuming processes. For a Project proponent such a mechanism represents a critical risk management tool and early warning system and, by allowing the Project demonstrate responsiveness to its stakeholders' concerns, can form the basis of much stronger long lasting relationships and a more secure 'social license to operate'. Moreover, it is important to note that the mechanism will be transparent, culturally appropriate, at no cost, and without retribution for the party presenting the grievance.

IPIECA recommends that a grievance mechanism is structured around seven key steps illustrated in Table A.8.1 and described in the paragraphs below:

(1) http://www.ifc.org/wps/wcm/connect/cbe7b18048855348ae6cfe6a6515bb18/IFC%2BGrievance%2BMechanisms.pdf

Figure A.8.1 IPIECA Recommended Grievance Mechanism Process



Source: IPIECA; 2014

This process flow has been directly adopted by eni in its draft corporate guidance on developing grievance management procedures and the same structure has guided the development of the process described for this EIS.

A.8.3. CURRENT GRIEVANCE MANAGEMENT

Currently all Project related grievances and concerns that are raised at a community level are raised informally via direct interaction or communication with the Project CLO who responds to them himself or escalates them to the eni Ghana HSE & Community Investments Department as needed basis. The HSE & CI structure are responsible for co-ordinating grievances as they come into the Project and following the Grievance Procedure in ensuring resolution.

Accordingly, there is a requirement to establish a more formal and documented grievance procedure both as a risk management tool for eni Ghana, and in order to provide community members with an accessible and transparent channel for communicating concerns to the Project and for receiving a formal and documented response to those concerns.

A.8.4. GRIEVANCE PROCEDURE

A Project grievance register and formalised grievance process will be developed and implemented in the next 4 months.

The process is structured according to recommended good practice and draft eni guidance, as described above and will comprise the following steps:

- Step 1: Establishing and Publicising the Grievance Management Procedure;
- Step 2: Receive and Track Grievances;
- Step 3: Assess and assign responsibility for resolution;
- Step 4: Investigate Grievances;
- Step 5: Respond and Resolve and Close Out; and
- Step 6: Monitor Report, and Evaluate the Grievance Mechanism

A.8.4.1. STEP 1: ESTABLISHING AND PUBLICIZING GRIEVANCE MANAGEMENT PROCEDURE

The grievance procedure needs to be available and accessible to all affected communities and therefore once established will need to be publicized and communicated within Project Affected Communities.

Consultation on the workings of the procedure will take place with communities and stakeholders at District, Municipal and Metropolitan Assemblies across the DAoI and with institutions in selected locations in the IAoI.

A range of different approaches will be used for this communication as deemed appropriate, including face to face meetings and group (e.g. village) meetings. In addition, information materials such as a brochure or flyer, describing the process will be produced and distributed by hand and via posting in publicly accessible locations in the Project DAoI and IAoI.

The contact details of the Project Community Liaison Officer (CLO) and Grievance Officer (GO) will be provided clearly on this notice as the key points of contact for receiving grievances.

A.8.4.2. STEP 2: RECEIVE AND TRACK GRIEVANCES

Grievances can be submitted in writing, telephonically or presented verbally to the Project CLO or Grievance Officer.

<u>Logging Grievances</u>

All grievances shall be logged using a Grievance Form. Eni will log, document and track all grievances within a Grievance register to be managed and updated by the Grievance Officer with oversight from the Project CLO.

The database shall be monitored regularly for recurring grievances so that appropriate standardised mitigation can be developed.

The following information shall be recorded for each grievance:

- Grievance case number;

- Complainant's name and contact details(1)
- Date of complaint;
- Details of complaint;
- History of other complaints / queries / questions (if known);
- Resolutions discussed and agreed with the party(ies) in question;
- Actions implemented (including dates) and;
- Outcome of the actions implemented.

For complaints in person, typically the responsible eni staff (CLO or GO) shall either complete himself of help the complainant with the completion of a feedback form.

For complaints by phone, eni's staff shall register the complaint themselves using the feedback format.

Acknowledging Receipt of a Grievance

eni shall formally acknowledge receipt of any grievance as soon as possible, and within a standardised time period.

An initial response should be provided not more than (5) five days from the date it was submitted and shall inform the complainant about the timeframe in which a response can be expected. A full response should then be provided no later than a month from receipt and acknowledgment of the grievance.

The acknowledgement must be sent in written form although it can be anticipated by phone depending upon the complainant.

The process of acknowledgement shall include responding to the complainant, using appropriate communication channels, about the following issues:

- explaining next steps;
- providing a target date for resolution of the issue or, if necessary, the full response to the feedback;

Ideally, acknowledgment of a grievance to the complainant should include the name of the person assigned to resolve the issue.

A.8.4.3. STEP 3: ASSESS AND ASSIGN RESPONSIBILITY FOR RESOLUTION

eni will assess each type of grievance for an understanding of the types of response required and in order to assign responsibility of the appropriate individual to manage the response.

The following risk levels indicated in Table A.8.1 may be considered and assigned to classify the type of response required.

(1) Name and contact details are necessary for interaction around the resolution of the grievance. Anonymous submissions will be permitted, but the party submitting should understand that direct response will not be possible.

Table A.8.1 Grievance/Issue Risk Level

Issue Risk Level	Description
Level 1	Positive feedback requiring acknowledgement and thanks to the remittent and or feedback that is not related to eni Upstream Area and needs to be directed elsewhere.
Level 2	A question or request for information.
Level 3	A grievance that is not a breach of law or of an eni policy and is not related to • death or serious illness or • a recurrent question /request for information
Level 4	A repeated or widespread grievance or • a grievance that is a breach of law or eni policies or • a direct accusation of breach of human rights or • a grievance related to death or serious illness.

In some cases, an issue may require specialised support to be addressed; e.g. from the Health, Safety and Environment, Procurement or Operations Departments and will be escalated accordingly.

Please note all grievances assessed as level 3 or 4 require the involvement of Senior Management of the eni company involved.

A.8.4.4. STEP 4: INVESTIGATE GRIEVANCES

eni will investigate fully all grievances submitted, and where necessary will involve other departments, contractors and senior management in the process in order to fully understand the circumstances that led to the grievance being raised. eni's companies or projects may decide to invest in this type of assistance as deemed necessary for grievances of a significant risk level (Level 3 and 4).

This investigation should be performed in a timely manner to avoid delaying the resolution of a grievance. eni will aim to resolve any grievances within 30 days from the date that of receipt. This timeframe can be extended to 60 days for more complex grievances (eg level 4 grievances), if required

The following steps shall be performed as part of an investigation to avoid delaying resolution of a grievance:

- Obtain as much information as possible from the person who received the complaint, as well as from the complainant to gain a first-hand understanding of the grievance. In addition, an appropriate liaison official (CLO, GO, FLO) must be present during any interactions with eni Ghana and the stakeholder registering agrievance.
- Undertake a site visit, if required, to clarify the parties and issues involved. Gather the views of other stakeholders including eni employees, if necessary and identify initial options for settlement that parties have considered.
- Determine whether the grievance is eligible for consideration and valid.
- Eligible grievances include all those that are directly or indirectly related to eni' Project and that fall within the scope of the Grievance Mechanism as outlined above.

- Ineligible complaints may include those that are clearly not related to the eni Project or its contractors' activities, whose issues fall outside the scope of the Grievance Mechanism procedure or where other eni or community procedures would be more appropriate to address the grievance.
- If the grievance is deemed ineligible it can be rejected however a full explanation as to the reasons for this must be given to the complainant and recorded in the Grievance Database.
- If the grievance is eligible, its risk level should be determined using the significance criteria in Table A.8.1. This will help to determine whether the grievance can be resolved immediately or requires further investigation and whether senior management will need to be informed of the grievance.
- If the grievance concerns physical damage, (e.g. fishing boat, crop, house, community asset) a photograph should be taken of the damage and its exact location recorded the as accurately as possible.
- Inform the complainant of the expected timeframe for resolution of the grievance.
- Enter the findings of the investigation in the Grievance Database.

A.8.4.5. STEP 5: RESPOND, RESOLVE AND CLOSE OUT

A response should be provided to the complainant in all cases, by the CLO, and if necessary the local eni's management. This may only consist in a simple clarification of a technical issue. Responses can be either oral or written, depending on whether the grievance was received orally or in writing.

Ineligible Claims

If a claim is rejected as ineligible (not considered to be related to eni's or its contractor's activities) or without basis the and the response is that the grievance does not require action by the company to resolve it, it should still be documented and included in company systems for grievance tracking for further reference. The message that the Project does not intend to provide a response, should be handled sensitively to the complainant.

Eligible Claims

Preliminary Response

In the case of all eligible complaints, eni will provide an initial response within a stipulated period of time and propose the next steps and actions for resolution. The CLO/GO will then communicate the results of the assessment and the status of their claim to the complainant.

Final Response

This response should provide clear information on the proposed final corrective action and detail any related commitments made by both parties. It should obtain the written agreement of the complainant.

If the complainant is not happy with the proposal they should be free to seek resolution through a formal external dispute resolution mechanism.

Should the grievance be of level 3 or 4 (see table 7.1), the response or update may need to be provided directly by eni local senior management in order to demonstrate responsiveness and commitment by eni to resolving stakeholder grievances.

Appeal Process

The grievance process will include an appeal process with the involvement of third parties to mediate in cases where no agreement is reached to the satisfaction of the affected person. If deemed necessary this may include forming a grievance committee with participation of local representatives and involving a third party in the process of grievance resolution.

The mechanism will not impede access to judicial or administrative systems.

Close out

A complaint is closed out when no further action can be or needs to be taken.

When closing out, it is important to ensure full proof of close out based on fully documented evidence of the resolution process including:

- Written internal record internally, with the date and time it took place, and sign off by responsible staff sign off;
- Photographs if relevant documenting the resolution; and
- Written confirmation of the complainants' agreement with the resolution (a template close-out agreement or similar may be used).

The final close out status of the complaint e.g. open (under investigation), resolved (resolution has been agreed), unresolved (not possible to reach an agreed resolution and case has gone to external dispute resolution), abandoned (complaints where the complainant is not contactable after a certain period and complaint becomes null and void), must be recorded in the Grievance Register.

A.8.4.6. STEP 6: MONITOR, REPORT AND EVALUATE

Eni management will monitor grievances routinely as part of the broader management of the Project. This entails good record keeping of complaints raised throughout the life of the construction and operation of the Project. On receipt of grievances, electronic notification to management must be distributed. Grievance records must be made available to management at all times.

Monthly internal reports will be compiled by the Grievance Manager and distributed to the management team.

As part of the grievance monitoring ENI will implement a process to analyse grievances. This will ensure wider actions are taken where required to solve root problems causing grievances rather than just individual grievances. ENi will also develop performance indicators to evaluate the grievance management process.

A.8.5. GRIEVANCE SPECIFIC TO RESETTLEMENT ISSUES

Finally, Box A.8.1 below gives some guidance on the IFC's requirements for a RAP specific Grievance Mechanism:

Box A.8.1 A note on RAP Grievance Management

According to the requirements of IFC Performance Standard 5, a Land Acquisition and Resettlement specific grievance mechanism (or sub-section of the Project Grievance Mechanism) must be developed and managed as a stand-alone process (albeit one that is coordinated and aligned with the overall Project Grievance mechanism), and that sufficient and appropriate resources must be allocated to this function.

This requirement is intended to ensure any complaints raised specifically in association with the RAP are managed as quickly as possible and in a relevant and sensitive way to avoid disputes causing stakeholder challenge to land access, which can lead to very costly Project delays.

It is important to note that the complex technical nature of resettlement processes calls for a specifically trained resource, familiar with both the steps in the RAP process and the agreements in place within that process (e.g. land lease agreements, compensation agreements) to handle the investigation and formulation of responses to RAP related grievances, and where required the escalation of the those grievances to senior eni management.

A.9. MONITORING, EVALUATION AND REPORTING

A.9.1. MONITORING AND EVALUATION

The SEP will be monitored and evaluated regularly using the indicators in the IFC Guidance Notes on Public Consultation and Disclosure. The monitoring results, both qualitative and quantitative, will be disclosed to all stakeholders. Suggested monitoring and evaluation activities are outlined below:

- Monitor the grievance register in terms of response times to address complaints logged as well as the recurrence of complaints over time;
- Regular update of the stakeholder register and stakeholder risk analysis;
- Monitor media coverage of eni and the project;
- Keep records of all engagement activities including meetings attended, open-house events, focus group discussions, road shows, etc.;
- Keep a library (electronic or hard copy) of all communication material;
- Develop a stakeholder satisfaction survey format and conduct stakeholder interviews to gauge level of satisfaction;
- Develop and assess performance in terms of Key Performance Indicators (KPIs); and
- Revise plans and activities.

A.9.2. REPORTING

eni will report internally and to stakeholders at least once a quarter on all engagement activities and particularly on all complaints (both open and closed).

Appendix A

Invitation Letters for Scoping Meetings

Environmental Resources Management

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Great Westerford
240 Main Road, Rondebosch
7700, Cape Town, South Africa

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Fax: +27 (0) 21 686 0736
www.erm.com

2nd December 2014

The Chief Superintendent of Police
Marine Police
Takoradi Harbour
Takoradi, Ghana

Dear Sir,

Subject: Environmental, Social and Health Impact Assessment (ESHIA) for the Offshore Cape Three Points (OCTP) License Area – Phase 2

Eni Ghana E&P are proposing to develop the oil & gas resources within the Offshore Cape Three Points (OCTP) Licence Area in two phases. In terms of the Ghana Environmental Assessment Regulations of 1999 (LI 16:52), these activities require an Environmental, Social and Health Impact Assessment (ESHIA) and an environmental licence from the Ghana Environmental Protection Agency (EPA).

The ESHIA for Phase 1 was undertaken by ESL Consulting; the authorisation process is not yet completed as the submission of the ESHIA study to the EPA is planned after the official presentation of plan of development to the Ghanaian authorities. Subsequently, eni Ghana have appointed Environmental Resources Management (ERM) and ESL Consulting to undertake the ESHIA for the Phase 2 activities. The ESHIA will be undertaken in accordance with Ghanaian legislative requirements and will be aligned with the International Finance Corporation (IFC) Performance Standards on Environmental and Social Sustainability.

The Phase 2 Project consists of the following:

- Five non-associated gas (NAG) wells and subsea facilities;
- Minimum gas treating facilities located on the Phase 1 FPSO unit;
- An Onshore Receiving Facility (ORF) where the first gas is expected in 2017.
- An approximately offshore 62 km pipeline from the subsea wells to the ORF; and
- An optional gas pipeline (approximately 10km) connecting the ORF with the existing Ghana National Gas Company Central Processing Facility (GNGC CPF) at Atuabo.

As part of the Scoping Phase of the ESHIA, Eni Ghana is planning to consult with national, provincial, and district stakeholders, traditional leaders and directly affected communities. The purpose of these meetings is to inform stakeholders regarding the proposed Project, and to discuss and record any issues and concerns.

As a significant stakeholder for the implementation of the Project, we cordially request a meeting with you and any other members of your Department at **11:00am on Monday 8th December** at your offices.

Registered Company Address
Environmental Resources Management
Southern Africa (Pty) Ltd
1st Floor, Building 32
The Woodlands Office Park
Woodlands Drive, Woodmead
2148, Johannesburg, South Africa

Company Registration Number
2003/001404/07

Directors
Bruce Walker (Managing)
Grant Bassingthwaighte
Jeremy Soboil
John Simonson (UK)
Tania Swanepoel

A member of the Environmental Resources Management Group

Environmental Resources Management

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Should you require any further information you may contact Mr. Tony Bentil of ESL Consulting (Tel: +233 20 8769258; Email: tonybentil@gmail.com).

We look forward to meeting with you.

Yours sincerely

Mr AK Armah
ESL Consulting

Daniele Strippoli
ERM Partner

Henry Camp
ERM Partner

Cristina Ortuno
ERM Project Manager

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1st December 2014

The Regional Director
Ghana Ports and Harbours Authority
Takoradi Harbour
Takoradi, Ghana

Dear Sir,

Subject: Environmental, Social and Health Impact Assessment (ESHIA) for the Offshore Cape Three Points (OCTP) License Area – Phase 2

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- An approximately offshore 62 km pipeline from the subsea wells to the ORF; and
- An optional gas pipeline (approximately 10km) connecting the ORF with the existing Ghana National Gas Company Central Processing Facility (GNGC CPF) at Atuabo.

As part of the Scoping Phase of the ESHIA, Eni Ghana is planning to consult with national, provincial, and district stakeholders, traditional leaders and directly affected communities. The purpose of these meetings is to inform stakeholders regarding the proposed Project, and to discuss and record any issues and concerns.

As a significant stakeholder for the implementation of the Project, we cordially request a meeting with you and any other members of your Department at **10:00am on Friday 5th December** at your offices.

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2148, Johannesburg, South Africa

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Should you require any further information you may contact Mr. Tony Bentil of ESL Consulting (Tel: +233 20 8769258; Email: tonybentil@gmail.com).

We look forward to meeting with you.

Yours sincerely

Mr AK Armah
ESL Consulting

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27 November 2014

The Director
Friends of the Nation
Adiembra
Sekondi, Ghana

Dear Sir or Madam,

Subject: Environmental, Social and Health Impact Assessment (ESHIA) for the Offshore Cape Three Points (OCTP) License Area – Phase 2

Eni Ghana E&P are proposing to develop the oil & gas resources within the Offshore Cape Three Points (OCTP) Licence Area in two phases. In terms of the Ghana Environmental Assessment Regulations of 1999 (LI 16:52), these activities require an Environmental, Social and Health Impact Assessment (ESHIA) and an environmental licence from the Ghana Environmental Protection Agency (EPA).

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The Phase 2 Project consists of the following:

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- Minimum gas treating facilities located on the Phase 1 FPSO unit;
- An Onshore Receiving Facility (ORF) where the first gas is expected in 2017.
- An approximately offshore 62 km pipeline from the subsea wells to the ORF; and
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As part of the Scoping Phase of the ESHIA, Eni Ghana is planning to consult with national, provincial, and district stakeholders, traditional leaders and directly affected communities. The purpose of these meetings is to inform stakeholders regarding the proposed Project, and to discuss and record any issues and concerns.

As a significant stakeholder for the implementation of the Project, we cordially request a meeting with you and any other members of your Department at **9:00am on Friday 5th December** at your offices.

Registered Company Address
Environmental Resources Management
Southern Africa (Pty) Ltd
1st Floor, Building 32
The Woodlands Office Park
Woodlands Drive, Woodmead
2148, Johannesburg, South Africa

Company Registration Number
2003/001404/07

Directors
Bruce Walker (Managing)
Grant Bassingthwaighte
Jeremy Soboil
John Simonson (UK)
Tania Swanepoel

A member of the Environmental Resources Management Group

Environmental
Resources
Management

2nd Floor
Great Westerford
240 Main Road, Rondebosch
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Fax: +27 (0) 21 686 0736
www.erm.com

Should you require any further information you may contact Mr. Tony Bentil of ESL Consulting (Tel: +233 20 8769258; Email: tonybentil@gmail.com).

We look forward to meeting with you.

Yours sincerely

Mr AK Armah
ESL Consulting

Daniele Strippoli
ERM Partner

Henry Camp
ERM Partner

Cristina Ortuno
ERM Project Manager

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27 November 2014

The Chief Executive Officer
Ghana National Gas Company
Airport
Accra, Ghana

Dear Sir or Madam,

Subject: Environmental, Social and Health Impact Assessment (ESHIA) for the Offshore Cape Three Points (OCTP) License Area – Phase 2

Eni Ghana E&P are proposing to develop the oil & gas resources within the Offshore Cape Three Points (OCTP) Licence Area in two phases. In terms of the Ghana Environmental Assessment Regulations of 1999 (LI 16:52), these activities require an Environmental, Social and Health Impact Assessment (ESHIA) and an environmental licence from the Ghana Environmental Protection Agency (EPA).

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27 November 2014

The Coordinator
OilWatch Ghana
North Legon
Accra.

Dear Sir,

Subject: Environmental, Social and Health Impact Assessment (ESHIA) for the Offshore Cape Three Points (OCTP) License Area – Phase 2

Eni Ghana E&P are proposing to develop the oil & gas resources within the Offshore Cape Three Points (OCTP) Licence Area in two phases. In terms of the Ghana Environmental Assessment Regulations of 1999 (LI 16:52), these activities require an Environmental, Social and Health Impact Assessment (ESHIA) and an environmental licence from the Ghana Environmental Protection Agency (EPA).

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As a significant stakeholder for the implementation of the Project, we cordially request a meeting with you and any other members of your Department at **3:00pm on Wednesday 3rd December** at your offices.

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Yours sincerely

Mr AK Armah
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Daniele Strippoli
ERM Partner

Henry Camp
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Cristina Ortuno
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27 November 2014

The Chief Executive Officer
Ghana National Gas Company
Airport
Accra, Ghana

Dear Sir or Madam,

Subject: Environmental, Social and Health Impact Assessment (ESHIA) for the Offshore Cape Three Points (OCTP) License Area – Phase 2

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As a significant stakeholder for the implementation of the Project, we cordially request a meeting with you and any other members of your Department at **9:00am on Wednesday 3rd December** at your offices.

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27 November 2014

The Country Represntative
Ricerca e Coorperazionne
Labone
Accra.

Dear Sir,

Subject: Environmental, Social and Health Impact Assessment (ESHIA) for the Offshore Cape Three Points (OCTP) License Area – Phase 2

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As a significant stakeholder for the implementation of the Project, we cordially request a meeting with you and any other members of your Department at **8:30am on Thursday 4th December** at your offices.

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Southern Africa (Pty) Ltd
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Woodlands Drive, Woodmead
2148, Johannesburg, South Africa

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ERM Partner

Henry Camp
ERM Partner

Cristina Ortuno
ERM Project Manager

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2148, Johannesburg, South Africa

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2003/001404/07

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27 November 2014

The Director
Wildlife Division of Forestry Commission
Legon
Accra, Ghana

Dear Sir or Madam,

Subject: Environmental, Social and Health Impact Assessment (ESHIA) for the Offshore Cape Three Points (OCTP) License Area – Phase 2

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27 November 2014

The Regional Director
Environmental Protection Agency
P. O. Box MB
Stadium Post Office
Sekondi, Ghana

Dear Sir or Madam,

Subject: Environmental, Social and Health Impact Assessment (ESHIA) for the Offshore Cape Three Points (OCTP) License Area – Phase 2

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09 December 2014

Ahanta West District Assembly

Dear Chief Executive Officer of the District Assembly,

Subject: Environmental, Social and Health Impact Assessment (ESHIA) for the Offshore Cape Three Points (OCTP) License Area – Phase 2

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As a significant stakeholder for the implementation of the Project, we cordially request a meeting with you and any other members of your Department at Ahanta West District Assembly offices on the 9th of December.

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We look forward to meeting with you.

Yours sincerely,

Daniele Strippoli	Henry Camp	Cristina Ortuno
ERM Partner	ERM Partner	ERM Project Manager

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27 November 2014

The Executive Director
Environmental Protection Agency
P. O. Box MB 326
Ministries Post Office
Accra, Ghana

Dear Sir or Madam,

Subject: Environmental, Social and Health Impact Assessment (ESHIA) for the Offshore Cape Three Points (OCTP) License Area – Phase 2

Eni Ghana E&P are proposing to develop the oil & gas resources within the Offshore Cape Three Points (OCTP) Licence Area in two phases. In terms of the Ghana Environmental Assessment Regulations of 1999 (LI 1652), these activities require an Environmental, Social and Health Impact Assessment (ESHIA) and an environmental licence from the Ghana Environmental Protection Agency (EPA).

The ESHIA for Phase 1 was undertaken by ESL Consulting; the authorisation process is not yet completed as the submission of the ESHIA study to the EPA is planned after the official presentation of plan of development to the Ghanaian authorities. Subsequently, eni Ghana have appointed Environmental Resources Management (ERM) and ESL Consulting to undertake the ESHIA for the Phase 2 activities. The ESHIA will be undertaken in accordance with Ghanaian legislative requirements and will be aligned with the International Finance Corporation (IFC) Performance Standards on Environmental and Social Sustainability.

The Phase 2 Project consists of the following:

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- An approximately offshore 62 km pipeline from the subsea wells to the ORF; and
- An optional gas pipeline (approximately 10km) connecting the ORF with the existing Ghana National Gas Company Central Processing Facility (GNGC CPF) at Atuabo.

As part of the Scoping Phase of the ESHIA, Eni Ghana is planning to consult with national, provincial, and district stakeholders, traditional leaders and directly affected communities. The purpose of these meetings is to inform stakeholders regarding the proposed Project, and to discuss and record any issues and concerns.

As a significant stakeholder for the implementation of the Project, we cordially request a meeting with you and any other members of your Department at **8:30am on Tuesday 2nd December** at your offices.

Registered Company Address
Environmental Resources Management
Southern Africa (Pty) Ltd
1st Floor, Building 32
The Woodlands Office Park
Woodlands Drive, Woodmead
2148, Johannesburg, South Africa

Company Registration Number
2003/001404/07

Directors
Bruce Walker (Managing)
Grant Bassingthwaighte
Jeremy Soboil
John Simonson (UK)
Tania Swanepoel

A member of the Environmental Resources Management Group

Environmental Resources Management

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We look forward to meeting with you.

Yours sincerely

Mr AK Armah
ESL Consulting

Daniele Strippoli
ERM Partner

Henry Camp
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27 November 2014

The Director
Fisheries Commission
Ridge
Accra, Ghana

Dear Sir or Madam,

Subject: Environmental, Social and Health Impact Assessment (ESHIA) for the Offshore Cape Three Points (OCTP) License Area – Phase 2

Eni Ghana E&P are proposing to develop the oil & gas resources within the Offshore Cape Three Points (OCTP) Licence Area in two phases. In terms of the Ghana Environmental Assessment Regulations of 1999 (LI 16:52), these activities require an Environmental, Social and Health Impact Assessment (ESHIA) and an environmental licence from the Ghana Environmental Protection Agency (EPA).

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As a significant stakeholder for the implementation of the Project, we cordially request a meeting with you and any other members of your Department at **3:00pm on Tuesday 2nd December** at your offices.

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27 November 2014

The Executive Director
Ghana Maritime Authority
Ridge
Accra, Ghana

Dear Sir or Madam,

Subject: Environmental, Social and Health Impact Assessment (ESHIA) for the Offshore Cape Three Points (OCTP) License Area – Phase 2

Eni Ghana E&P are proposing to develop the oil & gas resources within the Offshore Cape Three Points (OCTP) Licence Area in two phases. In terms of the Ghana Environmental Assessment Regulations of 1999 (LI 16:52), these activities require an Environmental, Social and Health Impact Assessment (ESHIA) and an environmental licence from the Ghana Environmental Protection Agency (EPA).

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As part of the Scoping Phase of the ESHIA, Eni Ghana is planning to consult with national, provincial, and district stakeholders, traditional leaders and directly affected communities. The purpose of these meetings is to inform stakeholders regarding the proposed Project, and to discuss and record any issues and concerns.

As a significant stakeholder for the implementation of the Project, we cordially request a meeting with you and any other members of your Department at **1:30pm on Tuesday 2nd December** at your offices.

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27 November 2014

The Chief Director
Ministry of Energy and Petroleum
Ministries
Accra, Ghana

Dear Sir or Madam,

Subject: Environmental, Social and Health Impact Assessment (ESHIA) for the Offshore Cape Three Points (OCTP) License Area – Phase 2

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As part of the Scoping Phase of the ESHIA, Eni Ghana is planning to consult with national, provincial, and district stakeholders, traditional leaders and directly affected communities. The purpose of these meetings is to inform stakeholders regarding the proposed Project, and to discuss and record any issues and concerns.

As a significant stakeholder for the implementation of the Project, we cordially request a meeting with you and any other members of your Department at **11:00am on Tuesday 2nd December** at your offices.

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3rd December 2014

The Regional Director
Fisheries Commission
Beach Road
Takoradi, Ghana

Dear Sir or Madam,

Subject: Environmental, Social and Health Impact Assessment (ESHIA) for the Offshore Cape Three Points (OCTP) License Area – Phase 2

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As a significant stakeholder for the implementation of the Project, we cordially request a meeting with you and any other members of your Department at **12:30pm on Monday 8th December** at your offices.

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09 December 2014

Shama District Assembly

Dear Chief Executive Officer of the District Assembly,

Subject: Environmental, Social and Health Impact Assessment (ESHIA) for the Offshore Cape Three Points (OCTP) License Area – Phase 2

Eni Ghana E&P are proposing to develop the oil & gas resources within the Offshore Cape Three Points (OCTP) Licence Area in two phases. In terms of the Ghana Environmental Assessment Regulations of 1999 (LI 16:52), these activities require an Environmental, Social and Health Impact Assessment (ESHIA) and an environmental licence from the Ghana Environmental Protection Agency (EPA).

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The Phase 2 Project consists of the following:

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As part of the Scoping Phase of the ESHIA, Eni Ghana is planning to consult with national, provincial, and district stakeholders, traditional leaders and directly affected communities. The purpose of these meetings is to inform stakeholders regarding the proposed Project, and to discuss and record any issues and concerns.

As a significant stakeholder for the implementation of the Project, we cordially request a meeting with you and any other members of your Department at Shama District Assembly offices on the 9th of December.

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Environmental Resources Management
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We look forward to meeting with you.

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Daniele Strippoli	Henry Camp	Cristina Ortuno
ERM Partner	ERM Partner	ERM Project Manager

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Tania Swanepoel

A member of the Environmental Resources Management Group

Appendix B

Background Information Document (BID)

Offshore Cape Three Points License Area
Phase 2 Development
Environmental Impact Assessment
Background Information Document
December 2014

Purpose

The purpose of the Background Information Document (BID) is to provide information about the proposed Phase 2 Development and the Environmental Impact Assessment (EIA) process, and to invite comment or concerns.

Background

The Offshore Cape Three Points (OCTP) block licence is located approximately 60 km offshore in the Western Region of the Republic of Ghana (*Figure 1*). The area is licenced by a joint venture between eni Ghana, Vitol, and the Ghana National Petroleum Corporation. Eni Ghana is the operator.

The licence area is being developed in two phases. The Phase 1 Development is an oil production project. It consists of 8 oil production wells, 3 water re-injection wells, and 3 associated gas injection wells. Oil from the wells would be transferred to a double-hulled Floating Production, Storage and Offloading (FPSO) unit that would be located about 60 km offshore. The first oil production is planned for 2017.

The EIA for the Phase 1 Development has been conducted. Stakeholder engagement activities took place between June 2012 and November 2013. The draft ESHIA report is planned to be submitted to the Ghana EPA soon after the official presentation of plan of development to the Ghanaian authorities.

Phase 2 Development

The Phase 2 Development (*Figure 2*) is a gas production project with the first gas production planned for 2018. The development infrastructure consists of:

- 5 subsea NAG wells;
- Subsea umbilicals, risers and flowlines from the five NAG wells to the existing FPSO;
- Offshore 63 Km long pipeline from FPSO to shore;
- Onshore pipeline from shore approach to Onshore Receiving Facility (ORF);
- ORF including compression station, accommodation camp, warehouse, workshop, firefighting station and medical facility. (Figure 2).
- Export Onshore pipeline: there are two options under evaluation; the base case foreseen a tie-in in the existing GNGC sales gas pipeline, while the optional case, foreseen a 10 km long onshore pipeline from ORF to GNGC CPF in Atuabo.

Activities associated with the Phase 2 Development construction include drilling, completion and connection of the wells, laying and testing of the subsea facilities and pipeline to ORF, site clearance and construction of the ORF. Activities associated with the construction of the optional pipeline include laying of the pipeline and testing.

Once operational, gas will be produced, transferred, and gathered at the Phase 1 FPSO unit. Gas will be sent by pipeline to the ORF. At the ORF the gas will be combined with the gas from the GNPC CPF and sent to users. As an option, gas would instead be sent from the ORF to the GNPC CPF by a new pipeline where it would be processed and sent to users.

Environmental Impact Assessment (EIA)

eni Ghana has appointed Environmental Resources Management (ERM) to conduct the EIA. The EIA will be conducted in accordance with the requirements of the Ghana Environmental Assessment Regulations of 1999 (LI 16:52). The EIA will also be conducted in consideration of the environmental and social performance standards of the International Finance Corporation (IFC).

The EIA will assess the positive and negative environmental, social, and health impacts of the project. The EIA will describe the plans to be put in place to mitigate and manage impacts. The EIA process will include engagement with the government and community and civil society stakeholders to obtain their views. The EIA report, along with stakeholder comments will be submitted to the Ghana EPA for approval.

Potential Impacts

The EIA will include the identification and assessment of key environmental, social and health impacts on the marine and terrestrial environment as well as impacts on the local communities and their activities (*Table 1*).

Potential effects impacts from construction include impact to air quality, water quality, terrestrial and marine ecology, and communities. Land acquisition has the potential to impact livelihoods and landscape. Impacts will be generally limited to the project footprint and the immediate area. Impacts during operation are anticipated to be related to the FPSO operations and to land acquisition.

Figure 1: Project Locality Map

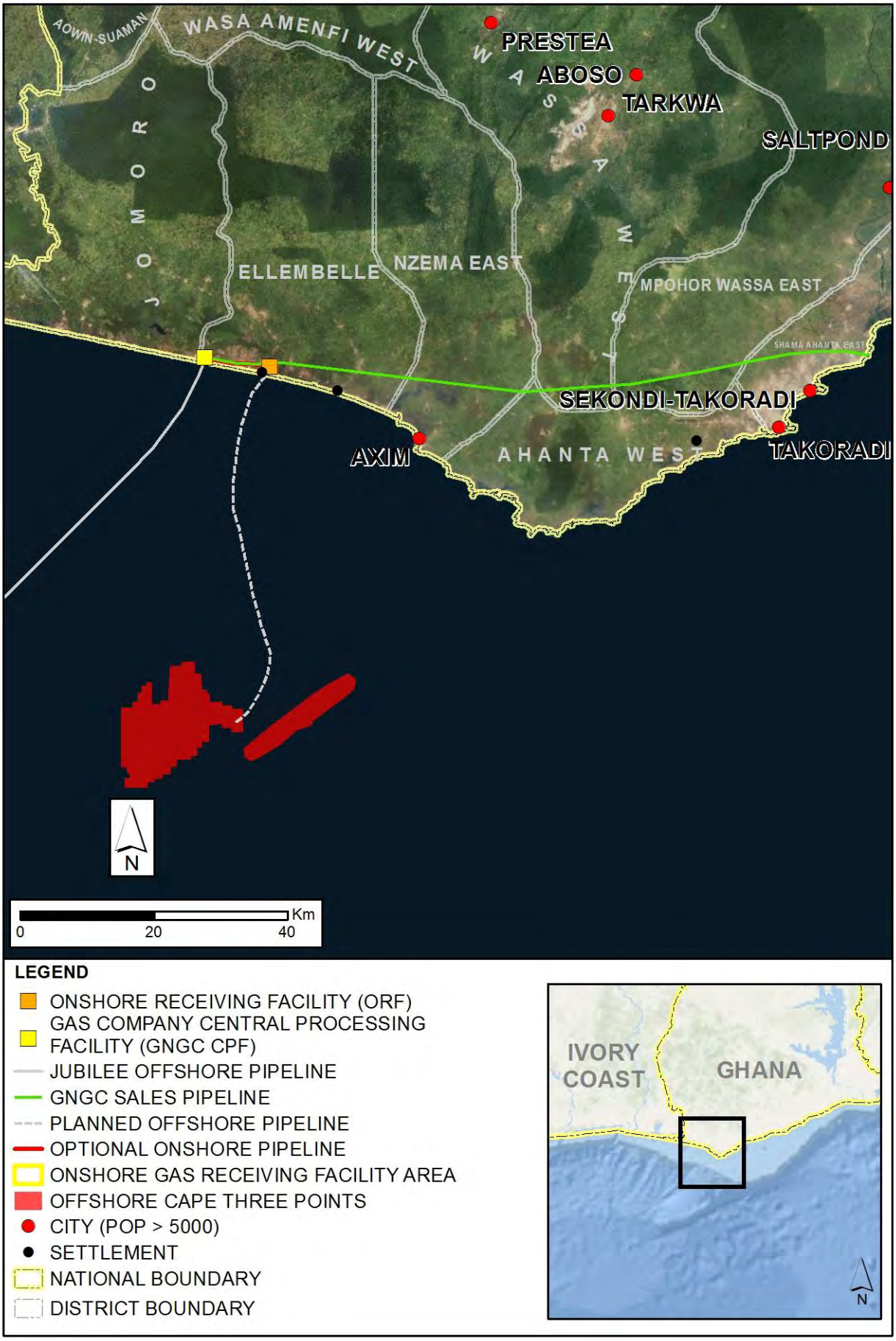


Figure 2: Project Locality Map – Detail of Onshore Area

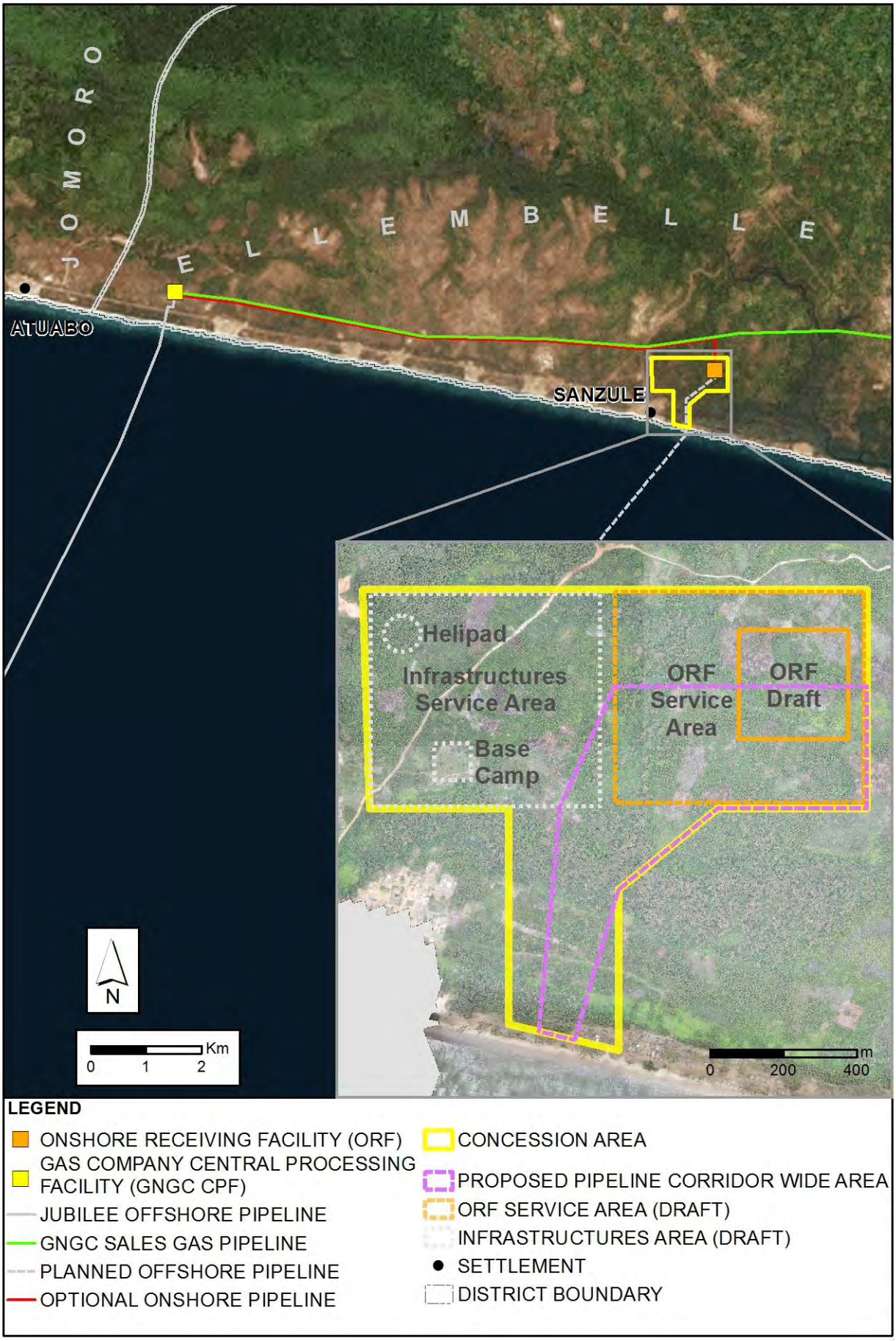


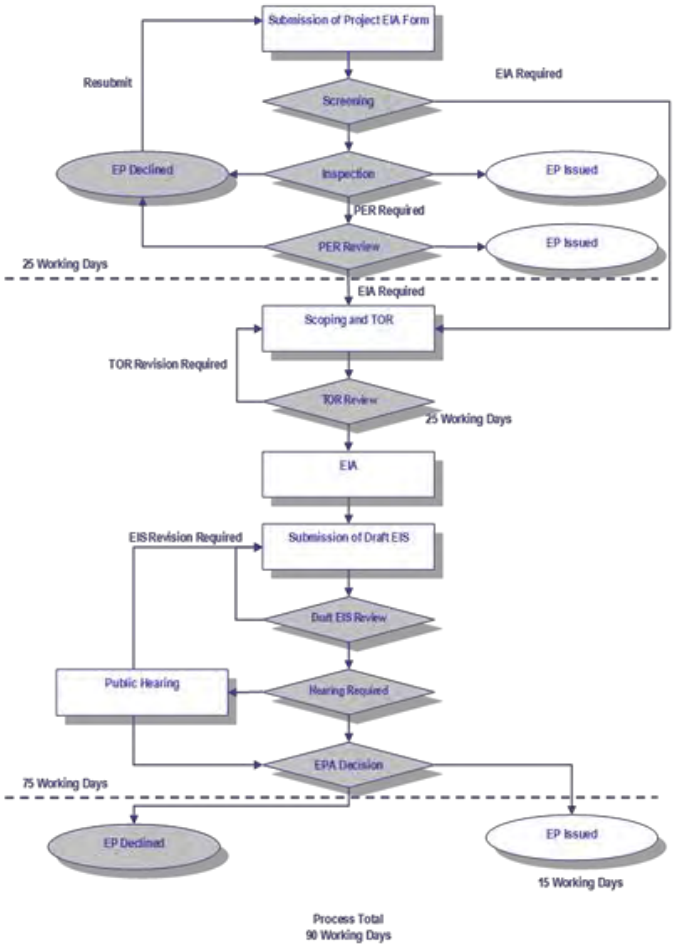
Table 1: Preliminary List of Key Environmental, Social and Health Impacts of the Project

Project Stage	Activity	Action	Potential Impact
Wells Drilling	Drilling Activities	Drilling system installation and removal	Damage to small organisms living on the seabed. Disturbance of sediments on the seabed.
		Drilling system operation	Emission of pollutants to the air Creating underwater noise.
		Drilling cuttings discharge	Damage to small organisms living on the seabed.
		Production test	Emission of pollutants to the air.
Well heads installation and removal	Well heads installation and removal	Installation/removal activities	Damage to small organisms living on the seabed. Disturbance of sediments on the seabed. Creating underwater noise.
Well heads Operation	Normal operating Procedures	Presence of production structures Protection of structures against corrosion (anodes)	Emission of pollutants to the air. Mobilisation and re-suspension of sediments. Increased availability of organic matter. Release of pollutants and metals in solution.
FPSO operation (cumulative impacts of Phase 1 and Phase 2 development projects)	Process normal operating conditions	Process operation and produced water discharge	Emission of pollutants to the air. Release of cooling water (hot waste water). Creating underwater noise. Release of biocides and pollutants into the sea.
		Offloading activities	Release of pollutants and metals in solution. Release of engine cooling water (hot waste water). Creating underwater noise. Emission of pollutants to the air.
Use of support vessels			Release of pollutants and metals in solution. Release of engine cooling water (hot waste water). Creating underwater noise. Release of nutrients (sewage). Emission of pollutants to the air. Disturbance of fishing.
Installation of subsea pipeline	Pipeline installation (and removal)		Damage to small organisms living on the seabed. Disturbance of sediments on the seabed. Disturbance of fishing. Displacement of fisherman from fishing zones
Site preparation and construction of gas plant and onshore pipeline	Site preparation	Levelling of site for construction of the gas receiving facility Clearing of pipeline right of way New roads construction Vehicle movement	Removal of vegetation. Habitat fragmentation or disruption Disturbance of fauna. Removal of topsoil Change in surface water flow. Emission of pollutants to the air / soil contamination. Creating noise. Physical and economic displacement (of people, cultural sites and crops resulting in temporary/ permanent loss of property and loss of access to land and or natural resources).
	Construction and installation	Construction of receiving facility Pipeline construction Vehicle movement	Creating noise. Emission of pollutants to the air / soil contamination. Release of nutrients (sewage). Disturbance of fauna. Employment. Influx of workers Changes in demographics, sociocultural institutions and sense of place of surrounding communities.
	Commissioning and Operation	Commissioning of receiving facility	Creating noise. Emission of pollutants to the air. Employment.
All	Accidental events	Collisions, ruptures, blowout	Oil spills (fuel oil) Emission of pollutants to the air. Impacts on marine biodiversity

The ESHIA Process in Ghana

The ESHIA will be carried out in line with the process specified by the Ghana EPA and will include the following steps:

1. Registration of the proposed development with Ghana EPA for Screening
2. Initial stakeholder consultation
3. Preparation and submission of a Scoping Report to EPA followed by disclosure
4. Collection of environmental, social and health data for the area.
5. Further consultations with key stakeholders.
6. Submission of an Environmental Impact Statement (or ESHIA Report) (including an Environmental Social and Health Management Plan (ESHMP)) to Ghana EPA.
7. Disclosure of the EIS to the public (possibly including public meetings).
8. Decision by the EPA on authorisation for the Project.



Invitation to Comment

You are invited to participate in the ESHIA process and to note any issues and concerns you may have about the proposed project.

Your comments are a key part of the ESHIA process and it is important that your support or concerns are noted so that these can be responded to and assessed.

Please use this form to register any comments or else, please do not hesitate to send an email or write separately. To be kept informed throughout the ESHIA process please register as an Interested and Affected Party. To register, please send this form or provide your details to the addresses given below.

Name: _____

Organisation: _____

Position: _____

Address: _____

Telephone: _____

Mobile: _____

Email: _____

Please post or fax or email this form to the following address:

ESL Consulting Limited
Contact: Mr. AK Armah

Tel: +233-302-683206/514614
Email: akarmah@yahoo.com or info@eslghana.com
Address: ESL Consulting Ltd, PO Box LG 239 Legon, Ghana

eni Ghana Exploration Production limited
Contact: Mr. Juan Deffis

Tel: + 233-302 761 790 ext 227
Email: juan.Deffis@enighana.eni.com
Address: 111 Floor Una Horne Building, No. 12 Airport Bypass
Airport City PMB KA 185 Accra, Ghana.

Stakeholder Comment Sheet

It would be useful if you could answer the questions below but please feel free to provide any comments you would like to raise. Please continue on additional paper if required.

1. What are the primary concerns and or benefits faced by you/your community/your organisation with regards to this development?

_____

_____

_____

_____

_____

2. In your opinion, what are the positive and negative aspects of the proposed Project?

_____

_____

_____

_____

_____

3. Do you have information regarding the environment, community or health status in the general project area which you think is relevant? (If so, please include here)

_____

_____

_____

_____

_____

Thank you for your participation

Additional Stakeholder Comments

-

Appendix C

Copies of Meeting Registers

ENI OCTP Phase II ESIA

Attendance Register

Date: 02/12/2014

Location/ Village Name: ACCRA Stakeholder: EPA

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
MR. EBENEZER APPAH-SAMPONG	EPA	Ag. ES/TECHNICAL	0277163050	P.O. Box M326 ACCRA	Kwabenaappahsampong@yahoo.com	
MR. LARRY KOTOE	EPA	PROGRAMME OFFICER	0262165575	✓	Larrykotoe@gmail.com	
Henry Cooper	ERM	Partner	+27 730743646	Cape Town	henry.cooper@gmail.com	
A.K. ARMAH	ESL	CEO	0244777707	P.O Box LG239 LEGON	akarmah@yahoo.com	
Mr. Juan Manuel Delfis	eni Ghana	HSE&CI Mgr.	0544334993	Una Home building Airport Residential	juan.delfis@enighana.com	
MRS. CRISTINA ORTUÑO	ERM	CONSULTANT	+34607116224	MADRID	cristina.ortuno@erm.com	
Anthony Bentil	ESL	Consultant	0205769258	Legon. Accra	tonybentil4@gmail.com	

ENI OCTP Phase II ESIA

Attendance Register

Date: 02/12/14

Location/ Village Name: ACCRA Stakeholder: MINISTRY OF ENERGY & PETROLEUM

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
PROF T. M ARABOM.	MINISTRY OF ENERGY & P	CHIEF DIRECTOR	0202921723	SD 40, STADIUM RD ACCRA	takab2990 gmail.com	
Henry Camp	ERM	Partner	+27 710743646	Cape Town	henry.camp e erm.com	
Juan Manuel Deffis	eni Ghana	HSE&CI Mgr	+233 544334993	Vue Home Bldg. Airport Residential	juan.deffis@enighana.eni.com	
CRISTINA ORTUÑO	ERM	consultant	+34 607 116 224	MADRID	cristina.ortuno	
KWASI TWUM ADDO	MIN. OF ENERGY & PETROLEUM	DEPUTY DIRECTOR	+233 244 3263 64	SD 40, STADIUM RD., ACCRA	ktaddo@energymin.gov.gh	

ENI OCTP Phase II ESIA

Attendance Register

Date: 02/12/14

Location/ Village Name: ACCRA Stakeholder: WILDLIFE DIVISION OF FORESTRY COMMISSION

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
NANA KOFI ABU-NSIAH	FORESTRY COMMISSION WILDLIFE DIVISION	EXECUTIVE DIRECTOR	0244187143	P.O. BOX MB 239 ACCRA	adunsiah@yahoo.com	
CLETUS NATEG	FORESTRY COMMISSION-WD.	DIR. OF OPERATIONS	0244722152	- Do -	kcnateg@ymail.com	
ANDREW IKWEI AGYARE	FORESTRY COMMISSION	OPERATIONS MANAGER	0208888100	—)-	akagyare-ae@yahoo.com	
Anthony Bentil	ESL	Consultant	0208769258	Legon	tonybentil@gmail.com	
A. K. Armah	ESL	CEO	0244771707	Legon	akarmah@yahoo.	
CRISTINA ORTUÑO	ERM	CONSULTANT	+34 607 116224	MADRID	cristina.ortuno@erm.com	
Henry Camp	ERM	Partner	+27 790743646	CAPETOWN	henry.camp@erm.com	

ENI OCTP Phase II ESIA

Attendance Register

Date: 02/12/14

Location/ Village Name: ACCRA Stakeholder: FISHERIES COMMISSION

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
SAMUEL QUANTEY	FISHERIES COMMISSION	DIRECTOR	0208163342	P.O. Box GP630	samquantey@yahoo.com	
SAMUEL D. MANU	FISHERIES COMMISSION	HEAD POST HARVEST	0244571903	✓	sdmanu@yahoo.com	
NEMORIUS N. PENG-YIR	Fisheries Commission	Deputy Director Head Administration & Operations Division	0208149687	P.O. BOX GP630 ACCRA	npengyir@yahoo.com	
MATILDA QUAST	FISHERIES COMMISSION	REP. DIRECTOR MARINE FISHERIES MCT DIV.	0208112230	✓	matildaquast@yahoo.co.uk	
DORIS YEBOAH	FISHERIES COMMISSION	HEAD MONITORING & EVALN	0242774779	✓	ncosffpgh@yahoo.co.uk.	
Dr Peter Ziddah	FISHERIES COMMISSION	HEAD, AQUATIC ANIMAL HEALTH	0244254048	✓	peterzid@yahoo.com	
Emmanuel Angee	Fisheries Commission	Head: Inland Fisheries and Aquaculture Div.	0502169625	✓	Osubibibio@yahoo.com	
JUAN M. DEFFIS	eni Ghana	HSE & CI Mgr.	0544336993		juan.deffis@enijuba.eni.com	
CRISTINA ORTUÑO	ERM	CONSULTANT	+34607116224	MADRID	cristina.ortuno@erm.com	
Henry Camp	ERM	Partner	~~+44~~ +27 791074364 6	Cape Town	henry.camp@erm.com	
Anthony Henry Al.	Bentil Okine	ESL ESL	Consultant Consultant	0208769258 cell 3578896	Accra Accra	tonybentil@yahoo.com henryjustice@yahoo.com

ENI OCTP Phase II ESIA

Attendance Register

Date: 03/12/14

Location/ Village Name: ACCRA. Stakeholder: PETROLEUM COMMISSION

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
C IC James	P C	Mgr HSSE	0208180264	PC	Charles.James@petrocom.gov.gh	
Alfred Ayah	PC	HSSE	0244517468	P.O. Box 228 Cantonments, Accra	alfred.ayah@petrocom.gov.gh	
Ishmael Amegah	PC	HSSE	0243138233	— do —	ishmael.amegah@petrocom.gov.gh	
Benjamin Kofie	P C	HSSE	0549293024		benjamin.kofie@petrocom.gov.gh	
Anthony Bentil	ESL	Consultant	0208769250	Ngm	tonybentil@gmail.com	
Henry Okine	ESL	Consultant	0243575890	✓	henryjustice@yahoo.com	
JUAN MANUEL BETTIS	eni GHANA	HSE & CI Mgr	0544334993	Airport Residential	juan.bettis@enighana.eni.com	
CRISTINA ORTUÑO	ERM	CONSULTANT	+34607116224	MADRID	cristina.ortuno@erm.com	

ENI OCTP Phase II ESIA

Attendance Register

Date: 04/12/14

Location/ Village Name: ACCRA Stakeholder: RICERCA - E COOPERAZIONE

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Dr. Gianna Da Re	Ricerca e Cooperazione	Country Rep	024.4255089 0302-792090	P.O. BOX 348	g.dare@ongpc.org	
Juan Manuel Beffis	eni Ghana E&P	HSE&CI Mgr.	0544334993	Ovalhome Bldg	juan.beffis@enighana.eni.com	
Henry Camp	ERM	Partner	+27 79 0745641	Cape Town	henry.camp@erm.com	
CRISTINA ORTUÑO	ERM	CONSULTANT	+34 607116224	MADRID	cristina.ortuno@erm.com	
Anthony Bentil	ERM	Consultant	0208769258	Legon	tonybentil@gmail.com	

ENI OCTP Phase II ESIA

Attendance Register

Date: 04/12/14

Location/ Village Name: TEMA Stakeholder: GHANA NATIONAL PETROLEUM CORPORATION

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Seth Foli	GNPC	HSE Officer	0503883458	PMB, Tema	S.foli@gnpc ghana.com	
Edith Moses	GNPC	HSE officer	0244794447		e.moses@gnpcgha .com	
Gyamfua-Amoh	GNPC	HSE Trainee	0266796600	P.O.Box 11098 Tema	gyamiesam@ gmail.com	
Nii Kotey Amasa	GNPC	~~ASSISTANT~~ ASSISTANT HSE OFFICER	020-8944221	HARBOUR ROAD, PMB, TEMA	nk.amasa@ gnpcghana.com	
PHILOMENA DONKOR	GNPC	HSE OFFICER	0268499674	AMERICAN RD PMB, TEMA	p.donkor@gnpcghana.com	
~~Kennedy Ebo~~	GNPC	EHS officer	0244103440	PMB Tema	kka.edor@gnpc.com	
Samuella Addo-Yobo	GNPC	N.S.P	0576072828	PMB, Tema	muelayne16@ gmail.com	
GOMAH AHMED SALIM N.	GNPC	NSP	0206765743	P.O Box CT 4444, Accra	gomahsalim@gmail.com	
Henry A. Okine	ESL	Consultant	0243575890	Legon	henryjustice@ yahoo.com	
Anthony Bentil	ESL	Consultant	0208769218	Legon	tonybentil@gmail.com	

ENI OCTP Phase II ESIA

Attendance Register

Date: 04/12/14

Location/ Village Name: ~~TAKORADI~~ TEMA Stakeholder: GHANA PORT & HARBOUR AUTHORITY

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Surveyor James Ben Gaisie	GPHA	Estate & Environment Manager	0271655795	P. O. Box 150 Tema	jgaisie@ghanaports.net.	4/12/14
Komla Ofori	~~GPHA~~	Project Engineer		P.O. Box 150 Tema	kofori@ghanaports.net	4/12
Okoo Lonsdale	GPHA	Princ Estate & Envir Supervisor	0245625888	P. O. Box 150 Tema	lonsdaleoneogh@yahoo.com	
Henry Okine	ESL	Consultant	0243575890	Legon	henryjustice@yahoo.com	
Anthony Berte	ESL	Consultant	0208709780	Legon	—	AB
JUAN MANUEL DEFFIS	eni Ghana exp	HSE & CI Mgr	0544334993	Airport residential Una Home Bldg	juan.deffis@enighana.eni.com	
Henry Camp	ERM	Partner	+27 790743646	Henry Cape Town	henry.camp@erm.com	
CRISTINA ORTUÑO	ERM	CONSULTANT	T34607116224	MADRID	cristina.ortuno@erm.com	

ENI OCTP Phase II ESIA

Attendance Register

Date: 5/12/2014

Location/ Village Name: FON Office, Takoradi Stakeholder: Friends of the Nation

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Mr. Kwesi Randolph JOHNSON	Friends of the Nation	Community Dev. Coordinator	0544858474	C/o MC 11 Takoradi	K.johnson@fonghana.org kbr.johnson@outlook.com	
Mr. Solomon Kusi Ampofo	Friends of the Nation	Extractive Industry Program Office	0244055951	P.O. Box MC11 Takoradi	S.ampofo@fonghana.org	
Henry Camp	ERM	Partner	+27 710743646	Cape Town	henry.camp@erm.com	
CRISTINA CORTUÑO	ERM	CONSULTANT	+34607116224	MADRID	cristina.cortuno@erm.com	

ENI OCTP Phase II ESIA

Attendance Register

Meeting at Date: 5/12/14

Location/ Village Name: Planter's Hotel Stakeholder: Conservation Foundation

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Alfred K. Grimes	Conservation Foundation	Administrator & Accounts Officer	0203400125	Agama Ahanta Box AH 77	Conservation_Foundation@	
Henry Comp	ERM	Partner	+27 79 074 3C4	Cape Town	Yahoo.com henry.comp@erm.com	
CRISTINA ORTUÑO	ERM	CONSULTANT	+34 607 116 224	MADRID	cristina.ortuno@erm.com	

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MEETING ATTENDANCE REGISTER

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Fax Number	Postal Address	Email Address
Mr. Shine Figagome	EPA	Chief Programme Officer	0501301697		P. O. Box 219 Sekondi	shine.figagome@epa.gov.gh
Ing. Hakeem Seidu	EPA	Ass. Prgrme offic	0501301700		P. O. Box 219, Sekondi	hakeem.seidu@epa.gov.gh
OINUSU-BERKO	MARINE POLICE	DIRECTOR MARINE POLICE, RLY & PORTS	0540528800		P. O. Box 146 SEKONDI-TAKORADI	bowusu57@yahoo.com
OSEI CHARLES	MARINE POLICE	OPERATIONS MARINE POLICE	0208174613		P.O. Box CC, Sekondi	Oseiagyemangcharley@gmail.com
HOPE Hanyin	WRCC	Ag. RCO	0245212837		P.O.Box 204 Sekondi	hopehanyin@yahoo.com

MEETING ATTENDANCE REGISTER

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Fax Number	Postal Address	Email Address
Edward Nelson	WRCC	Asst Stent Director	0242214815 0242214816		Box of Sekondi	xnelson2005@yahoo.com.
Alfred Ekow Coyan	WRCC	DRM	0244 201216		✓	abbottcplus@gmail.com
Basil Kondoh	EDC	Oil & Gas Projekt Manager	024 4562616		Box AX 1996 Takoradi	~~bakot~~ basil.kondoh@edcghana.org
Capt. Owusu-Koranteng	GPHA TKD	DOF	0242919818		Box 248 TAKORADI	owusu-koranteng@ghanaports.net
Alex Sarbah	Fisheries Commission	Director, Western Region	0244517498			alexsabah66@yahoo.com

eni

MEETING ATTENDANCE REGISTER

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Fax Number	Postal Address	Email Address
Michael Kpingbi	Ghana Tourism Authority.	Acting Regional Manager	020821 9991	03120223 601	Box TD 781 Takoradi	Kmichael_life1@live.com
Ebenezer Collins Bordoh	Ghana Museums and Monuments Board	Principal Museum Curator	02448 88020		Box 281 (Cape Coast Castle) Cape Coast	ec_bordoh@yahoo.com
MARK AMENYO-XA	GHANA MUSEUMS & MONUMENTS BOARD	ASST. ADMIN. OFFICER	0243 901389		P. O. Box 281 CAPE COAST	seyramx@yahoo.com
Essel-Blankson	GMMB. Cape coast castle	Snr. Museum Educator	0244 741678		P. O. Box 281 Cape Coast	blankson2000@yahoo.com
DAVID HALM	GPHA TD	ESTATE & ENVIRONMENT MANAGER	024457 5090		Box 708 TAKORADI	

ENI OCTP Phase II ESIA

Attendance Register

Date: 03/12/2019

~~Location/ Village~~ Name: Ellembelle DA Stakeholder:

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Mr. Ted Tetteh	EDA	District Env. Health Off.	0275842002	Box 34, Nkwaful	tedtetteh2014@yahoo.com	
Mr Samuel Appartaim	EDA	District finance officer	0277200185	Box 34 Nkwaful	seapparte yahoo.com	
Mr. Koame Nackson	EDA	Procurement officer	0242548158		dkoame@yahoo.com	
Kwabena Asiedu-Bedicka(MGIP)	EDA/TCPD	Town Planning officer	0270996580	P.O. Box 5816 Accra-North	asibedk@yahoo.com	
Derricic Obeng	EDA/D.P.C	Dist. plann. officer	0244939179	Box 321 Nkwaful	derricicobeng80@yahoo.com	
WILLIAM TEI-KROFI	(DWE)EDA	Dist. Works Engineer	0244678562	Box 34 Nkwaful	wteikrofi@yahoo.com	
INNOCENT HAUGHTH	EDA	Ag. Co-ord Director	0244865823	Box 34 Nkwaful	kojohaligah@yahoo.com	
Felix Mensah	DBA	Budget Officer	0547871287	Nkwaful	mefelizo@yahoo.com	

ENI OCTP Phase II ESIA

Attendance Register

Date: 05/12/2014

Location/ ~~Village Name~~: ~~Jodoro~~ Half assini Stakeholder: JODORO DA

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Stephen Q. Williams	JDA	District Finance Officer	0208188602	Box 72 Half Assini	southchia@yahoo.com	
John Jengafe Abotar	JDA	District Budget Officer	0547123239	Box 72, Half Assini	[illegible]@yahoo.com	
Jalil Ali Mahama	JDA	District Planning officer	0207404362	✓	aliabduljalil@gmail.com	
EMMANUEL ARMOO	J.D.A.	DIST-COMMUNITY DEV'T OFFICER	0249218325	Box 72 H/Assini		
SAMUEL [illegible]UAN	JDA	ASSISTANT DIRECTOR II/A	0247087624	✓ ✓	odoisamuel20@yahoo.com	
ABUDU AMADU	JDA	DIST. CO-ORD DIRECTOR	0244720682	Box 72 H/ASSINI	abuduamadu4@gmail.com	
RAYMOND SEWORH	JDA	~~DEPUTY~~	0244892048	✓	raymondbks96@yahoo	

ENI OCTP Phase II ESIA

Attendance Register

Date: 05/12/14

Location/ Village Name: Half Assini Stakeholder: Fisherman of Half Assini

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Nana Emma Odwire	Fishing	Chief Fisherman	0245065869	Box 170 H/Assini		
Paul Forson	✓	Sec To C/fisherman	0240527739	✓ ✓ ✓		
/	/	/	/	/	/	/
/	/	/	/	/	/	/
Vocational School Tanshi → 04/12/14						
NATHANIEL ABORABORAH	C.D.T.I SANZULE	DEPUTY MANAGER	0249112614 0205412181	BOX H6 ESIAMA.	firstnathaniel@gmail.com.	
ELIZERBETH IKESSON	C.D.T.I SANZULE	Secretary	0241159794	BOX 46. ESIAMA		

ENI OCTP Phase II ESIA

Attendance Register

Date: 2/12/14

Location/ Village Name: REGIONAL Stakeholder:

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Dr. E K TINKORANG	WR REG. HEALTH DEPT.	REG DIRECTOR	0248644384	P.O Box 242 Sekondi	ektinkorang@yahoo.co.uk	
Mrs Elizabeth Corney	Dist Health Directorate Ellembelle	DDHS	0243165040 0271634534	P. O. Box 38 Half Assini	elizabethcorney directorg@gmail.com	
Mr. Cephas Abebe	finance officer	ELLEMBELE DISTRICT HEALTH	0209175237 0547154054	P.O. Box 1 Eremo	abebe30 2005 @ yahoo.com	

BELINDA Consulting

ATTENDANCE SHEET

DATE 08/12/14

LOCATION AXIM

STAKEHOLDER Chief Fishermen

	NAME	ORGANIZATION	POSITION	PHONE NO.	ADDRESS	EMAIL	SIGNATURE
1	C. K. ATTAH		Secretary	0509446174	c/o Box 69, Axim		Attah
2	NANA ETWE AZANE Chief Fisher		Chief Fisherman	0200653895	c/o Box 69, Axim		
3	KOFI YANKEY		ELECTRICIAN	0248483880	c/o Box 69 Axim		
4	Uncle Kobina Mason		Fisherman		c/o Box 69 Axim		for ck.
5	Uncle Ebukalo		Fisherman		c/o Box 69		for ck.

ATTENDANCE SHEET

DATE: 8/12/14

LOCATION: UPPER DISCOVE

STAKEHOLDER: chief Fishermen

NAME	ORGANIZATION	POSITION	PHONE NO.	ADDRESS	EMAIL	SIGNATURE
Nana Kwaneng Akyeampong	Fishers	chief Fisherman Upper Discove	0233755642	Upper Discove	—	

ATTENDANCE REGISTER

DATE: 8/12/

LOCATION : NZEMA EAST MUNICIPAL, AXIM

STAKEHOLDER : District Assembly officials

NAME	ORGANIZATION	POSITION	PHONE NO.	ADDRESS	EMAIL	SIGNATURE
Dominic Boadu-Ayebeafo	NEMA	AD IIB	0208800150	Box 25, Axim	dominicayebeafo@yahoo.com	
ISAAC KWAKYE	NEMA	MCD	0244804515	Box 25, Axim	nackycc@yahoo.com	
Kwabena Kesseh	HRM/NEMA	HRM	0244095437	Box 25, Axim	kwabena_kesseh@yahoo.com	
JOHN TETTEH DOKU	ENV. HEALTH	DEP. METH	0203993164	BOX 25, Axim	djohntetteh@yahoo.com	
Emmanuel Azunu	Int. Audit	Snr. Int. Audit	0547777668	P.O. BOX 25 Axim	azzucco@gmail.com	
Kingsley Ofori	NEMA	MFO	0207095022	Box 25, Axim	0207095022	
Eric Tekpor	"	MME	0208447948	"		

ATTENDANCE REGISTER

DATE: 9/12/14

LOCATION: ESIAMA

STAKEHOLDER: Fishermen FGD.

NAME	ORGANISATION	POSITION	PHONE NO.	ADDRESS	EMAIL	SIGNATURE
Nana Kofi Bekoe		Chief Fisherman	0200653508	Esiama		
kwesi Kansa		Fisherman	0502901242			
Emmanuel Asamah			0502103483			
Kwamuku		Fisherman				
Accra boy		fisherman	0509441707			
Prah						
Francis			0200653508			
George blra			0547084213			
Emmanuel kwofie			02784335 1			
pan kwesi			0271974767			
Darkwah sephpen			0578493509			
Yaw Hamond			0543627333			
DEDE Samuel Bekoe		Fisherman	0503 [illegible] 518			
Mohammed Mozu		Fisherman				

ENI OCTP Phase II ESIA

Attendance Register

Date: 08-12-14

Location/ Village Name: SHAMAH Stakeholder: FISHERMEN

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Nana Efirimu(IV)	G.N.C.F.C.	Chief fisherman	0248449155	Box 16 Shama		
Frank Pegu	GNCFC	Assemblyman	0248 4455	Box 16		
Emmanuel O. Tecco	GNCFC	Mechanics	0265690379 0248332406	BOX 40		
Awortwi Asperkwa	✓ ✓	Fisherman	0207073728			
Yakubo	✓ ✓	Fisherman				
Kwesi Nkrumah		Fisherman	0243703349			
Kweku Bedu			0236719312			
Papa Kofi Essoun			0540999017			
Papa Kwasia	Ansah		0264510449			
Magya Kojo			0552447179			

eni ERM

ENI OCTP Phase II ESIA

Attendance Register

LVL Consulting

Date: 08 - 12 - 2014

Location/Village Name: SEKONDI Stakeholder METRO. CITY OF DEVELOPMENT PLANNING OFFICER

Title, First name & Surname	Organization name	Position in organization	Telephone/Cellphone numbers	Postal Address	Email Address	Signature
METRO DEV. PLANNING OFFICER	SEKONDI —	HEAD OF	0244734284	P.O. Box	hlowusi @	
HENRY	TAKORADI	DEVELOPMENT		74	yahoo.com	
OKUSU	METRO. ASSEMBLY	PLANNING		SEKONDI		

ENI OCTP Phase II ESIA

Attendance Register

Date: 09/12/14

Location/Village Name: Shama **Stakeholder** Shama District Assembly

Title, First name & Surname	Organization name	Position in organization	Telephone/Cellphone numbers	Postal Address	Email Address	Signature
Hon. Enoch K. Appiah	Shama Distrial Asse	Hon. Distrial Chief Execut	0208476973	Box 37 Shama	shandolf acc @yahoo.com	
Samsudeed S. Kassim	Shama District Ass.	Assistant Director	0202356085	Shama Dist. Ass Box 37 Shama	Salfyn_samp@ yahoo.com	

ENI OCTP Phase II ESIA

Attendance Register

Date: 18/12/14

Location/ Village Name: SHAMAH Stakeholder: Fishermen

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Egya Essafio			0554477179			
Mansah						
Emmanuel	Mansah		0246958100			
Nana Ofori			0576246917			
Uncle Egya	ata boys		0545548919			
Papa Asefua			0576246917			
Egya Abona			0576246917			
Kobbina Essun						
Mohammed Idris			0277748648			
Egya Kwasi ntama			0249027707			

Simons Kennedy

ENI OCTP Phase II ESIA

Attendance Register

GPS N 4° 57' 21.57
W 003° 42' 4.76

Date: 7-12-14

Location/ Village Name: SEKONDI
FISHMONGERS AT FISHING HARBOUR

Stakeholder: CHIEF FISHERMAN, SEKONDI

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
JANA KOFI ESSUON	PANNA FISHES	FISHERMAN	0208153734	217 - Sekondi	-	

ATTENDANCE REGISTER

DATE: 9/12/14

LOCATION: ESIAMA

STAKEHOLDER: Fishermen FGD.

NAME	ORGANISATION	POSITION	PHONE NO.	ADDRESS	EMAIL	SIGNATURE
Nana Kofi Bekoe		Chief Fisherman	0200653508	Esiama		
kwesi Kansa		Fisherman	0502901242			
Emmanuel Asamah			0502103483			
Kwamuku		Fisherman				
Accra boy		fisherman	0509441707			
Prah						
Francis			0200653508			
George blra			0547084213			
Emmanuel kwofie			02784335 1			
pan kwesi			0271974767			
Darkwah sephpen			0578493509			
Yaw Hamond			0543627333			
DEDE Samuel Bekoe		Fisherman	0503 [illegible] 518			
Mohammed Mozu		Fisherman				

ENI OCTP Phase II ESIA

Attendance Register

Date: 9/12/14

Location/ Village Name: NGALAKPOLE Stakeholder: PUBLIC MEETING

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
REGENT NANA BLAY BUAKE	Ngalakpole Comm.	REGENT	0570838833	Post Box 11 EJURA	-	
Mr. BLAY Kwasi	✓	Linguist	0577721808	✓	-	
Mr. Denis Ersaak	✓	✓	0547239240	✓	-	
Mrs Andi BLAY	✓	Elder	-	✓	-	
Mr. Amihere Joseph	✓	✓	0276757079	✓	-	
Nyameke AVO	✓	✓	0574804695	✓	-	
Morkeh Nyameke	✓	✓	0273060192	✓	-	
Bonsoh Meanzah	✓	✓	-	✓	-	
Avukah Amihere	✓	✓	-	✓	-	
Rebecca Kesse	✓	✓	0572863734	✓	-	

ENI OCTP Phase II ESIA

Attendance Register

Date: 4/12/14

Location/ Village Name: NGAPALE Stakeholder: PUBLIC MEETING.

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Gladys Ahla	✓	✓	0507449118	✓	✓	
Elizabeth Azuah	✓	✓	—	✓	✓	
Amasfa	✓	✓	0249642077	✓	✓	
Nwozah Alda	✓	✓	—	✓	✓	
felicia Fleyddle	✓	✓	—	✓	✓	
Adukonu Happy	✓	✓	—	✓	✓	
Nreda Eggake	✓	✓	—	✓	✓	
Nreda Ahama	✓	—	—	✓	✓	
Rose Dazdie	✓	✓	0201884641	✓	✓	
Ulthans Cudjoe	✓	✓	0207708268	✓	✓	

ENI OCTP Phase II ESIA

Attendance Register

Date: 4/12/14

Location/ Village Name: NGAZAKPOLE Stakeholder: PUBLIC MEETING

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Elizabeth Bandinte	✓	✓	0230292032	✓	✓	
Comfort Adiekye	✓	✓	0276181063	✓	✓	
Monica Kwame	✓	✓	0542788153	✓	✓	
Hanna Sigarde Anagama	✓	✓	0273401618	✓	✓	
Suzanah Yaw	✓	✓	0273401518	✓	✓	
Margaret Ebenick	✓	✓	0274900978	✓	✓	
Elizabeth Ayima	✓	✓	✓	✓	✓	
Agnes Aliweke	✓	✓	✓	✓	✓	
Joyce Kwasi	✓	✓	0508726662	✓	✓	
Philes Ndu	✓	✓	✓	✓	✓	

ENI OCTP Phase II ESIA

Attendance Register

Date: 4/12/14

Location/ Village Name: NGALAKPOLE Stakeholder: PUBLIC MEETING

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Mr Azah Nyamekye	✓	✓	0503680286	✓	✓	
Meak Nyameke	✓	✓	0272150922	✓	✓	
Mr Armstrong Amihere	✓	✓	0546662244	✓	✓	
Emmanuel Kwaa	✓	✓	0507628595 0547036 1212	✓	✓	
Thomas Kwaggal	✓	✓	0272032163	✓	✓	
Andrews Andisyi	✓	✓	0570570093	✓	✓	
Stephen Kwasi	✓	✓	0502121653	✓	✓	
Seleman Meanzah	✓	✓	0572518940	✓	✓	
Mociah Kojo	✓	✓	0202259420	✓	✓	
Francis Akromah	✓	✓	0546103288	✓	✓	

ENI OCTP Phase II ESIA

Attendance Register

Date: 4/12/14

Location/ Village Name: NGALANPOLE Stakeholder: PUBLIC MEETING

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Francis Amihere	✓	✓	0541646707	✓	✓	
Nicolas Amihere	✓	✓	0503525707	✓	✓	
ISHAMEL Kpaw	✓	✓	0578279744	✓	✓	
Francis Gyande	✓	✓	0273357552 0541157306	✓	✓	
Frank Ackon	✓	✓	0273875320	✓	✓	
Frank Kovie	✓	✓	0278291966	✓	✓	
Stephen Andony	✓	✓	0546103285	✓	✓	
Monica Nyanke	✓	✓	0575944008	✓	✓	
Dorcas Nyameke	✓	✓	0577011281	✓	✓	
Margret Benefeyi	✓	✓	—	✓	✓	

ENI OCTP Phase II ESIA

Attendance Register

Date: 4/12/14

Location/ Village Name: NGMAPOLE Stakeholder: PUBLIC MEETING

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
~~Janet~~ Janet Konmale	✓	✓	0208530777	✓	✓	
Mary Kofie	✓	✓	0574352862	✓	✓	
Mary Sewuley	✓	✓	0277047977	✓	✓	MS Sewuley
Beneeky Ama	✓	✓	0278336494	✓	✓	
Joyce Ehun	✓	✓	—	✓	✓	
Ennah Kuba ~~Wongo~~	✓	✓	0276173683	✓	✓	
Kuah Ago	✓	✓	—	✓	✓	
Joseph Kabenle	✓	✓	0570123373	✓	✓	
Paul ~~K~~ Korneh	✓	✓	—	✓	—	
Thomas Arize	✓	✓	0272803921			

ENI OCTP Phase II ESIA

Attendance Register

Date: 4/12/14

Location/ Village Name: _____ Stakeholder: PUBLIC MEETING

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Eric Enor	✓	✓	0541224484	✓	✓	
James Adabi	✓	✓	0271975768	✓	✓	
Elizebeth Ekbor	✓	✓	–	✓	–	
Kuadede	✓	✓	0279617391	✓	✓	
~~Adele~~ Cecelia Meizah	✓	✓	–	✓	✓	
Emmanuel ~~Amaka~~ Amalkah	✓	✓	0247125799	✓	✓	
Banzah Eleya	✓	✓	–	✓	✓	
Kuah Kabenda	✓	✓	–	✓	✓	
Francis Kuah	✓	✓	–	✓	✓	
Francis Ackah	✓	✓	–	✓	✓	

ENI OCTP Phase II ESIA

Attendance Register

Date:_____

Location/ Village Name:_____ Stakeholder:_____

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Mary Kofi	✓	✓	0572861715	✓	✓	
Victoria Ankomah	✓	✓	0572525797	✓	✓	
Nyezunda Ahu	✓	✓	0271892726	✓	✓	
Mary Blay	✓	✓	0572518940	✓	✓	
Rebbecca Cudjoe	✓	✓	0576292195	✓	✓	
Regina Nreda	✓	✓	0503680311	✓	✓	
Vida Tane	✓	✓	0570121940	✓	✓	
Patrick Ackal	✓	✓	0206025748	✓	✓	
Joyce Tanoe	✓	✓	0503533178	✓	✓	
Magret Quasah	✓	✓	0202407229	✓	✓	

ENI OCTP Phase II ESIA

Attendance Register

Date: 4/12/14

Location/ Village Name: NGMATKPAZE Stakeholder: PUBLIC MEETING.

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Richard Ezuah	✓	✓	0570632841	✓	✓	
Cecelia Cudjoe	✓	✓	—	✓	✓	
Mary Kofie	✓	✓	—	✓	✓	
Nyameteh Pascal	✓	✓	0270855782	✓	✓	
Faustina Ackah	✓	✓	0273653962	✓	✓	
Rauf Ackah	✓	✓	0276985491	✓	✓	
Martine Armaah	✓	✓	0279533674	✓	✓	
John Jelly	✓	✓	—	✓	✓	
Mathedah Findah	✓	✓	✓	✓	✓	
Elizabeth Kofie	✓	✓	✓	✓	✓	

ENI OCTP Phase II ESIA

Attendance Register

Date: 4/12/14

Location/ Village Name: NGALAKPOLE Stakeholder: KII INTERVIEW

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Kesse John	✓	✓	0546324897	[illegible] Box 62 BIA	Kesse@yahoo.com	
Robert Arthur	✓	✓	0277656860	✓	✓	
Mensah Shadrack	Ngalekpole K-G	Teacher	0209167941			

ENI OCTP Phase II ESIA

Attendance Register

Date: 05/12/14

Location/ Village Name: BAKU Stakeholder: PUBLIC MEETING

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Nana Nwea-Ebiase VI		Chief	024661274	Box 22 Esiama	nanaglawdanyamoh@gmail.com	
Nana Agyeman Kwaw Blay II		Tufohene	0273162932	P.O. Box 10 Ekwe Via Axim		
J.S. Andoh		Abusua Kyinli	0279421862	✓		
Nana Melah III		Queen Mother	—	✓		
Safohente Koju		Safohene	0505333516	✓		
Colobulel Kwah		Oman Kyeame				
Soplua Armoo		Inhabitant	0276142927	✓		
Elizabeth Nyamekah			—			
Mary Ackah		Inhabitant	0731899464	✓		
Arvo Blay			0275441487	✓		

ENI OCTP Phase II ESIA

Attendance Register

Date: 03/12/14

Location/ Village Name: BAKU Stakeholder: PUBLIC MEETING

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Monica Akweley		Inhabitant	0501570778	Box 10 Esikwe	—	
Asmo Mensah	—	✓	0277477919	✓	—	
Samuel Kwankye	-	✓	0279049768	✓	—	
Egya Mensah		✓		✓	—	
Owusu Kwaku		Oman Kanjin	—	✓	—	
Kwaku Eduafo		~~Huabo~~ Inhabitant	—	✓	—	
Paul Kenyah Snr.		Inhabitant	0275871658	✓	—	
Albert Cudjoe		✓	0272143198	✓	—	
Emmanuel K Blay		✓	0272364821	✓	—	
Thomas Famiyeh		✓	0577512953	✓	—	

ENI OCTP Phase II ESIA

Attendance Register

Date: 05/12/14

Location/ Village Name: BATELL Stakeholder: PUBLIC MEETING

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Kenneth Mensah		Inhabitant	0248692556	BOX 10 Beku	—	
Kwasi Kakraba		✓	—	✓	—	
Kabenlah		✓	—	✓	—	
Anthony Mensah		✓	0271995038	✓	—	
Ekow Awotwe		✓	—	✓	—	
Rebecca Nsiah		✓	0271236114	✓	—	
Francis Annan		✓	—	✓	—	
Sylvester Sappey		✓	0570121924	✓	—	
Beneabie Sowah		✓	—	✓	—	
Theresah Kaku		✓	0545296435	✓	—	

ENI OCTP Phase II ESIA

Attendance Register

Date: 05/12/14

Location/ Village Name: BMCU Stakeholder: PUBLIC MEETING

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Theresah Young		inhabitant	—	P. O. Box 10 Buckle	—	
Margaret Appiah		✓	0279206450	✓	—	
Deborah Owusu		✓	0273900296	✓	—	
~~Paul Kenyah Jnr~~ Geoffrey Agbodoku		✓	0200303653	✓	gagbodoku@gmail.com	
~~Geoffrey Agbodoku~~ Paul Kenyah Jnr		✓	0275384304	✓	—	
Mary Bansil		✓	0271822774	✓	—	
Nurlanyo Adatsi		✓	0572566834	✓	—	
Veronica Armor		✓	—	✓	—	
Clemence Mensah		✓		✓	—	
Augustine Ezzoah		✓	0574737410	✓	✓	

ENI OCTP Phase II ESIA

Attendance Register

Date: 05/12/14

Location/ Village Name: BATCH Stakeholder: PUBLIC MEETING

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Sikayena Kwaku		inhabitant		P. O Box 10 Baku – Ekwe	—	
Bismark Bley-Aikai		✓	0261002371	✓	—	
Nyonye Jacob		✓	0276663156	✓	—	
Paul Okoi		✓	0572123207	✓	—	
Paul Dadee		✓	0274369582	✓	—	
Anthony Kofi Tetteh		✓	0273569140	✓	—	
Raphael Gyidjoe		✓	0279622104	✓	—	
Edward Enerchi		✓	—	✓	—	
Julius Dubey		✓	0272794043	✓	—	
Joseph Tanoe		✓	0273262358	✓	—	

ENI OCTP Phase II ESIA

Attendance Register

Date: 05/12/14

Location/ Village Name: BAKU Stakeholder: PUBLIC MEETING

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Ismael Tandoh		Inhabitant	0506499722	Box 10 Baku-Ekwe	—	
Eyya Agyisaal		✓	—	✓	—	
Kobbinah Patrick		✓	0576532857	✓	—	
Jephter Arkator		✓	0570129134	✓	—	
Joshua Gadzo		✓	0275400350	✓	—	
Joseph Kofie		✓	0576692658	✓	—	
Samuel Agyiban		✓	0506499385	✓	—	
Remember Knyge-dze		✓	0503333124	✓	—	
Joseph Koju		✓	0573985669	✓	—	
Alex K. Appiah		✓	0263330393	✓	—	

ENI OCTP Phase II ESIA

Attendance Register

Date: 06/12/14

Location/ Village Name: BEYIN Stakeholder: TOURISM KI

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Martin Kwakye	Tenacic Beach	Manager	0244222772	Box 1 Beyin	martin9@gmail.com	

ENI OCTP Phase II ESIA

Attendance Register

ESL Consulting

SRC

Date: 03/12/2014

Location/ Village Name: KRISSAN Stakeholder: VILLAGE MEETING

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
ABUAKWA NIN ISAAC CUDJOE	KRISSAN		024.836.8770 020.8989454	N/A	N/A	
MIEZA ENREKO	KRISAN VILLAGE	ASAFOHENE-RATNIN	N/A	N/A	N/A	
MIEZA GEORGE GBRKEN	KRISAN VILLAGE	OMANRATNIN	024.867.2699 020.033.4471	N/A	N/A	
NANA KWAMENA AMOS	✓✓	FORMER CHIEF ANKOBRAH	020.353.0976			
MR. S. CUDJOE	✓✓	ONANRATNIN	027.164.0986	N/A	N/A	
KWAO KESSEE	✓✓		057.672.7445	N/A	N/A	
JOHN BONKYE	✓✓	OSAFOHENE	027.350.9055	N/A	N/A	
KWAGI KWANSAH	✓✓		054.176.4310	N/A	N/A	
NANA KWARENA MONSRO	✓✓	CHIEF FISHERMAN	054.785.9185	N/A	N/A	
EBO KWABENA	✓✓	LIN QUAS, CHIEF FISHERMAN	027.698.5815	N/A	N/A	

ENI OCTP Phase II ESIA

Attendance Register

Date: 03/12/2014

Location/ Village Name: KRISSAN Stakeholder: VILLAGE MEETINGS

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
FRANK ARMAH	KRISAN VILLAGE	IT-SPECIALIST	058.4158055 0541158055	N/A	smile4money@ymail.com	
JOSEPH E. EDUKU	✓✓	LINGUIST. ACCOR	N/A	N/A	N/A	
ANTHONY AMANFO	✓✓	OMANPANIN	027.551.776	N/A	N/A	
BLAYKYIE MIAH	✓✓	OMANPANIN ATUAHENE	N/A	N/A	N/A	
NAH EDUKU	✓✓	SABAHENE	054.289.1209	N/A	N/A	
VINCENT KWAO	✓✓	SABAHENE	057.286.3760	N/A	N/A	
JOHN ANYIMAH	✓✓	OMANPANIN	027.284.4728	N/A	N/A	
ALBERT BUMP	✓✓		057.653.2813	N/A	N/A	
Samuel Aryate	✓✓	DRIVER	0273813960	N/A	N/A	
KAINYAH EBENEZER	✓✓	TEACHER	057.637.6830	N/A	N/A	

ENI OCTP Phase II ESIA

Attendance Register

Date: 03/12/2014

Location/ Village Name: KRISAN Stakeholder: VILLAGE MEETING

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
MOSES ACKAH	KRISAN	BALM NUT TAPPER	N/A	N/A	N/A	
OSAR AMBERE	✓	ZOOMLION WORKER	057.511.9632	N/A	N/A	
MATTHEW KANGAH	✓	MASON	057.388.49 69 A	N/A	N/A	
DAVID BLAY	✓	ELECTRICIAN	027.288.7323	N/A	N/A	
AGNES ATIUBRAH	✓	UNEMPLOYED	0572863740	N/A	N/A	
NORCAS APPIAH	✓	UNEMPLOYED		N/A	N/A	
MARY A. ACKAH	✓	UNEMPLOYED	0573487908	N/A	N/A	
VICTORIA MENSAH	✓	FISHMONGER	N/A	N/A	N/A	
CECILIA MENSAH	✓	FARMER	N/A	N/A	N/A	
EWIA AHUBEH	✓	UNEMPLOYED	N/A	N/A	N/A	

ENI OCTP Phase II ESIA

Attendance Register

Date: 03/12/2014

Location/ Village Name: KRISAN Stakeholder: VILLAGE MEETING

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
PAULINA ABOGYE	KRISAN	FISHMONGER	0545019164	N/A	N/A	
SARINE NYANKE	✓	TRADER	N/A	N/A	N/A	
ADIZA KESE	✓	ZOOMLION	N/A	N/A	N/A	
EBELA MIYAH	✓	FARMER	N/A	N/A	N/A	
MARY SIAH	✓	FISHMONGER	N/A	N/A	N/A	
ETI NYAMEKE	✓	TRADER	N/A	N/A	N/A	
GRACE KWAN	✓	FARMER	N/A	N/A	N/A	
ELIZABETH CUDJOE	✓	TRADER	0241153827	N/A	N/A	
AGNES ACKAH	✓	RETIRED	0274170395	N/A	N/A	
SARAH ARMAH	✓	UNEMPLOYED	0249293512 N/A	N/A	N/A	

ENI OCTP Phase II ESIA

Attendance Register

Date: 03/12/2014

Location/ Village Name: KRISAN Stakeholder: VILLAGE MEETING

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
MONICA CUDJOE	KRISAN	TRADER	N/A	N/A	N/A	
COMFORT ACKAH	✓	TRADER	N/A	N/A	N/A	
NAVIS ACKAH	✓	TRADER	N/A	N/A	N/A	
ABIGAIL OSEI	✓	SUSU COLLECTOR	0509445378 N/A	N/A	N/A	
THERESA EDUKU	✓	TRADER	0276191584	N/A	N/A	
ELLEN AMADEH	✓	ACCOUNTANT	0509078754	N/A	N/A	
ANGELINA ACKAH	✓	FISHMONGER	0273880794	N/A	N/A	
MARY AYIMAH	✓	TRADER	0279532707	N/A	N/A	
MARY ACKAH	✓	SELLER	N/A	N/A	N/A	
NDEDE AKU	✓	TRADER	0274530244	N/A	N/A	

ENI OCTP Phase II ESIA

Attendance Register

Date: 03/12/2014

Location/ Village Name: KRISAN Stakeholder: VILLAGE MEETING

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
ELIZABETH ESHUN	KRISAN	SELLER	N/A	N/A	N/A	
SUSANA ACKAH	✓	TRADER	0279535408	N/A	N/A	
JOYCE MOZU	✓	TRADER	0271733593	N/A	N/A	
ALBERT MEAH	✓	SENIOR CPT	0273642642	N/A	N/A	
JOSEPH AMISHERE	✓	FISHERMAN	N/A	N/A	N/A	
BISHOP EMMANUEL	✓	BISHOP	0242672276	N/A	N/A	
JULIANA MADI	✓	TRADER	0270887583	N/A	N/A	
AFIA FILWAH	✓	BAKER	N/A	N/A	N/A	
ASUAH BOZOMA	✓	TRADER	N/A	N/A	N/A	
KWASI BLAY	✓	FISHERMAN	N/A	N/A	N/A	

ENI OCTP Phase II ESIA

Attendance Register

Date: 03/12/2014

Location/ Village Name: KRISAN Stakeholder: VILLAGE MEETING

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
ANNOR KOFI	KRISAN	FISHERMAN	N/A	N/A	N/A	
STEPHEN KESE	✓	CARPENTER	0279221405	N/A	N/A	
EMMAH AFIBAH	✓	FARMER	N/A	N/A	N/A	
EMMAH YABA	✓	FISHMONGER	N/A	N/A	N/A	
GRACE COSBY	✓	FARMER	0272292907	N/A	N/A	
STEPHEN KPOLEY	✓	POULTRY FARMER	0273110196	N/A	N/A	
SHEDRACK ISSAKA	✓	FARMER	N/A	N/A	N/A	
VIDA ASAMOAH	✓	HAIR DRESSER	0543591181	N/A	N/A	
AGNES KAHA	✓	UNEMPLOYED	N/A	N/A	N/A	
MELA ANYIMAH MELA AKUA	✓	STUDENT	N/A	N/A	N/A	

ENI OCTP Phase II ESIA

Attendance Register

Date: 31/12/2014

Location/ Village Name: KRISAN Stakeholder: VILLAGE MEETING

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
FELICIA KWASI	KRISAN	FISHMONGER	N/A	N/A	N/A	
JOHN ANTIMAH	✓	PHONE REPER	N/A	N/A	N/A	
JOSPHINE BLAY	✓	SELLER	0206025067	N/A	N/A	
KANYAH AMA	✓	FISHMONGER	N/A	N/A	N/A	
SOPHIA AMIHERE	✓	HAIRDRESSER	N/A	N/A	N/A	
CECILIA ADJAH	✓	FARMER	N/A	N/A	N/A	
VIVIANE ANLIMA	✓	FARMER	N/A	N/A	N/A	
ENGLEZI BEYEHU	✓	FARMER	N/A	N/A	N/A	
NYANZU NYIAH	✓	TRADER	N/A	N/A	N/A	
NUDE NYIA	✓	FARMER	N/A	N/A	N/A	

NOT PRESENT

ENI OCTP Phase II ESIA

Attendance Register

Date: 3/02/2014

Location/ Village Name: EIKWE II Stakeholder: HEALTH PROFESSIONALS AT ST. MARTIN DE PORRES HOSPITAL

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
MS GRACE ENOYAH	ST MARTIN DE PORRES HOSP. EIKWE	PUBLIC HEALTH NURSE	0209805511 0245914209	ST MARTIN DE PORRES HOSP. BOX 6, EIKWE	grace_enyan@yahoo.com	
[illegible]	ST. MARTIN DE PORRES HOSP EIKWE	HEALTH SERVICE ADMIN.	020 9805549 027 7854483	BOX 6, EIKWE	[illegible]	
DR PAUL COOPER	ST MARTIN DE PORRES HOSP EIKWE	MEDICAL SUPT.	0246011805 0209805085	ST MARTIN DE PORRES HOSPITAL P.O. BOX 6 EIKWE	cpaulkofi@yahoo.co.uk	
MR. SYLVESTER ASMAH	ST. MARTIN DE PORRES HOSP. EIKWE	HEALTH INF. OFFICER (HIO)	0203151907 0245868826	ST. MARTIN DE PORRES HOSPITAL BOX 6, EIKWE	slyassylvesterasmah@gmail.com	

ENI OCTP Phase II ESIA

Attendance Register

Date: 4/12/14

Location/ Village Name: SANZULE Stakeholder: HEALTH WORKERS AT SANZULE CHPS COMPOUND

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
MR SIMON KWAKU ERZOAH	GHS	C.H.O	0246512210/ 0209660820	KRISAN	erzoahsimonkwaku@gmail.com	
Sadikatu Braimah	GH.S	C.H.O	0274917030	"		

ENI OCTP Phase II ESIA

Attendance Register

Date: 4/12/14

Location/ Village Name: ATUABO Stakeholder: ATUABO CHPS COMPOUND (HEALTH WORKERS)

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Belinda Mensah	G-H-S	C H-O	0242207845	Atuabo	Mensahbelinda 10 @yahoo.com	
Rosemary Otubea Duodu	G H S	C. H O	0248986049	Atuabo	rmary415 @yahoo.com	

ENI OCTP Phase II ESIA

Attendance Register

Date: 5/12/14

Location/ Village Name: BAKU Stakeholder: FGD - Women's Group (BAKU)

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Veronica A. Essien	BAKU	Member	0246181697	P.O. Box 2574 MC TAKORADI. ~~BAKU~~.	www.afiessien22@gmail.com	Veronica
Aequah Kanra	"	✓		Baku		Sgd.
Mary Ackah	"	✓	0573989964	Baku		
Sophia Kwame	"	✓	0271886522	Baku		Kwame
Augustina Kwame	"	✓	0576971149	Baku		
Cynthia Sarfo	"	✓	0570570364	Baku		
Nyevile Sorbah	"	✓	~~027~~			Sgd.
Magaret Appiah	"	✓	0279206480	Baku		
Christabel Essien	"	✓	0275357901	Baku		
Debora Owusu	"	✓	0502266671	Baku		

ENI OCTP Phase II ESIA

Attendance Register

Date: 5/12/14

Location/ Village Name: BAKU Stakeholder: BAKU WOMEN

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Janet Quaicoe	Baku	Member		Baku		Sgd
Monica Kwasi	"	✓	~~05743~~	Baku		Sgd
Monica Akortey	"	✓	0507015778	Baku		Sgd
Charlie Agyeiba	"	✓		Baku		Sgd.
* Theresa Younge	"	✓		Baku		Sgd
Grace Kwasi	"	✓	0202868913	Baku		~~GK~~
Famanya	"	✓		Baku		Sgd
Kodwo Mensah Kaya	"	✓		Baku		Sgd
Mame Baduwa	"	✓		Baku		Sgd
Agnes Annor	"	✓		Baku		Sgd

ENI OCTP Phase II ESIA

Attendance Register

Date: 5/12/14

Location/ Village Name: BAKU Stakeholder: BAKU WOMEN

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Cecilia Kodwo	Baku	Member	–	Baku	–	Sgd
Efua Awotwe	〃	〃	–	Baku	–	Sgd
Tanoe Ethwia	〃	〃	–	Baku	–	Sgd
Beneabie Somah	〃	〃	–	Baku	–	Sgd
Sarah Kenyah	〃	〃	–	Baku	–	Sgd
Veronica Armoo Nda	〃	〃	–	Baku	–	Sgd
Mary Isaac	〃	〃	–	Baku	–	Sgd
Ewiaka Adwoo	〃	〃	–	Baku	–	Sgd
Veronica Armoo	〃	〃	–	Baku	–	Sgd
Horbanyo	〃	〃	0572566834	Baku	–	Sgd

ENI OCTP Phase II ESIA

Attendance Register

Date: 5/12/14

Location/ Village Name: BAKU Stakeholder: BAKU WOMEN

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Rebecca Nwonro	Baku	Member	0578493523	Baku	–	
Patience Ackah	〃	✓	–	Baku	–	Sgd
Magaret Amihere	〃	✓	0503526089	Baku	–	Sgd
Nyamekye Enuaye	〃	✓	–	Baku	–	Sgd
Josephine Ackah	〃	✓	–	Baku	–	Sgd
Magaret Mensah	〃	✓	–	Baku	–	Sgd
Agnes Meah	〃	✓	–	Baku	–	Sgd
Martha Amah Kodwo	〃	✓	–	Baku	–	Sgd
Theresa Kaku	〃	✓	–	Baku	–	Sgd
Osofo Aba	〃	✓	–	Baku	–	Sgd

ENI OCTP Phase II ESIA

Attendance Register

Date: 5/12/14

Location/ Village Name: BAKU Stakeholder: BAKU WOMEN

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Salomey Tetteh	Baku	Member	–	Baku	–	Sgd

ENI OCTP Phase II ESIA

Attendance Register

Date: 5/12/14

Location/ Village Name: BAKU Stakeholder: BAKU WOMEN

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
ARTHUR PATRICK	ASEMNDA SUAZO ERY	HEADMASTER	0278720175	BOX 1 ATUABO		

ENI OCTP Phase II ESIA

Attendance Register

Date: 9/12/14

Location/ Village Name: NKROFUL Stakeholder: DISTRICT HEALTH ADMINISTRATION

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
MR. OSEI EVANS BOATENG	GHANA HEALTH SERVICE	DISTRICT HEALTH INFORMATION OFFICER	0240-616791 0209-098485	ELLEMBELLE DISTRICT HEALTH DIRECTORATE Box 38, NKROFUL	onesimus46@hotmail.com	
CHARLES BONNEY GHARTEY	GHANA HEALTH SERVICE	DISTRICT DISEASE CONTROL OFFICER	0244417506 020 7420003	"	Bonighart@yahoo.com	
MR SARFO ANKOMAH CHRISTIAN	GHANA HEALTH SERVICE	DISTRICT NUTRITION OFFICER	0208758102 0249091270	"	christiansarfo@gmail.com	
JUDITH OKINE	GHANA HEALTH SERVICE	DISTRICT PUBLIC HEALTH NURSE	0242478358 824	DHA BOX 38 ELLEMB	Judithnaadeda okine@gmail.com	
ELIZABETH GOMEZ	GHANA HEALTH SERVICE	D DHS	0248165049 0271634534	DHA Box 38 Ellembelle	elizabethcomezdirect@gmail.com	

ENI OCTP Phase II ESIA

ERM

Attendance Register

Date: 04-12-14

Location/ Village Name: NGATEKYI Stakeholder: LANDOWNERS - FGD

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Mr Nicholas	Ghanaian	Landowner		N/A	N/A	
Agnes Mantse	Ghanaian	Landowner		N/A	N/A	
Anthony	"	"	0271530777	"	"	
Hannah Adjo	"	"	0272216163	"	"	
Kwame Agbo	"	Landowner	0500335730	"	"	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
David Amissah	Nkaka MA Inc	Head Teacher	0279104487	Box 111 Anyinase	davidamissah75@gmail.com	
Frances Nyame	M/Basic Sch	H. Teacher	0272245194	Box 111 Anyinase		

ENI OCTP Phase II ESIA

Attendance Register

Date: 05-12-14

Location/ Village Name: ANOKYI Stakeholder: WOMEN FGD

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Margaret Aiky	Farmer		0273542960			
Cynthia Arnold	Trader					
Mavis Appiah	Fish Monger		0279533716			
Anna Assuah	Trader		-			
Selina Kwaku	Seamstress		-			
Comfort Abadu	Trader		0527009686			
Roz Ellen			0576089016			
Komela	Fish Vendor					
Angelina Sam	Trader		0577699820			
Teresa Oyinkye	Trader		0240230477			

ENI OCTP Phase II ESIA

Attendance Register

Date: 05/12/19

Location/ Village Name: Esende Stakeholder: Community Meeting

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
MR. NYAMEKE BUAH			0543882912			
MR. ROBERT MENSAH			0272145930			
MR. JOSEPH K. TOFFEY						
MR. SAMUEL KWASI						
MR. DOMINIC KWAME						
MR. ARMAH MORKEH						
MR. SIMON BUADU						
MR. ISAAC CUDJOE						
MR. JACOB ELLIAM						
MR. VINCENT ANLIMAH						

ENI OCTP Phase II ESIA

Attendance Register

Date:_____

Location/ Village Name:_____ Stakeholder:_____

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
JULIANA MEZAH						
MR. NICHOLAS BLAT						
MR. MATTEW KWAME						
MR. DESMOND ARTHUR						
MR. JOHN KAKU						
MR. JOSEPH AGOVI ARMAH						
MR. ALBERT ERZOAH						
EGYA KOBWO ANTIKU						
EGYA MEAH						
MR. JOHN NREDAH						

ENI OCTP Phase II ESIA

Attendance Register

Date:_____

Location/ Village Name:_____ Stakeholder:_____

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
NANA OBAHEMA DUAHU NYANDAH						
MR. PHILIP KAKU						
SABINA MENSAH						
DIANA DUAH						
SUSANA TOTEY						
MARY KINOFIE						
AWIA MELAH						
AMANIE						
SABINA AMINE RE						
GLADYS AKIGATE						

ENI OCTP Phase II ESIA

Attendance Register

Date:_____

Location/ Village Name:_____ Stakeholder:_____

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
MARY KAKU						
GRACE KAKU						
VERONICA ESSIEN						
DOROTHY AMOAH						
REGINA MEAH						
SHANTAL ACKAH						
VIDA ARTHUR						
MR. JOHNSON			0270552261			

ENI OCTP Phase II ESIA

Attendance Register

Date: 04/12/14

Location/ Village Name: Sanzule Stakeholder: Eduction KII

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Mr Quadoo Bernard	Sanzule/Krisan D/A Prim Sch.	Sports master	0241765579 0209351186	Box 1 Krisan	quadoobernard@yahoo.com	
Justina Anadwo	Sanzulekrisan D/A Pri Sch	Assistant Head Master	0547917749	Box 9, Sanzule	Anadwo Justina@yahoo.com	
Patricia Quandaka	Sanzulekrisa D/A Prim sch	class teacher	0242355216-4	Box 6 Elkwo	Quandaka Patricia@yahoo.com	
Yeboah Sorgyi Nicker	Sanzuley D/A Prim Sch.	Assistant Sport master	0570263271 0544100760	Box 2. Sanzuley	Nickelas Kinseth@yahoo.com	
Mr. Festus Agbodah	✓	Head	0550441279	✓	Fagbodah187@gmail.com	
Mr. Kwakye Emmanuel	✓	Head	0503680156	✓	Bonshue21@yahoo.com	

ENI OCTP Phase II ESIA

Attendance Register

Date: 04/12/14

Location/ Village Name: Santale village Stakeholder: Community Meeting

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Ezenlang John	Santale village		0573485859	Box 9 Santa		
Blay John	"	Maison Cont.	0247931929	✓ ✓		
Blay Nicholas	"	chief fisherman	0272286336	✓		
Quarcoo Williams	"		0577149757	✓		
Ackah Ebenezer	"		0243838053	✓		
Ekwasi Samuel	"	Maisons	0248485319	✓		
Amabil Angeng	"	Chief Elder	0241699571	✓		
Akrong Kofi	"		0544197630	✓		
Jughen Azumah	"		0276867343	✓		—
Kudwo Ebelly	"					

ENI OCTP Phase II ESIA

Attendance Register

Date:_____

Location/ Village Name:_____ Stakeholder:_____

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Hunter - Kalengyi	Sanzule VIII			Box 9 Sanzule		—
Akkah - John	✓	Abusua Panyin	0272937537	✓		
Armah Emmanuel	✓		0576675510	✓		
Arizie Pius	✓		0503515757	✓		
Kwame Jacob	✓		0275157297	✓		
Kabenla Anthony	✓		—	✓		
Ayalla Samuel	✓		0506501324	✓		
Etti John	✓		0572401758	✓		
Ezale Thomas	✓		0275214915	✓		
Edeo Kofi	✓		0554686318	✓		—

ENI OCTP Phase II ESIA

Attendance Register

Date:_____

Location/ Village Name:_____ Stakeholder:_____

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Kwaw Francis	Sanzule Vill.		0240032129	Box 9 Sanzule	✓	
Adzakey George	✓		0507298917	✓		
Akoyah Francis	✓		0275324322	✓		
Bonzoe Joyce	✓		0271733593	✓		
Allou Isaac	✓		0542816388	✓		
Newton Francis	✓		0248054466	✓		
Bonzoe K.	✓		0241772487	✓		
Aboagye Francis	✓		0273357053	✓		
Sobo Sylvester	✓		0241829791	✓		
Ehomeh Michael	✓		0570329999	✓		

ENI OCTP Phase II ESIA

Attendance Register

Date:_____

Location/ Village Name:_____ Stakeholder:_____

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Yaw Thomas	Sanzule Ass.	—	0241585334	Box 9. Sanzule		
Tubli Simon	✓		0241690916	✓		—
Ladzakpo Stephen	✓		0245399848	✓		
Kwaw Raphael	✓		0275277236	✓		—
Benard Belicko	✓		0245585940	✓		
Homiah Vincent	✓		0271212146	✓		
Mansa Tetrokese	✓		—			—
Kaaku - Nkrenza	✓		0572874998	✓		—
Eric Kwofie	✓		0275120 57	✓		
Joseph Amande	✓		0576466620	✓		

ENI OCTP Phase II ESIA

Attendance Register

Date:_____

Location/ Village Name:_____ Stakeholder:_____

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Emmanuel Ellison	Sanzule Hill.		0243832461	Box 9 Sanzule		
Stephen Baidoo	✓		0540998577	✓		
Kwame Mayashire	✓		✓	✓		—
Abokyi Kabenla	✓		0545181590	✓		—
Nadia Stephen	✓		0574333721	✓		—
Morkedi Akubakpa	✓		0248394208	✓		—
Morkeh Francis	✓		0275589045	✓		
Francis Boadi Dawo	✓		0540787719	✓		
Mieza Michaels	✓		0205903654	✓		
Bonzoe Emm.	✓	—	0249669809	✓		

ENI OCTP Phase II ESIA

Attendance Register

Date:_____

Location/ Village Name:_____ Stakeholder:_____

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Emmanuel Ntay	✓		0274362693			
David Frans	✓		0243577953			
Susana Yankey	✓		0247475693			
Christiana Abekah	✓		0274948208			
Isaac Ackah	✓		0541808146			
David Ackah	✓		0241950475			
Dominic Amihere	✓		0576467197			
Kojo Philip	✓					
Ernest Annobil	✓		0573492121			
Isaac W. Johnson	✓		0275384975			

ENI OCTP Phase II ESIA

Attendance Register

Date:_____

Location/ Village Name:_____ Stakeholder:_____

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Mohammed Erzoah	✓		0205384973			
Arizi Erzoah	✓		0276165671			
James Kenyah	✓		0546019546			
Nuhu Horchi	✓		0243833475			
Emmuel Homeh	✓		0278969047			
Anthony Allwakah	✓		0257505243			
William Asafo	✓		027-1880013			
Akabi Kaken	✓		0545701870			
Isaac Quaio	✓		0245669019			
John Mensah	✓		0257350093			

ENI OCTP Phase II ESIA

Attendance Register

Date:_____

Location/ Village Name:_____ Stakeholder:_____

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Charles Adayi	✓		0209329914			
Joyce Adayi	✓		027-3298821			
Daniel Ampofo	✓	✓	0246511018			
Vivian Forgoah	✓		—			
Fredrick Nyarko	✓		027-9307174			
Gyanjo	✓		—			
Francis Arloo	✓		0577719751			
John Kwaku	✓		✓			
Elizabeth Alla	✓		✓			
Ibrahim Adam	✓		0240107998			

ENI OCTP Phase II ESIA

Attendance Register

Date:_____

Location/ Village Name:_____ Stakeholder:_____

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Moses Kwofie	✓		057434892			
Ali Iddris	✓		0242224349			
Anthony Namah	✓		027993599			
Paul Cudjoe	✓		0578492121			
Mariama Musa	✓		✓			
Aheeke Elizabeth	✓		✓ 0272723045			
Jamila Angemah	✓		0573374789			
Getrude Amangrah			0541037697			
Arlloo Samanye	✓		0578492127			
Helina Angemah	✓		✓			

ENI OCTP Phase II ESIA

Attendance Register

Date:_____

Location/ Village Name:_____ Stakeholder:_____

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Elizabeth Yeboah	✓		—			
Gabriel Amin	✓		0249980560			
Ackah Angate	✓					
Awiah Appiah	✓		—			
Margaret Kwofie	✓					
Anodwo	✓		0279630189			
Gifty Botto	✓		✓			
Kwaku Peter	✓		0540546117			
Esther Kwofie	✓		✓			
Angate Ehowah	✓		✓			

ENI OCTP Phase II ESIA

Attendance Register

Date:_____

Location/ Village Name:_____ Stakeholder:_____

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Mary Swanzy	✓		✓			
Comfort Andoh	✓		0503003782			
Philomena Mintah	✓		0547916764			
Rita Kumi	✓		✓			
Mary Kwofie	✓		—			
Magaret Ellen	✓		—			
Joseph Kwofie	✓		—			
Hagar Kwofie	✓		—			
Amos Ertzoah	✓		0246024616			
Obed Mensah	✓		0546826864			

ENI OCTP Phase II ESIA

Attendance Register

FOCUS GROUP FISHERMEN

Date: 3/12/2014

Location/ Village Name: KRISSAN Stakeholder: FOCUS GROUP FISHERMEN

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
FRANK ARMAH	KRISAN	I.T SPECIALIST	0541158055	N/A	smile4money@ymail.com	
M.EZAH GEORGE GOKEH	✓	OMANEPAYIN	0200334471 0248672699	N/A	N/A	
NANA KOBENA MANSURO	✓	FISHERMAN	0547859185	N/A	N/A	
EBO KOBENA	✓	FISHERMAN	0276985815	N/A	N/A	
EMMANUEL KENYA	✓	FISHERMAN	N/A	N/A	N/A	
ELIAH ANORTWI	✓	FISHERMAN	0202121136	N/A	N/A	
GEORGE ADDY	✓	FISHERMAN	0272284798	N/A	N/A	
KOFI MENSAH	✓	FISHERMAN	0275577163	N/A	N/A	
JOHN BONZOH	✓	FISHERMAN	0576106945	N/A	N/A	
JAMES CUDJOE	✓	FISHERMAN	0552900494	N/A	N/A	

ENI OCTP Phase II ESIA

Attendance Register

Date: 3/12/2014

Location/ Village Name: KRISAN Stakeholder: FISHERMEN / KIIs EDUCATIONS.

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
JAMES BUAH	KRISAN	FISHERMAN	0543548765	N/A	N/A	
JOHN BOAKYE	✓	FISHERMAN	0246336744	N/A	N/A	
JOSEPH NKRUMAH	✓	FISHERMAN	0576293338	N/A	N/A	
VINCENT KWAW	✓	FISHERMAN	0572563760	N/A	N/A	
RD FRANCIS NYANDZU	✓	KIIs + FOCUS GROUP - EDUCATION HEADTEACHER	0272145784	N/A	N/A	
NANA AKPANYI ARMO II	KRISAN	ASSEMBLYMAN/ CHIEF	0208178161 0276198902	BOX 1 KRISAN - EIKWE	N/A	

ENI OCTP Phase II ESIA

Attendance Register

Date: 4/12/2014

Location/ Village Name: ATUABO Stakeholder: KII EDUCATION /

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Mr. Timothy Mensah	Atuabo Methodist JHS	High School Head teacher	0208993839 0261003370	—	—	
Richard Nsiah	Atuabo Methodist	Primary School Asst HT	0246610744	—	—	

ENI OCTP Phase II ESIA

Attendance Register

Date: 03/12/2014

Location/ Village Name: KRISAN Stakeholder: FOCUS GROUP WOMEN

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
SOPHIA AMAMEHIE						
CECILIA MENSAH						
NYANKAKU ELLEN						
NYIMBA KODJO						
ESUAH BOSOMA						
ELISABETH OWUSU						
SUSANA ACKAH						
GRACE CROSBY						
PAULINA ABOAEGYE						
CONSTANCE CUDGOE						

ENI OCTP Phase II ESIA

Attendance Register

Date: 05/12/2014

Location/ Village Name: KRISAN Stakeholder: F.G WOTEN

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
MARY SIA						
AGNES ACKAH						
CYNTHIA AMIHERE						
COMFORT PLAHNAH						
NDEDE AKU						
AGNES ATOBRAH						
THERESA ADU.						

ENI OCTP Phase II ESIA

Attendance Register

Date: 3/12/14. Community/

Location/ Village Name: BAKANTA Stakeholder: VILLAGE MEETING

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
MS BELINDA RIDLEY	ERM	PRINCIPAL CONSULTANT	+2782 3614385	7 HAVEN DRIVE, NOORDHOEK		
APPIAH ONWONA-AGYEMANG	SRC	SENIOR CONSULTANT	0206545852	ACCRA		
Francis Midde			0276005721			
Isaac Dekeh			0545336860			
~~Francis~~			0543433072			
Francis Nyanzu			0543433072			
Joshua Kodwo			0271120449			
Joseph Kaku			0576467167			
Joseph Ersoah						
Saphena Anyomah						

ENI OCTP Phase II ESIA

Attendance Register

Date: 3/12/14

Location/ Village Name: BANANTA Stakeholder: Community meeting

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Paul Tagi Mensah			0509446981			
Anthony Adiah			0279527404			
Samuel K. Eshun			0554695829			
Gyam Nobbah						
Nobbachie Mohd						
JONATHAN AMANZIE			0570689654			
ALA NYAMEKEH						
Emmanuel			Obonu			
Anojate						
KOJO Anane			0544506940			

ENI OCTP Phase II ESIA

Attendance Register

Date: 3/12/14

Location/ Village Name: BAKANTA Stakeholder: Community meeting

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Amihere Ackah			0278970559			
Paul Blay			0276220135			
ERIC Rendje			0546899211			
EFI Rejoa			0570804982			
Thomas KOjo			0272146146			
John Ackah	Sweet Mother Company		0275568384			
ROBERT ARLOO			0572224491			
Richard Arloo			0273835126			
James Arloo			0271211870			
Ivan Ackah	£		0273636269			

ENI OCTP Phase II ESIA

Attendance Register

Date: 3/4/14

Location/ Village Name: BAKANTA Stakeholder: Community meeting

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
KOFI AMGBO			~~0574774199~~ 0574774919			KOFI
William Anjimah			0576298500			
Godfway Twerebo ah						
Eric Nkrumah			0595241542 0572519466			
MOSES KUSI			0276033388			
Emmanuel Awudzi			0248271583			Ewudzi
Francis Addo			~~050~~ 05055 ~~054~~ 33314			
Ebenezer Anjimah			0573111724			
Majid Issif			0541426442			
Michael Anyan			0241231189			

ENI OCTP Phase II ESIA

Attendance Register

Date: 3/12/14

Location/ Village Name: BAKWATA Stakeholder: Community meeting.

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Tane			054HH1037HH			
JOSEPH MIEZAH						
Michael			0506610132			
John Cudjoe			0547189729			
Elizabeth Fogoe			050 9446981			
Awi Homa			0554688217			
KAKU			0574804466			
obona			02HH107H16			
Philip H. Achab			0272826642			
Mary Amandoh						

ENI OCTP Phase II ESIA

Attendance Register

Date: 3/12/14

Location/ Village Name: BAKANTA Stakeholder: Community meeting.

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Philip Mckah			0542787888			
Martin Cudjoe			0243355523			
Stephen Nyenrah			0277526175			
Kwasi Irizy.			0503533409			
Emmanuel A. Neyma	—	—	0274955070			
Jonas Amihere		Driver	0573928042			
Patrick Kwofie		student	0243820093	Bakanta Post office Box 3, Elkwe	Patrickkwofie @ yahoo-com	
Albert Kwaw			0272563250			
Ebenezer			0504611217			
Francis Cudjoe			0248262967			

ENI OCTP Phase II ESIA

Attendance Register

Date: 3/12/2014

Location/ Village Name: Bakanta Stakeholder: Community meeting

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Albert Nyamenlebam			0574602804			
Augustine Ackah			0276456932			
Peter Blay						
Alhaimzah			0540171744			
Ayo Ajima Asabanda						
Kwasi Allucke			0275[illegible]177			
Bright Anzah			0278474[illegible]3			
Andrew Mich			0246[illegible]7347			
James Affel			0272522320			

ENI OCTP Phase II ESIA

Attendance Register

Date: 31/12/14

Location/ Village Name: BAKANTA Stakeholder: Community meeting

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Rebecca Kwasi			0273161146			
Fraeisca Jonica			0500335678			
Monica Buadi			0545200601			
Rebecca Bragare						
Enestina Aamah			0502434802			
Veronica Cobbina						
Pantricia Ewedoko						
Elizabeth Mensah			0500335678			
Mary Esien			0242663601			
Philomina Mankeh			0274881847			

ENI OCTP Phase II ESIA

Attendance Register

Date: 3/12/14

Location/ Village Name: BAKANTA Stakeholder: Community meeting

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Mary Kanna Aya			~~057~~			
Monica Ala			0575746610			
Mary Gejetua						
Elonye Ehua						
Wagya Aya						
Monica Noba			0240253452			
Gradis Kofie			0509446717			
Cithai Mienza			0572120749			
Rose Nyi						
Aluake Aduo						

ENI OCTP Phase II ESIA

Attendance Register

Date: 3/12/14

Location/ Village Name: BAKANTA Stakeholder: Community meeting

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Alice Miah						
Manther Anyimah						
Elizabeth Ebakpole						
Owusu Ndabela						
Gogimah Nyi						
Rebecca cojeo						
Victoral Nyi						
Gifty Kofie						
Joyce Ebakpole						
Rosina Bely						

ENI OCTP Phase II ESIA

Attendance Register

Date: 3/12/14

Location/ Village Name: BAKANTA Stakeholder: Community meeting

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Adei Adwoba						
Faustina Cobbina						
Josephina Agemah			0202994934			
Peter Siah			0503770839			
Kojorale						
Rigana Kwaji						
Elizabeth Akah			0572864438			
Joseph Asebanda			0572121881			
Bernard Acker			0279645817			
Anthony Kokle						

ENI OCTP Phase II ESIA

Attendance Register

Date: 3/12/14

Location/ Village Name: BAKAMA Stakeholder: Community meeting

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Musa Musa			0279645817			
Nkrumah Boto						
~~Kodl~~ Kodo	Anyan		0544156340			
Cristana Koame						
Elizabeth Kemise						
Emy Alungameke						
Manyu Amokpoke						
Grace okyere						
Mavis Kadeula			0544112083			
Rose Kwaw			0272570482			

ENI OCTP Phase II ESIA

Attendance Register

Date: 3/12/14

Location/ Village Name: BAKANTA Stakeholder: Community meeting

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Joseph Yenkey			0243842951			
Godfred Armoo			0554479575			
Alfred Nyamekye			0547447391			
John Nyankey			0541687106			
Linda Ackah						
Esah Kofi						
Kaale Kadoo Kwadi						
Patrick Ezoah			0273164145			
Edward Ackah			0274960833			
John Abebe			0554686389			

ENI OCTP Phase II ESIA

Attendance Register

Date: 3/12/14

Location/ Village Name: BAKANTA Stakeholder: Community meeting

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Ruggers Ackah		~~02100~~	0240031393			
Solomon Adiah						
Mary Awjinah						
Grace Ackah	Bakanta K G	Teacher	0540788396			
Elizabeth Diah	Bakanta Prim	Teacher	0540790837			

ENI OCTP Phase II ESIA

Attendance Register

GPS – N 04° 58' 32·6"
W 002° 31' 16·1"

Date: 5/12/14

Location/ Village Name: Anokyi Stakeholder: Community meeting.

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
ADU NYARKO ANDORFUL	SRC	PRINCIPAL CONSULTANT	0202810522 0244855662	PMB CT 361 ACCRA	a.adunyarko@gmail.com	
APPIAH ONWONA-AGYEMANG	SRC	SNR CONSULTANT	0206154852 0242109854	✓	onwonagyemang@gmail.com	
Emmanuel Antwi			0576451015			
Francis K. Ansah			0542122337			
Margaret Ariil			0273362960			
Aba Esoun			0271208311			
Cobbiah Kope Agness						
Stephen Ackom			0272290842			
Samuel Codjoe			0573062641			
Edith Fiah			0278991564			

ENI OCTP Phase II ESIA

Attendance Register

Date: 5-12-2014

Location/ Village Name: Anokyi Stakeholder: Community meeting

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
~~Dorcas~~						
Dorcas Essien			0570326966			
Rose ~~Essin~~			0576009666			
Abraham ~~Abrahim~~ Armah			0208734009			
Annor Benye Ndabla			0275148673			—
Dominic Anoine	Anokyi Youth Association	Anokyi Youth Association President	0201855857 0546537629	P.O. Box 4, Anokyi	awotwe.dominic@gmail.com	
Francis A. Ansah			08 08 339			
P.R.O. S.N. Essien			020-53 53746	Box 115 Anochie,		
Joseph N. Essien			0208161972	P.O. Box 25 Ainyase		
Mr. Avo Blay			0208161972			—

ENI OCTP Phase II ESIA

Attendance Register

Date: 5-12-2014

Location/ Village Name: ANOKYI Stakeholder: Community meeting

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Papa Morkah Anor						
J. A. AFFUL		ELDER	0201334484	ANOKYE		
James Attobrah			0271650899			
ACOSHIE MENSAH						
Daniel A. Asamoah		Security	027715176	ANOKyi		
Sophia Kwaa			0576377 62	Anokyi		
Agnes Assuk						
Esther Mokle						
AUGUSTINA SAM			0579978200			
MONICA APPIAH			0279571 6			

Name:	Organisation Name	Position	Phone	Postal Address.	Email	Signature.
Asua Aku	—	—				
Susana Nreda	—					
Vida A. Morke	—		0271123764			
Mary Kusame						
Lucy Blay			0541918590			
Rose Nyankey						
Hannah Obeng						
Rosina Gibbah						
Agnes Asful						
Aka Ebasogaa						

ENI OCTP Phase II ESIA

Attendance Register

Date: 5/12/14

Location/ Village Name: ANOKYI Stakeholder: Community Meeting

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Agnes Kwofie			0574333870			
Cynthia Armah						
Jacob Adjokah	-	-	0572188511		Jacobadjokah@yahoo.com	
Javis Cobbold	-	-				
Patrick Kwesi	-	-	0578097579	-		
Theresah Obinhyaa			0276230877			-
Ekua Mensiwah	-	-	-			
Paul Amihyia	Transit	Transit	0507009680			
Sophia Mensah	-		0573696403			-

ENI OCTP Phase II ESIA ERM eni

Attendance Register

Date: 09/12/2014

Location/Village Name: Atuabo Stakeholder:

NAME	Organisation Name	Position in Organisation	Phone	Postal Address	Email Address	Signature
Elizabeth Nyamekeh			0245706594			
Gladys Amagful			—			
Victoria K. Ebela			0546007890			
Sabina Eshun	Hairdresser	Master				
Ruth Anuoba	Teacher		0263659547			
Anthi Yaa	—		—			
Mercy Ackerson			0249025699			
Cicelia Kerson			0541155908			
Dorithy Kwasi						
Margaret Cobbina	—		0576577123			

Attendance Register

DATE: 09/12/14

Location/Venue: Atuabo

Stakeholder:

NAME	Organisation Name	Position in Organisation	Phone	Postal Address	Email Address	Signature
Appiah Omwona Appg	SRC		0206154852			
Leticia Kargbe	GHS	Community Volet	0244043724			
Ruth Baadi			0243938805			
Esther Ackah			0277123664			
Gloria Kwaw			0241833713			
Comfort Klyorge			0245704835			
Eighty Kwaw			0			
Amo Baahraale						
Hannah Akuba Atiabo						
Mary Andoh			0271238300			

ENI OCTP Phase II ESIA

Attendance Register

Date: 08-12-14

Location/ Village Name: SHAMAH Stakeholder: FISHERMEN

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Nana Efirimu(IV)	G.N.C.F.C.	Chief fisherman	0248449155	Box 16 Shama		
Frank Pegu	GNCFC	Assemblyman	0248 4455	Box 16		
Emmanuel O. Tecco	GNCFC	Mechanics	0265690379 0248332406	BOX 40		
Awortwi Asperkwa	✓ ✓	Fisherman	0207073728			
Yakubo	✓ ✓	Fisherman				
Kwesi Nkrumah		Fisherman	0243703349			
Kweku Bedu			0236719312			
Papa Kofi Essoun			0540999017			
Papa Kwasia	Ansah		0264510449			
Magya Kojo			0552447179			

ENI OCTP Phase II ESIA

Attendance Register

Date: 18/12/14

Location/ Village Name: SHAMAH Stakeholder: Fishermen

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
Egya Essafio			0554477179			
Mansah						
Emmanuel	Mansah		0246958100			
Nana Ofori			0576246917			
Uncle Egya	ata boys		0545548919			
Papa Asefua			0576246917			
Egya Abona			0576246917			
Kobbina Essun						
Mohammed Idris			0277748648			
Egya Kwasi ntama			0249027707			

Simons Kennedy

ENI OCTP Phase II ESIA

Attendance Register

Date: 5/12/2014

Location/ Village Name: Krisan Stakeholder: krisan refugee camp Manager

Title, First name & Surname	Organisation Name	Position in Organisation	Telephone / Cellphone Numbers	Postal Address	Email Address	Signature
BANNERMAN-MARTIN	MADMO/ GRB	CAMP MANAGER	0246775023	C/o UN HCR Field office Box 304	dexterbmann@gmail.com	
Brendon Solik	ERM	consultant	0713306664	Lebanon ERM SA	brendon.solik@erm.com	
BELINDA RIDLEY	ERM	PROJECT MGR	0823611385	ERM SA	belinda.ridley@erm.com	

Appendix D

Meeting Minutes

ESHIA for eni Ghana's Offshore Cape Three Points (OCTP) Phase 2 development

Meeting Notes – Asemde-sauzo Community Meeting

Subject/Ref	ENI OCTP Phase II- Asemde-sauzo Community Meeting
Stakeholder and Venue	Asemdesauzo Community Meeting, Asemde-sauzo.
Date of Meeting and Time	Tuesday 2nd December at approx. 4:00 pm
Present	Daniel Abbrey (SRC), Brendon Solik (ERM), Community members (See stakeholder register)

Introduction:

DA introduced the project team and explained the purpose of the meeting.

The main purpose of the meeting was to:

- Introduce the community to the project and the project team;
- Explain the key components of the Project;
- Inform the Community that they are a key stakeholder and what activities the project team intends to carry out; and
- Engage the community on their key concerns and make note of queries and suggestions from the community.
- Gather baseline data on different community groups.

DA and BS circulated the Background information document to meeting attendees and explained the project using the map poster. The project team explained that this ESHIA was being conducted on behalf of eni Ghana and pertains to Phase II of the project activities. Distinction was made between Phase I and Phase II activities.

After the explanation of the components of the project the DA and BS fielded questions about the project.

Issues and concerns

Community Members indicated that they do not fish in the sea but rather in the inland streams to the north of the village. As a result they did not believe that offshore activities of the project would affect them directly.

- DA acknowledged this statement

Despite this, they did voice concern over the impact that the subsea pipeline would have on other coastal fishing communities. They were concerned that it may obstruct fishing boats and present safety risks. The safety concerns were directly related oils spills, leakages, and fires.

- DA acknowledged their concern and explained that eni would have all the necessary oil spill contingency plans, and safety plans in place.
- It was also noted that the impacts of the subsea pipeline would be temporary in nature as once the pipeline is complete fishing routines can commence as they did before.

The community was particularly concerned about the potential pipeline right of way from the onshore receiving facility to the Atuabo gas processing plant. The existing right of way runs adjacent to their farm lands. They indicated that any increase in the pipeline right of way may result in compensation to the community.

- DA explained that the pipeline from the onshore receiving facility to the Atuabo plant was one of the two options contemplated by ENI. If possible (dependent on the 'quality' of the gas), eni would send the gas directly north from the ORF to the existing national gas pipeline.
- If it is necessary to construct the pipeline from the ORF to the Atuabo (second of the two options), then the pipeline would be constructed parallel to the existing pipeline. As a result this should not occupy large tracts of land but rather possibly extend the pipeline right of way.

The community expressed that they expected employment opportunities as a result of the project. They described that their community was one of the affected communities and employment must be drawn from their village. The community alluded to social labour plan which would detail a local content policy. They indicated that employment for the youth was important to them.

- DA response was that Eni would announce job opportunities for those qualified and interested to apply.

DA thanked all attendees for their time and closed the meeting.

ESHIA for eni Ghana's Offshore Cape Three Points (OCTP) Phase 2 development

Meeting Notes - Atuabo Community Meeting

Subject/Ref	ENI OCTP Phase II – Atuabo Community Meeting
Stakeholder and Venue	Atuabo Community, Atuabo
Date of Meeting and Time	9th December, 2014 at 09:10 GMT
Present	ESHIA Team: Kwame Asante, Dan Abbrey and Appiah Onwona-Agyeman (KA, DA, & AOA, SRC), Joseph Karikari, (KK, ENi). Atuabo Community: Paramount Chief (Awulae Blay, VII), elders, youth and women representative (See attendance register)

Introduction

KA thanked the elders and community for making themselves available for the meeting and introduced the ESHIA team and the purposes of the meeting.

History of Atuabo

According to the Omanpanin of Atuabo, Nana Napoleon Annaman, the Nzema name for the town is Adoabo, the name of fruit under which the founder of the town settled under. That about 500 years ago, Atuabo was a port town and many people migrated to Atuabo for economic reasons whilst other migrated as they run away from wars in their communities. It was a port for export of raw materials (e.g., timber, coconut, palm nuts, and import of other items to Ghana.

Introduction of Phase II project

KA gave an overview of the proposed project activities highlighting the difference between Phase I and Phase II and the others o&g activities in the area. KA showed the large map with the location of proposed infrastructures and distributed the Background Information Document (BID). The ESHIA process followed by the project was also explained.

The Omanpanin, Napoleon Annaman, who was delegated and spoke on behalf of the Awulae, mentioned that the environmental impacts of the project will highly affect the people from Atuabo, being the paramouncy and therefore, attracting most of the workers for the various oil and gas projects. The elders asked questions about the potential health effects of the project on the adjoining communities and how eni plans to mitigate them. The various eni investments in health infrastructure at both the Ellembele and Jomoro Disctricts (Efaso, Asemda, Eikwe, Sansule CHIP Compound, were highlighted as examples of eni's readiness to deal with nay emerging health related issues to the project.

Demographics – In/out migration into the village

Both fishermen and workers come to Krisan to work mainly: British, Ewes, and Fantis (fishing), Nigerians (petty trading), muslims/ Funalis (cattle) and also and Asantis.
They have noticed a change in the migration pattern from the establishment of oil and gas activities in the area. Workers from the different companies: Tullow, Ghana Gas, Kosmos, etc. are arriving to the area and some of them stay for accommodation. This leads in an increase of the demand of housing and increase on prices.

They also mentioned that refugees from different countries arrived in 1997 to the Krisan Refugee Camp. They also mentioned, that the refugees destroyed the forest by cutting forest trees for charcoal burning, collect the coconut for food and sales. The community has also observed increased in stealing which is committed mostly by foreigners.

Vulnerable Groups

As vulnerable groups they identified:

1. Women;
2. Children;
3. The aged and the youth;
4. Disable people (only few in the village).

Conflicts/Tensions within the last 5 years

They reported an increase on crime (mainly robbery) due to the increase of immigrants in the area. They mentioned that no conflicts with oil and gas employees (including security forces) have been arisen thus far.

Paramount Chief

Krisan reports to Atuabo Paramount Chief.

Land Tenure and Land System

They mentioned that the farmlands are not is not fertile for agricultural activities especially, crop farming. The land is also not allowed to fallow because there are more people going after the acreage of farmlands land in the community. The main crops they plant in the area include coconuts (fresh and dried ones), palm trees and cassava.
Both farm and village lands are "family lands". The family elders are responsible for allocation of land but the process goes through the village elders. Women reported the same process during the Women FG with some additional details.
In recent times, with the find for oil and gas, many people have lost their farm lands to development and infrastructural projects. This has adversely affected the size of farmlands and food production in the Atuabo community.

Education

One primary school shared between Krisan and Sanzule. Refer to the KII Education at Atuabo.

Tourism

They confirmed that the Nzulezu is a tourist site.

Vulnerable Groups

As vulnerable groups they identified:

- Women;
- Children;
- The aged and the youth;
- Disable people (only few in the village).

Conflicts/Tensions within the last 5 years

They reported an increase on crime (mainly robbery) due to the increase of immigrants in the area. They mentioned that no conflicts with oil and gas employees (including security forces) have been arisen thus far.

Economic & Livelihoods Activities

The main activities of the people of Atuabo are;

- Fishing (60 % commercial with 40 % consumed by the local market) from July ending to March

- Farming (30 %) and
- Animal rearing: sheep, cow rearing and poultry keeping, (10 %).

According to the community elders, about 30 % of the population are employed as teachers, nurses and in other sectors of the local economy. Others are also involved in coconut, palm fruit and nuts, cassava farming. Fresh coconut is exported to Nigeria, dried coconut is sold to people from Takyiman. Cassava and palm nut trees/ fruits are sold at the local market.

Heritage Sites

The elders indicated that the main heritage sites at Atuabo are the cemetery and the palace of the paramount Chief.

Crime and Security

The community agreed that the petty crime has reared its head at Atuabo since the found of oil and gas. They cited examples like breaking of doors and stealing from people's rooms and others. The community estimates at a least 10 % increase in crime in the area since the last ten years. However, there is no police station and police presence at Atuabo to deal with the increasing crime rate. The community explained that there used to be a police presence at ATuabo. However, since the breakdown of the police station and the residence for the staff, the police left. The Awulae is presently renovating the police station with about 80 % of the work completed. The community hopes that eni will come and support the completion and furnishing of the police station after which the police can reasonable come and work at Atuabo.

Concerns and Expectations for the Project

The Awulae Blay VI and the elders were in favour of the project and felt that the project will provide some positive impact on the Atuabo community.

It was requested that the ESHIA Team wrote down their concerns which included:

- Ethnic balance in the assessment team for the social and environmental impact of the project. Not one Nzema person on the team.
- Increase in stealing and other petty crimes in the community.
- High cost of living at Atuabo, including rent.
- Negative influence of foreign culture on the youth and people of the area. For example, the youth are learning smoking from the foreign workers working in the area.
- Potential reduction in fish catches at Atuabo.
- Negative impact of the project on young women. School girls are being impregnated by the middle class workers in the community. Young girls are attracted by cars, smart phones and new technologies used by workers in

the area. The elders recommend a good education programme for project workers, girls and their parents in order to protect the young girls.

- Lack of transparency in the recruitment process for workers for the o&g projects. They suggested a advertisements to appear on the public information board and also create a recruitment committee at the local level to work with eni.
- Fear of impeded access to fishing ground especially near the gas pipe lines;
- Concerns on the cumulative impact on the fishing industry: including local fishermen, cold store owners, drivers, fish processors, firewood sellers, chop bar owners, etc.) They mentioned that the decline in fish catch due to project activities will deny most of the people above their descent livelihood.
- They expressed their discontent with the several unfulfilled promises done by the o&g operators, especially, the Ghana Gas Processing Plant.

The community leaders recommended a technical vocational skills, business skills and enterpreneurship development training programmes for the community members mostly affected by the project in order to provide opportunities for sustainable alternative livelihoods.

Note that additional concerns were raised during the different Focus Groups discussions (FG) and Key Informants Interviews (KII) held with women and fishermen (refer to meeting notes for FG Leaders & Elders, Women and Fishermen and KII Education).

The meeting ended at 10:30 am.

ESHIA for eni Ghana's Offshore Cape Three Points (OCTP) Phase 2 development

Meeting Notes - Community Meeting Bakanta

Subject/Ref	ENI OCTP Phase II – Bakanta Community Meeting
Stakeholder and Venue	Bakanta Community, Bakanta Chiefs Palace
Date of Meeting and Time	03 December 2014 at 9 am
Present	Belinda Ridley (ERM), Appiah Onwona-Agyemang (SRC), Bakanta Community (see attendance Register)

Introduction

AO introduced the project team and explained the purpose of the meeting.

The main purpose of the meeting was to:

- Introduce the community to the project
- Explain the key components of the Project;
- Inform the community that they are a key stakeholder
- Inform the community what activities the project team intends to carry out; and
- Consult the community on their key concerns and make note of queries and suggestions that they may have.

AO circulated the Background information document to meeting attendees and explained the project using the map poster.

After the explanation of the components of the project the AO fielded questions about the project and recorded issues, concerns and information from the community.

General

The community expressed about why ERM/SRC was coming to come here to talk to the community when the project is going to be located at Sanzule?

- ERM explained that the scope of work for the project included engaging with 10 communities along the coastline and not just Sanzule. This is because the

possible effects (both negative and positive) of the project are likely to be felt beyond Sanzule.

The community enquired whether the project would fall across within the Bakanta boundaries.

- ERM/SRC responded by indicating that part of their objectives was to better understand about how communities members fish/farm/live in order to understand who/what will be affected within the footprint of the project (The poster map was used to explain the project affected area)

The community continued to engage on why the project location was not Bakanta.

- ERM/SRC explained that there are a range of technical and non-technical considerations in site situation process affecting location, including:
    - Avoiding displacement;
    - Cost; and
    - Technical complexity;
    - Distance from CPF (may cause delays)
    - Distance from communities and land users– social relationships + disruption of livelihood
    - Distance from Ghana gas plant in Atuabo

ERM/SRC further that project is actually NOT located in Sanzule but rather on the shore component but between the two.

The community continued to display Disappointment that the ORF would be located on their land as they will not receive compensation. It was clear that expectations were raised during early site selection.

ESHIA for eni Ghana's Offshore Cape Three Points (OCTP) Phase 2 development

Meeting Notes - Beku Community Meeting

Subject/Ref	ENI OCTP Phase II- Beku community meeting
Stakeholder and Venue	Beku community, beku
Date of Meeting and Time	5rd of December at approx. 9:00 am GMT
Present	Daniel Abbrey and Dr. Eric Odei (SRC consultants) Community members (Please see stakeholder register attached)

Introductions:

DA introduced the project team and explained the purpose of the meeting.

The main purpose of the meeting was to:

- Introduce the community to the project and the project team;
- Explain the key components of the Project;
- Inform the Community that they are a key stakeholder and what activities the project team intends to carry out; and
- Engage the community on their key concerns and make note of queries and suggestions from the community.
- Gather baseline data on different community groups.

DA and EO circulated the Background information document to meeting attendees and explained the project using the map poster. The project team explained that this ESHIA was being conducted on behalf of eni Ghana and pertains to Phase II of the project activities. Distinction was made between Phase I and Phase II activities.

After the explanation of the components of the project the DA and EO fielded questions about the project.

Issues and Concerns

Community members wanted to know plans being put in place to mitigate any adverse impacts of the project.

- DA responded by saying that this ESHIA is being done gather information on the all project communities and gauges the views and perceptions of

community members about the project. He emphasised that the outcome of this exercise will be a report that outlines all potential adverse and positive impacts of the project. Where negative impacts are encountered, measures will be put in place to address them.

Community members appealed for eni to implement alternative livelihood programmes for fishermen who may be impacted.

They also called for community investment projects to be implemented in the project communities as a way of mitigating any adverse impacts of the project.

They again appealed to eni to make conscious efforts to employ youth from the community.

They would also like the company to assist in improving on the social infrastructure of the communities since worker are likely to put pressure on them.

They advised against oil spillage and asked eni to put in place measures to forestall this.

They also recommend that a fire station should be established in the area to respond to any potential fire outbreak at the project site.

ESHIA for eni Ghana's Offshore Cape Three Points (OCTP) Phase 2 development

Meeting Notes- Eikwe Community meeting

Subject/Ref	ENI OCTP Phase II – Eikwe Community Meeting
Stakeholder and Venue	Eikwe Community, Eikwe
Date of Meeting and Time	3rd December 2014
Present	Adu Nyarko A. (SRC), Dr. Eric Odei (SRC) Eikwe Community (See attendance Register)

Introduction:

AN introduced the project team and explained the purpose of the meeting.
The main purpose of the meeting was to:

- Introduce the community to the project and the project team;
- Explain the key components of the Project;
- Inform the community that they are a key stakeholder, since the project will be located on their land
- Inform the community what activities the project team intends to carry out; and
- Consult the community on their key concerns and make note of queries and suggestions that they may have.

Once the introductions and description of the project and been undertaken, key concerns and issues as well as information on the community was recorded.

Land Tenure and Land use

Lands are owned by the chiefs and families. They are mostly customary lands except areas appropriated by government as vested land. The Chief endorses any agreement

Economic & Livelihood Activities
Fishing and farming are most activities undertaken. Fishing 70%, farming 20% and others 10%. They said 20% are in formal employment in sectors including Education, MMDAs, etc. They said men are main fenders of the family. They have

low-income levels but the women earn more. Education bills consume most of their incomes. The fishing industry is the single occupation that earns them more income. Support the project but should endeavour to train local people to get the expertise to employed

Fishermen / Men
Fishing and farming are two main activities engaged in. the sea is single most important income earning resource. Fishing is done all year round with the peak from July to December but low from April to May. Fishes mostly harvested in the area are Sukwei, Eduei, and elks among others. They mostly use dragnets and a heavy catch – about GH₵1,500. Fish stock is decreased and attributed to presence of FPSO, and other fishermen who use light in fishing (it should be checked by the government). Their catch is sold to women who in turn send it to the markets at Ainyinasi, Tarkwa, etc. About 1% is used at home. Gender roles are that the men fish at sea, while the women buy and sell. Fishing gives greater income than any other activity.

Issues of concern

They were concerned that:

- Light on FPSO will attract all the fish so most fishes do not come close to the shores, which will reduce fish catch loading to poor economic conditions
- See weeds will continue to come (sogazum).
- They support the project because it is for the nation as a whole. However, the local people should be assisted. It should be in the form of financial assistance, provide water, toilet facility needed. Now use free range system Support the youth for employment

Suggestions

- Collaborate with Zoil to clean the local beach
- The fishermen have to be supported with alternative livelihood activities and financial support in the form of grants/loans.
- Implement local content policy to address the employment needs of the local communities
- Program for the vulnerable: children, old age

Questions

- Would like to know the types of impacts that the project could bring
- Would like to know how the pipelines are going to be laid so avert accidents
- Community members have been informed not to cross the corridor of the gas pipelines. Would like to know how they can access their farms beyond the corridor

The community is in full support of the project

ESHIA for eni Ghana's Offshore Cape Three Points (OCTP) Phase 2 development

Meeting Notes - Krisan Community Meeting

Subject/Ref	ENI OCTP Phase II – Krisan Community Meeting
Stakeholder and Venue	Krisan Community, Krisan
Date of Meeting and Time	3rd December 2014 at 0820GMT
Present	ESHIA Team: Kwame Asante (KA, SRC), Begoña Rodrigo LLodio (BRL, ERM). Krisan Community: Chief (Nana Essuah Menemah II), elders, youth and women representatives. (See attendance register)

KA thanked the community in making themselves available for the meeting and introduced the ESHIA team and the purposes of the meeting.

Introduction of Phase II project

KA gave an overview of the proposed project activities highlighting the difference between Phase I and Phase II and the others o&g activities in the area. KA showed the large map with the location of proposed infrastructures and distributed the Background Information Document (BID). The ESHIA process followed by the project was also explained.

The Chief Essuah Menemah II, mentioned that the environmental impacts of the project will also affect Krisan and not only Sanzule as they share the same fishing area. He mentioned that eni provided 2 toilets to Sanzule and that if eni provide Krisan with at least 10% of what it has been provided to Sanzule and Eikwe it will be enough for them.

Community concerns on the project

It was requested that the ESHIA Team wrote down their concerns which included:

- the need of 2 toilets;

- water access;
- a bus stop with shade;
- solar street light
- they claim for the same opportunities for employment and training as for Sanzule and Bakanta and other benefits of the project;
- fear of impeded access to fishing ground especially near the gas pipe lines;
- concerns on the cumulative impact on fishing activities with the other O&G projects. They mentioned that the fish catch has declined over the last years.
- they expressed their discontent with the several unfulfilled promises done by the o&g operators, especially, the Ghana Gas Processing Plant.

It was also suggested that in the future the meeting organizer shall bring enough chairs for everybody.

Note that additional concerns were raised during the different Focus Groups (FG) and Key Informants Interviews (KII) held in Krisan (refer to meeting notes for FG Leaders & Elders, Women and Fishermen and KII Education).

Figure 1 Village meeting at Krisan (3rd December, 2014)





Source: ERM, 2014

The meeting ended at 9:45 am.

ESHIA for eni Ghana's Offshore Cape Three Points (OCTP) Phase 2 development

Meeting Notes - Ngalichi Community Meeting

Subject/Ref	ENI OCTP Phase II- Ngalichi Community Meeting
Stakeholder and Venue	Ngalichi community, Ngalichi
Date of Meeting and Time	4th of December
Present	Adu-Nyarko and Eric Odei (SRC), Community members (Please see stakeholder register attached)

Introduction

AN introduced the project team and explained the purpose of the meeting.

The main purpose of the meeting was to:

- Introduce the community to the project and the project team;
- Explain the key components of the Project;
- Inform the Community that they are a key stakeholder and what activities the project team intends to carry out; and
- Engage the community on their key concerns and make note of queries and suggestions from the community.
- Gather baseline data on different community groups.

AN and EO circulated the Background information document to meeting attendees and explained the project using the map poster. The project team explained that this ESHIA was being conducted on behalf of eni Ghana and pertains to Phase II of the project activities. Distinction was made between Phase I and Phase II activities.

After the explanation of the components of the project the AN and EO fielded questions about the project.

Observations

The people would like to know whether the project would increase income levels in the project communities.

- AN responded that employment and business opportunities that are likely to be created in the communities have the potential of increasing the income levels of project beneficiaries.

They would like the company to offer scholarship to pupils to higher level

They also suggested that the company intensify its community engagement drives so the people better understand the project and its impacts.

Concerns raised on the project include the following:

- Influx of migrant workers, especially drivers and menial worker who would like to take opportunity of their poor economic situation and impregnate the young girls
- A surge in worker population will put pressure on social infrastructure. Shortage of accommodation will end up affecting other workers like teachers. Thus rent will be too expensive.
- Migrates workers for example the Chinese pay higher rates / dollars forcing teachers out of occupancy
- Safety issues as the road becomes busy with vehicular movement

Expectations

- Job opportunities for the youth
- Market for local business
- Assistance for SMEs operating in the project area as part of eni's CSR programmes

Community members called on eni to take all suggestions being offered seriously.

ESHIA for eni Ghana's Offshore Cape Three Points (OCTP) Phase 2 development

Meeting Notes- Ngalikpole Community Meeting

Subject/Ref	ENI OCTP Phase II – Ngalikpole Community Meeting
Stakeholder and Venue	Ngalikpole Community Meeting, Ngalikpole
Date of Meeting and Time	04 December 2014
Present	Belinda Ridley (ERM), Appiah Onwona-Agyemang (SRC), Ngalikpole Leaders/elders (see attendance Register)

Introduction

AO introduced the team and the purpose of the meeting. He also provided a brief understanding of the proposed project activities. Issues, concerns and information were recorded from the meeting.

General Concerns

The fisherman in the village have experienced disruptions to their fishing activities the from Ghana Gas project. Issues include:

- reduction in fish catch and an
- increase in seaweed in fishing areas
- heat from the gas flares

The community enquired what eni would to combat these issues.

Eni should introduce benefits to the community, for example a school for children.

Employment

The community indicated that they depend on sea for livelihood and that since the implementation of the Ghana Gas project there has been a reduction in fish catch.

The community members made an appeal to ENI to employ them.

The team broke away to engage with focus groups were more detailed information was obtained.

ESHIA for eni Ghana's Offshore Cape Three Points (OCTP) Phase 2 development

Meeting Notes- Sanzule Community Meeting

Subject/Ref	ENI OCTP Phase II- Sanzule Community Meeting
Stakeholder and Venue	Sanzule Community Meeting at Community Centre, Sanzule
Date of Meeting and Time	4th December 2014
Present	Brendon Solik (BS, ERM), Daniel Abbrey (DA, SRC) and Sanzule Public (See Attendance Register)

Introductions

DA introduced the project team and explained the purpose of the meeting.

The main purpose of the meeting was to:

- Introduce the community to the project and the project team;
- Explain the key components of the Project;
- Inform the community that they are a key stakeholder, since the project will be located on their land
- Inform the community what activities the project team intends to carry out; and
- Consult the community on their key concerns and make note of queries and suggestions that they may have.

DA circulated the Background information document to all meeting attendees and explained the project using the map poster. He explained that this ESHIA was being conducted on behalf of eni Ghana and pertains to Phase II of the project activities. Distinction was made between Phase I and Phase II activities.

After the explanation of the components of the project the DA fielded questions about the project and recorded issues, concerns and information from the community

Farm survey, valuation and compensation

They said people's lands have been surveyed and crops valued. They would like to know when compensations would be paid. DA answered that ERM/SRC are not in the position to tell immediately they were not involved in this farm survey/valuation work. He however assured the gathering that all queries regarding the project would be passed on to ENI to provide response to. They were further assured that ENI will ensure that any impacted person is identified and appropriately compensated.

Disturbance of fish habitat

They expressed concern that activities during the laying of gas pipelines under the sea might disturb fish habitat and possibly cause decline in fish catch. Would like to know what measures will be put in place to avert this. They urged ENI to put in place plans to ensure that fishing activities are not disrupted. DA responded that the essence of the scoping exercise is to gather such issues of concern so that expert can make recommendations to address any possible adverse impacts of the project.

Environmental hazards

Concern was also expressed over the possibility of accidental damage to pipelines and its attendant environmental hazards. They called for safety measures to be put in place to forestall this. They also want ENI to put in place measures to properly dispose of waste. DA responded that high safety and quality control and assurance standards be adhered to during construction and operation phase of the project to avert environmental hazards. They were assured that the EPA would not even allow ENI to operate if such environmental management plans are not prepared for the project.

Job opportunities

They fear that most of the job will be on the high sees leaving community members with few or no jobs at all. They would ENI to have a local con tent policy in place to ensure that people from the community, especially the youth, are given priority when in terms of employment.

Other social issues

Some issues were raised regarding influx of workers to the project areas and the possibility of increase in immorality and other form of social vices as a result. As a way of mitigating this, they suggested that ENI implement HIV/AIDS education program for workers and the youth.
They advised ENI to listen to the views of the people and ensure that suggestions offered are taken on board.

Community members would like to know how the project would benefit them.

ESHIA for eni Ghana's Offshore Cape Three Points (OCTP) Phase 2 development

Meeting Notes- FGD Anochi Leaders and elders

Subject/Ref	ENI OCTP Phase II Focus Group Discussion - Leaders and Elders
Stakeholder and Venue	Anochi Leaders and Elders, Anochi
Date of Meeting and Time	5th of December 2014
Present	Adu-Nyarko Andorful and Appiah Onwona-Agyemang Anochi leaders and elders (see attendance register)

OBJECTIVES:

- To provide information about the Project activities;
- To gather socio-economic information about the village. Specifically information about demographic, land use and ownership, leadership structure, economic/ livelihoods, education, heritage and policing and crime;
- To allow leaders and men to raise concerns/ questions about the Project; and
- To provide responses to concerns and questions, where possible. Where not possible to explore further as part of ESHIA.

GENERAL

1. What is the history of the village? When was it established and why was it established here?

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2. What are the divisions of labour in the village? (Roles and responsibilities of men vs. women).

ANS: Men go to sea to catch fish and women are responsible for smoking and selling the fish at the market.

3. What are the general problems/concerns that you face in the village?

ANS: Employment problems. All the youth are unemployed. The women lack capital to engage in trading activities.

DEMOGRAPHICS

4. What are the total population and number of households in the village?

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5. What is the gender composition of the village (approximate percentage)?

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6. Is there in/out-migration into the village? (Current rates; any recent increases – if so, why? Where are these people coming from? How do local residents feel about this?)

ANS: Yes. Many young men migrate out of the town in search of jobs in the cities. In the same way few other people also come here to look for jobs especially since Ghana Gas started.

7. Who do you think are the most vulnerable groups and why are they particularly vulnerable? (People previously discriminated against or who have not received equal opportunities to other groups)?

ANS: The elderly and people with disabilities in the communities.

8. What is the attitude towards women working?

ANS: Women are allowed to work and men have positive attitude towards them.

9. During the past 5 years has there been any conflict or tension? (e.g., conflict around natural resource shortages, land, economic matters, and cultural differences).

ANS: No tension or conflict.

10. How is tension/conflict managed?

ANS: Parties or individuals that have issues or controversy are summoned to the chief's palace for arbitration.

VILLAGE LEADERSHIP

11. How is the village/district structured in terms of administrative functions?

ANS: ------

12. Which Paramount Chief do you report to?

ANS: Anokyi chief report to the Paramount chief of Nzema East Traditional Area at Atuabo

13. What are the roles and responsibilities of the Chiefs?

ANS: The Chiefs are responsible for the day to day administration of the town. They are in charge of arbitration, allocation of lands, general cleanliness of the town and infrastructural and social development of the area under their jurisdiction.

14. Who represents the government administration at village level?

ANS: The Assembly member.

LAND TENURE AND LAND USE

15. Who 'owns' the village land (land where village is located and fields)?

ANS: All lands belong to individual families but are entrusted in the Stool.

16. What % is state land and % customary land?

ANS: It is 100% customary land.

17. Who is responsible for assigning/allocation of land in the village?

ANS: The individual family that owns the land is responsible for allocating land. After the land has been allocated to a person, the chief will have to give his approval.

18. What process does a person need to follow in order to acquire land in your villages? (How long does it take to complete this process?)

ANS: A person who needs a land must first identify the land he wants. Then he talks to land acquisition committee who identify the family that owns the land. The family sells the land to the person with the consent of the chief. The necessary documentation is done for the person.

19. What process do you need to follow when dealing with inherited land different to the one for land acquisition?

ANS: If one wants to buy such a land, he has to talk to the one who inherited the deceased and has the letters of administration to the deceased's estate.

20. What process do women have to follow when they want to acquire land in the village? (Prompt regarding whether women can own land or not and the reason why women cannot own land, if this is the case).

ANS: The process is the same for everybody; men and women.

21. Do people have formal 'ownership' certificates? If not, how can the land owner be identified?

ANS: Yes.

22. What are the main land uses in your village? (Try to ascertain the percentage of land used for infrastructure, businesses, grazing and crop farming, etc).

ANS: For construction of residential accommodation and farms.

EDUCATION

23. What are the education levels in the village?

ANS: Most people with high academic qualification travel out of the community to find jobs. Currently, there are people with Senior high School qualification. There are people with high academic levels who have retired from active service. So we have JHS, SHS and Diploma certificate holders in the community.

24. What is the enrolment rate of pupils at schools? What might the reason be for this? (girls vs boys)

ANS: Enrolment is high for both boys and girls. Everybody wants his child to be in school to take advantage of future job opportunities that will come to the area.

25. What proportion of the children attend school? For those who do not, why don't they go to school? (girls vs boys)

ANS: All children attend school.

26. Is there a difference between the percentage of boys and girls at school? If yes, what might the reason be for this?

ANS: both boys and girls are in school. The percentage is equal.

27. What is drop-out rate of pupils from the village? (girls vs boys)

ANS: Drop-out is minimal because everybody wants their children to be in school.

28. What are the differences between men and women education levels?

ANS: men have high educational levels.

ECONOMIC AND LIVELIHOODS ACTIVITIES

29. What are the main economic activities undertaken in the village? (This could refer to subsistence fishing/ farming, formal/ informal employment).

ANS: Fishing, farming and petty trading.

30. What are the secondary or alternative sources of income (besides the one mentioned above)?

ANS: No alternative source of income.

31. Rank economic/ livelihood activities in terms of contribution to household income/ subsistence.

ANS: Fishing, farming and petty trading.

32. If access to livelihood activities is disrupted, how would the villagers adapt and survive?

ANS: It will be a disturbing issue.

33. What is the level of unemployment in the village?

ANS: High unemployment.

34. For those who are formally employed who are the main employers in the District?

ANS: Ghana Education Service and Ghana Health Service.

35. Who are the main bread winners in the village households? (Prompt about female-headed households)

ANS: Both men and women. Men contribute 70% and women 30%.

36. Are you able to comment on the income levels of the village? (Break into no cash income, low, medium, high – define these categories and give approx. %)

ANS: the community has low income levels.

37. What are the differences between men and women's income levels? (Do men earn more than women?)

ANS: Men have high income levels than women.

38. What do most people spend their incomes on and where? Prompt for differences between men's and women's spending patterns, and where possible, rank the spending.

ANS: Spend mostly on food and Education of children.

39. How is wealth measured in the village? (e.g., in Kenya, the more cattle you have, the more wealthy people are perceived to be)

ANS: Wealth is measured by the level of investment in the fishing industry and the number of buildings one has built.

FARMING ACTIVITIES

40. Do many people farm for subsistence purposes, what do you grow, do you sell any of it (what percentage)? Prompt.

ANS: Farming is on subsistence level. We mostly grow cassava and because the yields are often small we eat everything and do not sell any.

41. What percentage of the village depends solely on agriculture?

ANS: About 10% of the people depend solely on agriculture.

42. What do you farm (crops or livestock)?

ANS: Crops.

43. Farming calendar: When are the various farming activities undertaken in the year (e.g. ploughing, planting, harvesting)

ANS: Weeding is done in February and sowing is done in April. Harvesting depends on the type of crop grown. If it is cassava which we mostly grow, we do not harvest all at a time. We harvest it as and when we need it to prepare food in the house.

44. Is the land left fallow, when? How has this cycle changed over time?

ANS: The land is left fallow for two years before cultivation is done on it again.

45. Has the yield changed over the past 10 years? How?

ANS: Crop yields continue to decrease year after year.

46. What percentage of the crops produced/ livestock breed do you sell and what percentage do you consume?

ANS: We hardly sell any of our produce. The yield is just small. We also farm for subsistence. We consume everything.

47. Where do you keep your livestock? Where do you graze them? (Prompt about problems surrounding the availability of grazing land, water, immunisations, etc)

ANS: We keep domestic animals in pens near our houses.

48. How and where do you sell your produce?

ANS: We sell at the market.

49. How much do you sell your produce for? (determine cost per weight)

ANS: The price of the produce depends on the cost of production and the demand for the produce.

50. Who is involved in farming activities (e.g., the whole family, men, women, children, hired labour)?

ANS: The whole family. We usually hire men to weed for us and maintenance and harvesting is done by the family.

51. What trading activities are practiced in the village? Rank.

ANS: Petty trading.

52. Where do you trade?

ANS: At the market.

53. What is the distance between your village and the market?

ANS: It's about 28 kilometres

54. What do you sell?

ANS: Mostly fish.

55. Where do you buy your goods? How many times a week/month do you go the buy stock? How much does it you to transport your goods to your storage space/ house before you take it to the market?

ANS: We buy from Ainyinase, Agona Nkwanta and Tikobo.

56. How do you transport your goods to your trading area/space everyday?

ANS: We hire the services of Taxi and use other public transport.

57. How do you determine the selling price of your goods?

ANS: We consider cost of production and demand of the goods.

58. What are the main constraints for doing business in the area/district?

ANS: Capital and transportation constraints.

59. How is the money/profits made from your trading activities spent and is this the main income for your household?

ANS: Profits from all activities are spent on food and education of our children.

HERITAGE

60. What heritage resources (sites/ rituals, tangible/intangible) are found/practiced in your village? If yes, prompt for the story behind these sites/areas. (Don't over prompt)

ANS: Nana Ayerara, Banzama, Adwomodenle, Mama and Anukpa

61. Where are these sites/areas situated?

ANS: Just at the outskirt of the community.

62. How do you think the project will affect these heritage resources?

ANS: The project will not affect the shrine in any way if the pipeline is laid by the Ghana Gas pipeline.

63. What festivals/rituals are undertaken in the village? Why are they undertaken? When do they happen?

ANS: We celebrate Kundum and it occurs in October every year.

POLICING AND CRIME

64. How is conflict managed in the villages and districts?

ANS: The chiefs call for arbitration. If it is beyond the chiefs the case is sent to the law court for determination.

65. What are the common crimes committed in the village? Where is the closest jail situated?

ANS: No crime. The nearest jail is in Sekondi.

66. How has criminal activity changed over the past 10 years?

ANS: There has not been any change.

67. How many police stations are found in the village?

ANS: No police station in the village. The nearest police station is at Ainyinase.

CONCERNS AND EXPECTATIONS

68. How do you feel about the proposed development? (positive and concerns)

ANS: The project is good but will greatly affect our livelihood. We depend on the sea for our livelihood. The drilling of wells in the sea will disturb the entire seabed. More sea weed will emerge and anytime we cast our nets we will catch only weeds.

69. How do you think the development will affect your lives?

ANS: More people will come to this area and costs of living will also go up.

70. How do you propose the potential issues could be avoided or mitigated?

ANS: Initiate more development projects for the community. The company should put up its own residential accommodation for its staff.

71. Who will be the most directly affected people, by the proposed activities? (positive and negative)

ANS: Fishermen

72. Are you in support of the proposed activities? Why for yes or no?

ANS: Yes because it will help in the country's development.

73. What can Eni do to enhance the positive impacts of the project which you have mentioned? (List one by one positive impacts and work through way of enhancing the positives)

ANS: There should be cordial relationship with the communities. They should also do more development projects for the communities.

HEALTH QUESTIONS FOR FOCUS GROUP MEETINGS - HEALTH FACILITIES

1. What healthcare facilities are there in the village? Who uses them?

ANS: No healthcare facilities in the village. We access healthcare at Eikwe.

2. If facilities are not in the village where are the nearest facilities that are used by the community? How far (time and distance) do people have to travel to get to them?

ANS: Eikwe

3. Why do people choose to use these facilities over others in the area? Cost? Quality of service etc.?

ANS: That is the only healthcare facility in the area. We have no choice.

4. Do people prefer to use traditional medicine over 'western' medicine? If so for what health concerns? And Why?

ANS: Few people prefer the use of traditional medicine over 'western' medicine.

5. What types of traditional remedies are used? (e.g. herbal medicines and preparations; remedies such as massage, acupuncture). Where do people in this community go to receive this treatment?

ANS: Herbal Medicine.

6. Are there any health awareness/ education campaigns being run in this village or this area that you know of? What do they cover?

ANS: Yes. The health workers at the hospital at Eikwe come here to do health education campaign on HIV/AIDS and malaria.

HEALTH PROFILE

7. In general, how old are women and men when they die?

ANS: Around Eighty years and some even grow up to about 120 years.

8. What are the most common causes of death for men and women? Why do you think they are the most common?

ANS: Malaria

9. What are the most common illnesses and diseases in a) men, b)women and c) children?

ANS: Malaria and waist pains.

10. Who are the most vulnerable in the community in terms of poor health?

ANS: Children and the elderly.

11. Is smoking, drinking or drug use within communities common? Which communities eg towns etc? Amongst what groups (age, gender)?

ANS: Drinking of alcohol is very common among the youth but smoking is rare. Drug use is non-existent in the community.

Do people have easy access to contraception (i.e. condoms)? Is it common for people to use contraception?

ANS: People use contraception but it is private affair.

12. Are there transactional sex workers present in the region? If so where? What is done to control risks associated with this activity?

ANS: No.

13. Does anyone in this community or neighbouring communities suffer from HIV/AIDS? Do you know how HIV/AIDS is spread? (work with the local consultants to find an appropriate way to ask if People in the area have HIV/AIDS? If people are aware of how it is transmitted and if there is any stigma around people living with HIV/AIDS)

ANS: No.

14. What does a typical diet consists of in your community? And how does this change during the year?

ANS: A typical diet consists of grounded corn prepared into banku and stew with fish.

COMMUNITY SAFETY AND SECURITY

15. What are the main risks in terms of community safety (e.g. bushfires, road traffic accidents, dangerous fauna, uneven terrain etc)?

ANS: No risks in terms of community safety. If anything at all it is road traffic accidents which we have little control over.

16. Are there any issues of public and/or domestic violence in the community? What is the nature and causes of the violence?

ANS: No domestic violence. Sometimes you have pockets of quarrels between husbands and wives and between neighbours which is normal.

17. What are the main security issues in the community (e.g. presence of bandits, etc)?

ANS: No bandits.

WATER AND SANITATION

18. What are the main sources of water for drinking, cooking, bathing and sanitation? (e.g. borehole, surface water supply, spring-fed).

ANS: We have boreholes and wells that we fetch water from. Kosmos Energy has made pipe-borne water for us but the water has stopped flowing.

19. Are there any times of year when there is no water or the supply is interrupted? What happens then? Do people have other sources to use?

ANS: During the dry season, water supply is interrupted a bit. Water does not flow as in the rainy season.

20. Are latrines available for use by all households? If not, what are the typical sanitary arrangements? Do people practice open defecation?

ANS: The only public toilet in the community is now out of use. The building is in a dangerous state so we have stopped using it. People defecate anywhere.

21. How and where is household wastewater removed? Is it treated?

ANS: household wastewater is not treated. Each household throws its wastewater behind the house.

22. How is household waste disposed of? E.g. closed waste bins, on the ground. Where is it taken? Is it treated?

ANS: they are sent to the waste dump at the outskirt of the town.

OBSERVATIONS AND PHOTOS

Could the team please note the following based on their visual observations of the village:

Are livestock and domestic animals kept in close proximity to the domestic dwelling?

ANS: Yes.

Are rodents or evidence of the presence of rodents present in the village?

ANS: No.

Are piles of rubbish present in the village?

ANS: Yes; at the outskirt of the town.

Is stagnant water present in the village?

ANS: No

Could the team please take photos of any health care facilities, water sources and sanitation facilities as well as general photos of the village?

ESHIA for eni Ghana's Offshore Cape Three Points (OCTP) Phase 2 development

Meeting Notes- FGD Atuabo Leaders and Elders

Subject/Ref	ENI OCTP Phase II – Elders meeting at Atuabo community
Stakeholder and Venue	Atuabo Community
Date of Meeting and Time	9th December, 2014 at 09:10 GMT
Present	ESHIA Team: Kwame Asante, Dan Abbrey and Appiah Onwona-Agyeman (KA, DA, & AOA, SRC), Joseph Karikari, (KK, ENi). Atuabo Community: Paramount Chief (Awulae Blay, VII), elders, youth and women representatives. See attendance register sheet for full list.

Introduction

KA thanked the elders and community for making themselves available for the meeting and introduced the ESHIA team and the purposes of the meeting.

History of Atuabo

According to the Omanpanin of Atuabo, Nana Napoleon Annaman, the Nzema name for the town is Adoabo, the name of fruit under which the founder of the town settled under. That about 500 years ago, Atuabo was a port town and many people migrated to Atuabo for economic reasons whilst other migrated as they run away from wars in their communities. It was a port for export of raw materials (e.g., timber, coconut, palm nuts, and import of other items to Ghana.

Introduction of Phase II project

KA gave an overview of the proposed project activities highlighting the difference between Phase I and Phase II and the others o&g activities in the area. KA showed the large map with the location of proposed infrastructures and distributed the

Background Information Document (BID). The ESHIA process followed by the project was also explained.

The Omanpanin, Napoleon Annaman, who was delegated and spoke on behalf of the Awulae, mentioned that the environmental impacts of the project will highly affect the people from Atuabo, being the paramouncy and therefore, attracting most of the workers for the various oil and gas projects. The elders asked questions about the potential health effects of the project on the adjoining communities and how eni plans to mitigate them. The various eni investments in health infrastructure at both the Ellembele and Jomoro Disctricts (Efaso, Asemda, Eikwe, Sansule CHIP Compound, were highlighted as examples of eni's readiness to deal with nay emerging health related issues to the project.

Vulnerable Groups

As vulnerable groups they identified:

1. Women;
2. Children;
3. The aged and the youth;
4. Disable people (only few in the village).

Conflicts/Tensions within the last 5 years

They reported an increase on crime (mainly robbery) due to the increase of immigrants in the area. They mentioned that no conflicts with oil and gas employees (including security forces) have been arisen thus far.

Economic Livelihoods and Activities

The main activities of the people of Atuabo are;

- Fishing (60 % commercial with 40 % consumed by the local market) from July ending to March
- Farming (30 %) and
- Animal rearing: sheep, cow rearing and poultry keeping, (10 %).

According to the community elders, about 30 % of the population are employed as teachers, nurses and in other sectors of the local economy. Others are also involved in coconut, palm fruit and nuts, cassava farming. Fresh coconut is exported to Nigeria, dried coconut is sold to people from Takyiman. Cassava and palm nut trees/ fruits are sold at the local market.

Heritage Sites

The elders indicated that the main heritage sites at Atuabo are the cemetery and the palace of the paramount Chief.

Crime and Security

The community agreed that the petty crime has reared its head at Atuabo since the found of oil and gas. They cited examples like breaking of doors and stealing from people's rooms and others. The community estimates at a least 10 % increase in crime in the area since the last ten years. However, there is no police station and police presence at Atuabo to deal with the increasing crime rate. The community explained that there used to be a police presence at ATuabo. However, since the breakdown of the police station and the residence for the staff, the police left. The Awulae is presently renovating the police station with about 80 % of the work completed. The community hopes that eni will come and support the completion and furnishing of the police station after which the police can reasonable come and work at Atuabo.

Concerns and Expectations for the Project

The Awulae Blay VI and the elders were in favour of the project and felt that the it will prove some positive impact in the community.

It was requested that the ESHIA Team wrote down their concerns which included:

- Ethnic balance in the assessment team for the social and environmental impact of the project. Not one Nzema person on the team.
- Increase in stealing and other petty crimes in the community.
- High cost of living at Atuabo, including rent.
- Negative influence of foreign culture on the youth and people of the area. For example, the youth are learning smoking from the foreign workers working in the area.
- Potential reduction in fish catches at Atuabo.
- Negative impact of the project on young women. School girls are being impregnated by the middle class workers in the community. Young girls are attracted by cars, smart phones and new technologies used by workers in the area. The elders recommend a good education programme for project workers, girls and their parents in order to protect the young girls.
- Lack of transparency in the recruitment process for workers for the o&g projects. They suggested a advertisements to appear on the public information board and also create a recruitment committee at the local level to work with eni.
- Fear of impeded access to fishing ground especially near the gas pipe lines;
- Concerns on the cumulative impact on the fishing industry: including local fishermen, cold store owners, drivers, fish processors, firewood sellers, chop bar owners, etc.) They mentioned that the decline in fish catch due to project activities will deny most of the people above their descent livelihood.

- They expressed their discontent with the several unfulfilled promises done by the o&g operators, especially, the Ghana Gas Processing Plant.

The community leaders recommended a technical skills and business skills training programme for the community members in order to provide opportunities for sustainable alternative livelihoods.

Note that additional concerns were raised during the different Focus Groups discussions (FG) and Key Informants Interviews (KII) held with women and fishermen (refer to meeting notes for FG Leaders & Elders, Women and Fishermen and KII Education).

Figure 1 Community meeting at Atuabo (9th December, 2014)



Source: ERM, 2014



Source: ERM, 2014

The meeting ended at 10:30 am.

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Meeting Notes- FGD Bakanta Fisherman and Men

Subject/Ref	ENI OCTP Phase II – Fisherman/ Men/ Leaders meeting at Bakanta community
Stakeholder and Venue	Chief's Palace, Bakanta
Date of Meeting and Time	3rd December 2014
Present	Belinda Ridley (ERM), Appiah Onwona- Agyemang (SRC), Bakanta Fisherman and Men (see Attendance Register)

Introduction

AO thanked the elders and community for making themselves available for the meeting and further introduced the ESHIA team and the purposes of the discussion.

General

- Still just want to know is it going to take their land or not take their land? A fence was dug near Bakanta but no names where written down.
- Names were written down in Sanzule why not here in Bakanta?
- Machines destroyed some crops and these were compensated for
- If your crops are affected by the project you are going to be compensated?

LAND:

Land is owned by Chief. If there are crops then individuals have to have go the chief and asked for land.
The Chief allocates land.
The process for acquiring land is to see the chief and he will allocate a plot. Time for land allocation is 1 month or shorter if it's urgent.

When the deceased person leaves a will specifying who inherits his land that must be respected. Without a will it will pass to the children.
If you rent land from your family you can do share cropping. Generally crops are divided into 3 portions , x 2 for the farmer, x 1 for the landowner

For women the process is the same for acquiring land
In terms of documents proving property/land ownership, there are 2 cases: in the case of land with housing on you have documents to show the land belongs to you. For farming purposes you have no formal documents you just have an informal right to use the land.

The owner has a copy and the chief has a copy of these documents but there seems to be disagreement about whether this is always the case. Ownership documents are more frequently held in the new town than for property in the older town (ie system of documenting ownership is quite modern)

22. (a) coconut
(b)Oil Palm
(c) cassava

EDUCATION

Youth are more literate than adults.

Most children go to school and there is no difference between girls and boys attending.
Boys do better than girls at school
Girls drop out more than boys at around 16 years. Why? Young pregnancy – have to be parents and cannot return to education.

Primary economic activities:
(i)Fishing
(ii) Farming
(iii)other e.g carpentry, teachers, hospital workers

Fishers sell fish to women take fish and farming produce to market.

Fishing catch is poor these days.

Men are higher earners and take care of women.

FARMING/FISHING

Fishing season is from August to September

Jan onwards is Farming.
The keep livestock e.g. pigs, sheep, chickens

Yes they let land fallow for 2 years.

They report a worsening yield in farming since oil and gas came. Everything is worse since the oil and gas came. No specific reason given.

At markets Tarkwa, Ayinasie

FISHING

From Awona up to new Bakanta.

Season is August to October.

All kinds of fish are caught - no one type more than others.
The catch is becoming poorer with seaweed problem.

Have to travel 2 hours out to sea and they mainly use drag nets.
Decline started 5 years ago
What do you think is changing?
Offshore oil projects. No other reason given for decline in catch.
Since 5 years there has been a seaweed problem. This is particularly bad in September to March.

SEAWEED
Drives away fish and gets caught in nets and gear.

FISH CATCH
Most is sold - 80-90%
The rest is eaten - 10%

Within the fishing group they have salesmen who sell to women and women go to markets.
Which markets? – , Ayinasie, Agona Nkwanta
They smoke the fish.

HERITAGE

There are 2 festivals during year
(1) Kundum – October
(2) Nyamaogya (Nyameleilei)

POLICE

There is no crime and no police service.

Their main concerns/expectations of the Project are:

CONCERNS

- Diseases
- Environmental impact on health
- Gas is going to pollute the air
- Disturbance to fishing activities
- It will negatively affect their livelihoods

EXPECTATIONS

Scholarships to educate
Employment opportunities
Community infrastructure (schools, hospitals)
Roads
Water provisions
6 traditional healers
Common for people to use them
Herbs

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Meeting Notes- FGD Baku Leaders and Elders

Subject/Ref	ENI OCTP Phase II – Elders meeting at Baku community
Stakeholder and Venue	Baku Community
Date of Meeting and Time	5th December, 2014
Present	Nana Mela III (Chief), Nana Agyemang Kwaw Blay (Tufuhene), Abusuapanin J.S Andoh, Opanin Owusu Krah, Asafohene Kodjo, Okyeame Kua, Opanin Shamba Afful, Nuhu A. Shaibu, Abdulai Nyamake, Abu Shamba, Abdulai A. Ayebiara, Shaibu Abdulai 4. Names of Team members conducting the discussion: Eric Odei and Daniel Abbrey (SRC)

GENERAL

1. What is the history of the village? When was it established and why was it established here?

ANS: It is believed that that the ancestors of Baku migrated from Effiduase in the Ashanti region and finally at Baku circa 17th century. According to the Chief, when one of the two women who originally settled died, the sole survivor lamented that " bako ye ya" (meaning it is painful to be alone) hence the name Baku.

2. What are the divisions of labour in the village? (Roles and responsibilities of men vs. women).

ANS: Fishing is done mainly by men while women process and sell the fish. Some women however sometimes support the men in pulling the net.
Both men and women undertake farming activities. House chores such as fetching of water, cooking and child care are mainly done by women.

3. What are the general problems/concerns that you face in the village?

ANS: The community lacks the following:

- Public school
- Public toilet
- Potable water
- Health facility
- Youth unemployment

DEMOGRAPHICS

4. What is the total population and number of households in the village?

ANS: About 1,170

5. What is the gender composition of the village (approximate percentage)?

ANS: About 52% are females while 48% are males

6. Is there in/out-migration into the village? (Current rates; any recent increases – if so, why? Where are these people coming from? How do local residents feel about this?)

ANS: Most of the youth leave the town for greener pastures during the lean seasons due to joblessness.

7. Who do you think are the most vulnerable groups and why are they particularly vulnerable? (People previously discriminated against or who have not received equal opportunities to other groups)?

ANS: Children, old persons and people with disability are the vulnerable

8. What is the attitude towards women working?

ANS: There are not restrictions on women working; they are free to work, save their own money and spend it as they wish.

9. During the past 5 years has there been any conflict or tension? (e.g., conflict around natural resource shortages, land, economic matters, and cultural differences).

ANS: No serious conflict apart from petty squabbles and quarrels among the youth and women which are often resolved amicably

10. How is tension/conflict managed?

ANS: They managed through the traditional arbitration system by the Chief or/and his Elders

VILLAGE LEADERSHIP

11. How is the village/district structured in terms of administrative functions?

ANS: Baku is in the Ellembell district. Its interest is championed by the Assemblyman of the area.

12. Which Paramount Chief do you report to?

ANS: Awualai of the Eastern Nzema Traditional Council, at Atuabo

13. What are the roles and responsibilities of the Chiefs?

- Spiritual head of the community
- Leadership
- Conflict resolution
- Drives the development of the community
- Ensure peaceful coexistence with neighbouring communities

14. Who represents the government administration at village level?

ANS: The Assemblyman

LAND TENURE AND LAND USE

15. Who 'owns' the village land (land where village is located and fields)? What % is state land and % customary land?

ANS: It is 100% stool land. Owned by the chief and held in trust for the people

16. Who is responsible for assigning/allocation of land in the village?

ANS: Various family heads for farming purposes but the chief and elders for infrastructural use.

17. What process does a person need to follow in order to acquire land in your villages? (How long does it take to complete this process?)

ANS:

- Meets with the Elder, Tufuhene and Safohene who will lead you to the chief
- You present drinks and some amount of money (abou GHc 200/plot of land)
- It takes about a month to conclude

18. What process do you need to follow when dealing with inherited land different to the one for land acquisition?

ANS: Same as above

19. What process do women have to follow when they want to acquire land in the village? (Prompt regarding whether women can own land or not and the reason why women cannot own land, if this is the case).

ANS: Same as above

20. Do people have formal 'ownership' certificates? If not, how can the land owner be identified?

ANS: Yes, but not common

21. What are the main land uses in your village? (Try to ascertain the percentage of land used for infrastructure, businesses, grazing and crop farming, etc).

ANS: Farming (65%), Building (30%) and Other uses (5%)

EDUCATION

22. What are the education levels in the village?

ANS: Low education levels

23. What is the enrolment rate of pupils at schools? What might the reason be for this? (girls vs boys)

ANS: Almost all children of school going age enrol in school but some drop out after Junior High School. Boys are the main culprits. They tend to drop out to engage in fishing

24. What proportion of the children attend school? For those who do not, why don't they go to school? (girls vs boys)

25. Is there a difference between the percentage of boys and girls at school? If yes, what might the reason be for this?

26. What is drop-out rate of pupils from the village? (girls vs boys)

27. What are the differences between men and women education levels?

ECONOMIC AND LIVELIHOODS ACTIVITIES

28. What are the main economic activities undertaken in the village? (This could refer to subsistence fishing/ farming, formal/ informal employment).

ANS: Fishing, farming, petty trading.

29. What are the secondary or alternative sources of income (besides the one mentioned above)?

ANS: Teaching and nursing

30. Rank economic/ livelihood activities in terms of contribution to household income/ subsistence).

ANS: Fishing (70%) farming (20%) trading (8%)

31. If access to livelihood activities is disrupted, how would the villagers adapt and survive?

32. What is the level of unemployment in the village?

ANS: More than 50% of the adult population is unemployed

33. For those who are formally employed who are the main employers in the District?

ANS: Ghana Education Service and Ghana Health Service

34. Who are the main bread winners in the village households? (Prompt about female-headed households).

ANS: Both men and women

35. Are you able to comment on the income levels of the village? (Break into no cash income, low, medium, high – define these categories and give approx. %)

36. What are the differences between men and women's income levels? (Do men earn more than women?).

ANS: Women earn more than men

37. What do most people spend their incomes on and where? Prompt for differences between men's and women's spending patterns, and where possible, rank the spending.

ANS: Food, education and health

38. How is wealth measured in the village? (e.g., in Kenya, the more cattle you have, the more wealthy people are perceived to be).

ANS:

- Ability to put up a building or own a house
- Number and size of coconut farms
- Number of livestock
- Number/size of fishing boat and nets

FARMING ACTIVITIES

39. Do many people farm for subsistence purposes, what do you grow, do you sell any of it (what percentage)? Prompt.

ANS: Mainly for subsistence

40. What percentage of the village depends solely on agriculture?

ANS: About 30%

41. What do you farm (crops or livestock)?

ANS: Cassava, coconut, cocoyam, pineapple, maize, oil palm

42. Farming calendar: When are the various farming activities undertaken in the year (e.g. ploughing, planting, harvesting)

43. Is the land left fallow, when? How has this cycle changed over time?

44. Has the yield changed over the past 10 years? How?

ANS: Yes, as a result of poor soil fertility

45. What percentage of the crops produced/ livestock breed do you sell and what percentage do you consume?

ANS: About 70% consumed

46. Where do you keep your livestock? Where do you graze them? (Prompt about problems surrounding the availability of grazing land, water, immunisations, etc)

ANS: Some are kept in pens and coops.

47. How and where do you sell your produce?

ANS: Often sold at Aiyinasie

48. How much do you sell your produce for? (determine cost per weight)

49. Who is involved in farming activities (e.g., the whole family, men, women, children, hired labour)?

ANS: All family members, and sometimes labourers

50. What trading activities are practiced in the village? Rank.

ANS: Selling of food items, clothes, confectionary, sachet water

51. Where do you trade?

ANS: Aiyinasie, Eikwe

52. What is the distance between your village and the market?

53. What do you sell?

54. Where do you buy your goods? How many times a week/month do you go the buy stock? How much does it you to transport your goods to your storage space/ house before you take it to the market?

ANS: Aiyinasie

55. How do you transport your goods to your trading area/space everyday?

ANS: By taxi and mini vans

56. How do you determine the selling price of your goods?

57. What are the main constraints for doing business in the area/district?

ANS: Lack of finance

58. How is the money/profits made from your trading activities spent and is this the main income for your household?

HERITAGE

59. What heritage resources (sites/ rituals, tangible/intangible) are found/practiced in your village? If yes, prompt for the story behind these sites/areas. (Don't over prompt)

ANS: Ngoane Azale and Korazo crocodile ponds lie on the western and eastern edges of the community. According to the locals, these ponds are gods and serve as habitat for crocodiles.

60. Where are these sites/areas situated?

61. How do you think the project will affect these heritage resources?

ANS: No impact anticipated

62. What festivals/rituals are undertaken in the village? Why are they undertaken? When do they happen?

POLICING AND CRIME

63. How is conflict managed in the villages and districts?

ANS:Simple squabbles are resolved by the elders. Serious crimes are however reported to the police

64. What are the common crimes committed in the village? Where is the closest jail situated?

ANS: Petty theft

65. How has criminal activity changed over the past 10 years?

ANS: No significant change has been observed

66. How many police stations are found in the village?

ANS: None

CONCERNS AND EXPECTATIONS

67. How do you feel about the proposed development? (positive and concerns)

ANS: It is very good that the project is coming to the area.

Positive:

- Employment opportunities
- Improvement in people livelihoods and income levels
- Investment in education will raise the standard of education in the area

Negative:

- Antisocial activities e.g. prostitution (spread of STIs) and petty crimes

68. How do you think the development will affect your lives?

ANS: The project will open up the place for business opportunities

69. How do you propose the potential issues could be avoided or mitigated?

70. Who will be the most directly affected people, by the proposed activities? (positive and negative).

- Fishermen – impeded access to fishing grounds
- Women – marketing opportunities
- The youth – through employment

71. Are you in support of the proposed activities? Why for yes or no?

ANS: In full support of the project

72. What can Eni do to enhance the positive impacts of the project which you have mentioned? (List one by one positive impacts and work through way of enhancing the positives.)

ANS:

- Eni should put up workers' quarters in the community
- community members should be prioritised in terms of employment
- Should respect and improve the status of the chief

The meeting ended at 10:30 am.

ESHIA for eni Ghana's Offshore Cape Three Points (OCTP) Phase 2 development

Meeting Notes- FGD Eikwe Men

Subject/Ref	ENI OCTP Phase II – FGD with Eikwe Men
Stakeholder and Venue	Eikwe Men Landing Beach (Zongo)
Date of Meeting and Time	3rd December 2014
Present	Adu Nyarko A. (SRC), Dr. Eric Odei (SRC) Eikwe Community (See attendance Regsiter)

Introduction

AN introduced the team and the purpose of the meeting. He also provided a brief understanding of the proposed project activities. Issues, concerns and information were recorded from the meeting.

Economic Activities

Fishing is main income source. Other economic activities are food vending and bar operators. Main resource for their financial stay is the sea. Fishing is done at any time of the day- morning, afternoon and during the night. The main fishing season is from June to August (peak – August). Fish catch is poor between November and December. Type of fish harvested in the area include eel (antsewano- local name), cassava fish etc. they indicated to have experienced reduce catch which was attributed to oil and gas activities (sea weeds – January – March). Fish caught is sold to women from the community, others come from Aiyinase, Tarkwa and Esiama. It was said that the percentage sold is about 99%, consumed 1% domestically. In terms of gender roles, men do fishing while women work as fishmongers

Concerns

- Concerned that that machine installed along the Sanzule area could lead to sea erosion and cause coconut trees to fall
- Concerned that fishing operators – fishermen and the entire economic activities that depend on the fishing operations will reduce.
- Pipeline to be laid will affect might affect fishing nets, reduce fishing space since they cannot go near FPSO installation and will eventually reduce fish catch & income
- Concerned that robbery/crime will increase as other people come to place to seek jobs

Expectations

- Employment for local people
- They have positive attitude towards the project because it will open job opportunities
- They proposed alternative livelihoods programs with trade/skills learning and animal rearing – pigs

Suggestions

- Want health screening for the people of the area before onset of the project to establish health baseline index.
- They called for scholarship to train local people for higher skills that can lead to future employment (for needy ones).
- Also asked for skills training and further training of artisans – drivers, welders, etc. and unskilled labor for employment.

Community needs

- Senior High School; the closest ones are at Esiama and Nkroful
- Police station to curb anticipated crime; the closest station is at Ainyinase or Benyin in the Jomoro District
- Teachers Living Quarters to encourage teachers to stay at post
- Street rehabilitations

ESHIA for eni Ghana's Offshore Cape Three Points (OCTP) Phase 2 development

Meeting Notes- FGD Krisan Men/Leaders/Elders

Subject/Ref	ENI OCTP Phase II – Focus Group with Leaders and Elders
Stakeholder and Venue	Krisan Community
Date of Meeting and Time	3rd December 2014 at 0950GMT
Present	ESHIA Team: Kwame Asante (KA, SRC), Begoña Rodrigo LLodio (BRL, ERM). Krisan Community: Chief, Nana Essuah Menemah II, leaders, elders and representatives. See attendance register sheet for full list.

Introduction

The Focus Group with Leaders and Elders took place right after the introductory meeting at village level. The youth and other men were also present. KA introduced the team and the purpose of the meeting. He also provided a brief understanding of the proposed project activities. Issues, concerns and information were recorded from the meeting.

History of Krisan

According to the family elder, the founder of the Krisan village originated from a town called Ajoan in the Ivory Coast and arrived at the present day Krisan in 1525. Upon his arrival, he found a tree by name Kyekyekisan. He sat under the tree and settled. In the village of Ajoan, there was a river called Krisan which bore semblance to the name Kyekyekisan. He called therefore, decided the place Krisan. He was later appointed as the only Odikro by Awulae Kakuaka, the Paramount Chief of the Nzema throne. The founder and Odikro of Krisan also became the linguist to the paramount chief.

Demographics – In/out migration into the village

Both fishermen and workers come to Krisan to work mainly: British, Ewes, and Fantis (fishing), Nigerians (petty trading), muslims/ Funalis (cattle) and also and Asantis.
They have noticed a change in the migration pattern from the establishment of oil and gas activities in the area. Workers from the different companies: Tullow, Ghana Gas, Kosmos, etc. are arriving to the area and some of them stay for accommodation. This leads in an increase of the demand of housing and increase on prices.

They also mentioned that refugees from different countries arrived in 1997 to the Krisan Refugee Camp. They also mentioned, that the refugees destroyed the forest by cutting forest trees for charcoal burning, collect the coconut for food and sales. The community has also observed increased in stealing which is committed mostly by foreigners.

Vulnerable Groups

As vulnerable groups they identified:

1. Women;
2. Children;
3. The aged and the youth;
4. Disable people (only few in the village).

Conflicts/Tensions within the last 5 years

They reported an increase on crime (mainly robbery) due to the increase of immigrants in the area. They mentioned that no conflicts with oil and gas employees (including security forces) have been arisen thus far.

Paramount Chief

Krisan reports to Atuabo Paramount Chief.

Land Tenure and Land System

Krisan farm lands are located 1 km to the mainland from the village. They mentioned that the land is not fertile. The main crops they farm are: cassava, pineapple, coconuts and palm trees.

Both farm and village lands are "family lands". The family elders are responsible for allocation of land but the process goes through the village elders. Women reported the same process during the Women FG with some additional details.

There are no "ownership certificates". However, they mentioned that for the construction infrastructures and developments drawings signed by the District are needed.

The main land uses in Krisan are farming and village infrastructure. They used to have grazing lands but not anymore (they explained that there was not financial resources for cattle).

Education

One primary school shared between Krisan and Sanzule. Refer to the KII Education in Krisan and Sanzule.

Tourism

They confirmed that there was no tourism in Krisan.

Economic activities

According to the leaders and elders, the main economic activity in Krisan is the Fishing and fishing processing. Other economic activities include: farming (mainly for subsistence), petty trading, beauty and hair dressing, masonery, carpentry. They added that there are one painter and one electrician in the village. Cattle used to be an economic activity as well but not at this time (due to limited resources to maintain the cattle).

The main sources of income according to men leaders and elders are:

1. Fishing
2. Fish processing.
3. Farming –subsistence (although with no success).

They mentioned that in case the fishing activities are disrupted they don't see any other livelihoods alternative.

According to the Chief, the unemployment rate in Krisan is about 75%. The formal employment in the village correspond to teachers and nurses working in the District.

Traditionally, the "main bread winners" in the village households (HH) are the men which depend on the fish catch. Income levels in the village are considered as low and they identified this as a reason for youth not going to higher education. It was mentioned that the income of women are higher than men's due to fish processing and petty trading activities.

The incomes are mainly spent in Krisan and Eikwe and mainly in taking care of children.

Wealth is measured in Krisan depending on the coconuts trees ownership, fisher nets, canoes, fishing boats, outboard motors and taxi owners.

They mentioned that they cannot predict any changes on the economic activities pattern due to o&g activities.

Farming activities

They mentioned that some poeple have piggery at small scale at Krisan. Buyers come from Takoradi, Enyinase, Esiama, etc. come to Krisan to buy the pigs. Due to limited economic resources the pigs are not well nourished and they sell them very cheap (around GH C 100.00 cedis/individual).

Farming activities are performed at all levels in the community. They don't hire workforce for farming activities.

Trading activities practiced in the village are:

1. Fish mongering;
2. Food crops;
3. Animal husbandry (piggery).

The trading activities are mainly made in Krisan but they also go to Enyinasi, the nearest market, for trading activities. Enyinasi market is located at approximately 7 km, markets days are Tuesday and Friday and they use taxis for transportation. It costs about an average of GH C10.00 (ten Ghana Cedis) to travel Enyinasi and back.

In general they sell processed fish every three months.

Robbery of stock was identified as the main constraint for doing business.

Cultural Heritage

A visit for cultural heritage has been arranged with the chiefs and elders for Friday at 4 pm.

Health – Facilities and Profile

There are no health facilities in Krisan. The community uses the hospital located at Eikwe. This choice is done considering distance and transportation.

Men mentioned that there is no traditional medicine in Krisan. However, women reported to use traditional medicine in their FG (see Women FG).

Some health awareness/education campaigns were run in the area including HIV/AIDS, Diarrhea.

Their perception is that women have more longevity than men and that the most common cause of death is diarrhea for both women and men.

Regarding the access to contraception, they confirmed that they are aware about family planning but avoided to give more details.

Transactional sex workers are present all over the area. They are aware about the HIV/AIDs risks and they mentioned that there was no HIV/AIDs in Krisan. To control the sex workers activity and the spread of sexual diseases, the Chief requests all the new people coming to Krisan to settle to present themselves and explain the reason why they are coming and what they plan to do.

Health - Community Safety and Security

They mentioned stealing as one as the main security risks for the communities. In terms of traffic, they seem not to be worried about it and mentioned that no accidents in Krisan has been reported so far due to the bad condition of the road which prevent speeding.

Health – Water and Sanitation

Water quality is perceived as "bad". The main source of water is groundwater. Water access is one of their main concern, they mentioned that they have 4 broken boreholes in the village mainly due to the bad quality of materials and time. One of the boreholes is over twenty years.

Figure 1 Existing boreholes (all broken) at Krisan (3rd December, 2014)





Source: ERM, 2014

Regarding latrines, only one community toilet is available in Krisan. They added that they would need two additional toilets to meet the community demands. They also mentioned that the new houses are already constructing latrines inside their HH. By their estimation there are about 10 new homes with inbuilt toilets.

There is a public and open waste dump pit at Krisan for waste disposal.

Concerns

The following concerns were mentioned by leaders, elders and men:

- Employment to youth.
- Waste left in the sea during pipeline construction and operation which impede them to deploy the nets.
- Health concerns of the new growth in the sea- itching of the skin.
- Concerns regarding the use of chemicals were raised. These chemical would pollute the drinking water and air quality.
- Concerns about the pipeline, then the gas will be liquid.
- Concerns with air pollution at the time of construction of the pipelines.
- Potential leakage from pipelines in the future.

They mentioned that they have seen the waste and pollution in the sea left by other activities.

The most directly affected people by the proposed project activities are considered to be the fishermen.

They proposed the following measures to avoid/minimize potential impacts of the project and enhance the positive impacts:

- Provision of scholarships for kids to study.
- Provision of a new school / help to finish the construction of the new school shared between Sanzule and Krisan.
- Help complete building and provide computers for ICT center.
- Day care center for children.
- Consider some compensation for the elders of Krisan

In general, they support the project however, they request eni to take into account the considerations raised by the communities. They suggested eni to meet with them to explain in more detailed the project activities, impacts and mitigation measures.

Figure 2 Focus Group Leaders, Elders and Men at Krisan (3rd December, 2014)



Source: ERM, 2014

The meeting ended at 11:15 am.

ESHIA for eni Ghana's Offshore Cape Three Points (OCTP) Phase 2 development

Meeting Notes- FGD Men and Elders Ngalikpole

Subject/Ref	ENI OCTP Phase II – FGD Men and Elders Ngalikpole
Stakeholder and Venue	Men and Elders in Ngalikpole
Date of Meeting and Time	04 December 2014
Present	Belinda Ridley (ERM), Appiah Onwona-Agyemang (SRC), FGD Men and Elders Ngalikpole (See attendance Register)

General

Ngalikpole is believed to be one of the oldest communities in the Ellembelle District. The community was established around the 1400's by a woman named Kyeremadi. The people settled here to undertake fishing, farming and making sponge from tree barks as a packaging material for export. A third successor to the stool was called Ngale Ezoma Kpole, who was a herbalist. She prepared herbal medicine for women and helped many women to conceive and bear children. Over time, women who wanted to conceive came to the community for the herbal preparation. They would say they were going to Ngale Ezoma Kpole for herbal medicine. Hence, the community came to be known as Ngalikpole.

The population size is unknown although there are approximately 60 households. Approximately 40% of the population is male and the remaining 60% is female with main languages being Nzema, Fanti and English.

Fishing and farming are the primary economic activities followed by petty trading and pig rearing.

Demographics

The leaders and elders indicated that the breakdown of the population was as follows:

- 0.5 age – 25%
- 6-18 years - 28%
- 19-35 years – 20%
- 36-59 years – 15%

- 60+ - 12%

The primary religions in the community are Christianity, Muslim, traditional religious.
Unemployment is approximately 80% with the employment standing at 15% and economically inactive proportion of the population is 15%. (There is no tourism in the village).

General

The community often experiences water shortage problems as there is only one water point which they often have problems with (no maintenance). There is no school in the community (after KG). Therefore pupils have to go to Eikwe or Ngalichi.

There is no specific in or out migration, however some fisherman go as far as the Ivory Coast to fish.

The most vulnerable people in the community are the elderly and disabled.
There are no specific attitudes about women working. Women partake in farming fishing and trading (although there are gendered roles in these activities). The community is peaceful with very little conflict.

Land use and Tenure

All land is owned by the Chief. If a community requires land the head of that family approaches the Chief who will then allocate an appropriate parcel. Inherited land is subject to renewal after 50 years. It is the same process for women to acquire land. There are land certificates which are held by the chief. But these certificates apply to the houses only and not the farmland.

Economic and Livelihood Activities

The primary economic activities are fishing, farming and trading. If these activities are disrupted the villagers have no other alternatives. Individuals who are formally employed have jobs at the hospital, are teachers or are employed at the Ghana gas plant.

Men are primarily the bread winners and they tend to earn more money. The income levels of the community are low.

Fishing

Fisherman in the village fish within approximately 4-5 hours (1000 yards) distance from the community. The main fishing season is between August and December (but fishing takes almost all of the year).

Fishing yields have decreased and are almost half of what they were 5 years ago. Poor catches are a result of an increase in sea weed. There is also a perceived effect that the oil and gas developments are hampering fishing. Fishers indicated that they believe that dumping may even be occurring along the coast.

Once the men have caught the fish they sell it to the women who in turn 'process' it and sell it. Although some of the bigger fish are sold directly to established customers. In general about 25% of the catch is kept for subsistence and 75% is sold. However, if there is poor catch then all of the fish is kept for subsistence.

The men are concerned that the security and exclusion zones will prevent the fisherman from fishing where they want to. Moreover, they are worried about the negative effects of the FPSO and associated noise and light.

The fisherman will cooperate with the Project but would like motors for their fishing boats

Farming

There is both farming and livestock rearing in the village. Between January and March cassava, oil palm, tomatoes, and peppers harvested. Crops are used mostly for subsistence. Extreme weather has been on the increase with flooding occurring (which destroys crops).

Trade

The market is in Aiyinasie which villagers have to travel to with their goods. The prices are based on transport costs and demand.

Crime

There are petty crimes in the village. These sorts of crimes are increasing because of hardships. There is no police in the area with the nearest station at Ayinasie.

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Meeting Notes- Men and Youth Ngalikpole

Subject/Ref	ENI OCTP Phase II – Men and Youth Ngalikpole
Stakeholder and Venue	Men and Youth Ngalikpole, Ngalikpole,
Date of Meeting and Time	04 December 2014 at 11am
Present	Belinda Ridley (ERM), Appiah Onwona-Agyemang (SRC), Ngalikpole Men and youth (see attendance Register)

Land Tenure

In order to acquire land you need to go and visit the Chief and it is the same process for men and women. In terms of inherited land the family usually decides and it is based on tradition (will) and not necessarily age.

The owner of the land and the chief has a copy of land certificates. (You require documents for cash crops but not subsistence crops).

Demographics

Migration occurs between Tarkura, Takoradi and Ivory Coast for different types of work including illegal mining, fishing, manual labour, and hunting.

Vulnerable parts of the population include Elderly, sick, and disabled ("many we cannot mention")
There is no negative attitude towards women working.
There is no tension or conflict in the community and if conflict does arise it is dealt with by the Chief.

Education

There is no school in the village (besides KG); students must travel to Eikwe, Ngalichi or Krisan.

The rate of enrolment is approximately 70% and there is no difference in attendance between boys and girls. Although about 5% of students will drop out at 16, predominantly due to financial pressure. Boys tend to start fishing or trying to get a job at this age. In general, Men are more educated than women.

Economic Activity and Livelihoods

The primary economic activities are fishing and farming. Other activities include hairdressers and electricians. The members have no other alternatives to their current way of life. Formal employment in the village is in the form drivers, electrician, Ghana Gas and the hospital at Eikwe. There is no formal employment in the tourism sector. Expenditure on children is a large expense for community members.

People in the community measure wealth by:

- Number and size of nets;
- If you have a car; and
- House size.

Farming

The primary crops grown are cassava, vegetable, and oil palm. Livestock includes Sheep and pigs (no goats allowed for cultural reasons). Farming occurs in the raining season and land is left fallow during the off season. Only a small percentage of the village relies solely on agriculture. The village is currently experiences poor yields and the community does not know why. The community sells their produce at the market in Aiyinasie and prices for goods are decided by individual sellers. However, villagers also sell their produce in the villages predominantly outside their house.

Fishing

Fisherman from the village fish along the coast within a distance of approximately 6hrs from the shore and within Ghana's boundaries. Fisherman will fish most days of the week except Sunday and go out at night as well. October and November (although fitting into the main fishing season is often) is often plagued with weeds. August is the best month for fishing.
Fishing yields have changed dramatically and there and the men believe this is a result of the Ghana gas project

Crime
There is no crime in the community. However, recently people have been stealing livestock (sheep)-This is perceived to be on the increase. There is also no police station (nearest is Aiyinasie)

Health

The nearest health facility is Eikwe Hospital. You have to pay a lot for medical services at the hospital depending on the sickness and health cover. Malaria medication can cost up to 200 Ghana cides.
Members of the community also traditional healers and there are four in the community however, Eikwe hospital is preferred.
There are health campaigns in the village; Ghana gas has run a program as well as trying to sponsor an health insurance card(but it has not worked).

Malaria and cholera are prominent diseases and children and the elderly being the most vulnerable.

Approximately 30% of the population in the village smoke, 70% consumes alcohol but there no drugs present.

The men did not answer the question on condoms and contraceptives.12.

There are no sex workers in the village although they men indicated that were present in the district. They are aware of HIV.

The village receives water from a stand pipe but it is often not functioning. They then use a well. Some of the new houses in the Community have toilets otherwise there is a communal toilet or open defecation. There is no specific waste disposal process, it occurs anywhere (mostly at the edge of the village).

General

The community feels positive about the project as they want jobs and economic benefits. They are expecting employment from eni and their biggest priority is a school.

ESHIA for eni Ghana's Offshore Cape Three Points (OCTP) Phase 2 development

Meeting Notes- FGD Men and Fishermen Sanzule

Subject/Ref	ENI OCTP Phase II – Elders meeting at Baku community
Stakeholder and Venue	Sanzule Community, Sanzule
Date of Meeting and Time	5th December, 2014 at12:15 pm
Present	Daniel Abbrey (SRC) Sanzule men and Fisherman (see attendance register)

OBJECTIVES

- To provide information about the Project activities;
- To gather socio-economic information about the village. Specifically information about fishing activities, etc;
- To allow fishermen to raise concerns/ questions about the Project; and
- To provide responses to concerns and questions, where possible. Where not possible to explore further as part of ESIA.

FISHING ACTIVITIES

1. What are your main sources of income?

ANS: Fishing and farming

2. Do you have any alternative sources of income?

ANS: No

3. Where do you fish?

ANS: Fishing is done everywhere and even travel as far over the high seas

4. When do you fish? (What time of day, month, year)?

ANS: Fishing is done daily and at all times.

5. What types of fish do you catch?

ANS: All types of fish. From anchovy to red fish to salmon and herrings.

6. How much fish do you catch (break down according to fish types?)

7. Have your fish catches changed over the past 10 years? (Prompt, around the decrease/ increase of in stock, what they think has caused the changes? Don't let them blame oil activities as the stocks have been decreasing historically – prompt around this point)

ANS: Fish catch has changed considerable especially in the last five years because of drilling activities on the high seas

8. How do you sell your fish (e.g. to intermediary, direct to households, at market, contract with buyer). How has this changed over the past 5 years?

ANS: Intermediaries from other towns and fish mongers form the community buy them for resale. Others also give them to their wives for sale at Aiyinasie market

9. Are the fish catches predominantly used for home consumption or are they sold? (try to establish %)

ANS: About 80% sold and 20% consumed

10. How do men's and women's jobs differ in the fishing activities?

ANS: Men do the actual fishing while women assist the men in pulling the nets and selling the catch

11. Which activities are the most lucrative?

ANS: It depends on the season, but both are lucrative depending on how one manages it. When fish is scares women benefit more

CONCERNS AND EXPECTATIONS

12. How do you feel about the proposed development? (positive and concerns)

ANS: Fear of interrupting fishing activities. Waste products from laying the pipe could pollute the sea

13. How do you think the development will affect your lives?

ANS: May impede access to fishing grounds. But the prospect of employment will benefit the youth

14. How do you propose the potential issues could be avoided or mitigated?

ANS: Fishermen should be provided with alternative livelihood activities to invest in. the youth should also be trained and equipped to be able to get employment with Eni

15. Who will be the most directly affected people, by the proposed activities? (positive and negative)

ANS: The youth will benefit the most through employment and women by getting market for their products. However, the fishermen may be negatively affected through impeded access to fishing grounds

16. Are you in support of the proposed activities? Why for yes or no?

ANS: Fully support the project because it will provide employment opportunities and help Ghana to develop

17. What can Eni do to enhance the positive impacts of the project which you have mentioned? (List one by one positive impacts and work through way of enhancing the positives).

ANS: The views and concerns of the people should be taken seriously

HEALTH QUESTIONS FOR FOCUS GROUP MEETINGS

HEALTH FACILITIES

1. What healthcare facilities are there in the village? Who uses them?

ANS: The community CHPS compound

2. If facilities are not in the village where are the nearest facilities that are used by the community? How far (time and distance) do people have to travel to get to them?

ANS: For serious medical attention people go Eikwe hospital

3. Why do people chose to use these facilities over others in the area? Cost? quality of service etc?

ANS: Because they have the best facilities and their services are also higher than those in the community.

4. Do people prefer to use traditional medicine over 'western' medicine? If so for what health concerns? And Why?

ANS: A combination of both are used, but 'western' medicine is much more patronised

5. What types of traditional remedies are used? (e.g. herbal medicines and preparations; remedies such as massage, acupuncture). Where do people in this community go to receive this treatment?

ANS: Herbal medicine.

6. Are there any health awareness/ education campaigns being run in this village or this area that you know of? What do they cover?

ANS: Education on ebola, cholera and HIV

HEALTH PROFILE

7. In general, how old are women and men when they die?

8. What are the most common causes of death for men and women? Why do you think they are the most common?

9. What are the most common illnesses and diseases in a) men, b)women and c) children?

ANS: Malaria.

10. Who are the most vulnerable in the community in terms of poor health?

ANS: Children and the elderly.

11. Is smoking, drinking or drug use within communities common? Which communities eg towns etc? Amongst what groups (age, gender)?

ANS: Smoking and drinking are common among the young people

12. Do people have easy access to contraception (i.e. condoms)? Is it common for people to use contraception?

ANS: Yes, most people use condoms.

13. Are there transactional sex workers present in the region? If so where? What is done to control risks associated with this activity?

ANS: Not that we know of

14. Does anyone in this community or neighbouring communities suffer from HIV/AIDS? Do you know how HIV/AIDS is spread? (work with the local consultants to find an appropriate way to ask if People in the area have HIV/AIDS? If people are aware of how it is transmitted and if there is any stigma around people living with HIV/AIDS)

ANS: No

15. What does a typical diet consists of in your community? And how does this change during the year?

ANS: Banku and Fish with stew or fufu with soup

COMMUNITY SAFETY AND SECURITY

16. What are the main risks in terms of community safety (e.g. bushfires, road traffic accidents, dangerous fauna, uneven terrain etc)?

ANS: Road traffic accidents and storm on the high seas.

17. Are there any issues of public and/or domestic violence in the community? What is the nature and causes of the violence?

ANS: Petty quarrels and minor incidents of fighting among the youth .

18. What are the main security issues in the community (e.g. presence of bandits, etc)?

ANS: No bandits. Only petty thievery

WATER AND SANITATION

19. What are the main sources of water for drinking, cooking, bathing and sanitation? (e.g. borehole, surface water supply, spring-fed).

ANS: Borehole, well

20. Are there any times of year when there is no water or the supply is interrupted? What happens then? Do people have other sources to use?

ANS: No

21. Are latrines available for use by all households? If not, what are the typical sanitary arrangements? Do people practice open defecation?

ANS: There are public toilets facilities in the community

22. How and where is household wastewater removed? Is it treated?

23. How is household waste disposed of? E.g. closed waste bins, on the ground. Where is it taken? Is it treated?

ANS: They are disposed of at a designated point at the outskirt of the town

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Meeting Notes- FGD Anochi Women

Subject/Ref	ENI OCTP Phase II – FGD with Anochi Women
Stakeholder and Venue	Anochi Women Anochi Chiefs Palace
Date of Meeting and Time	4th December 2014
Present	Adu Nyarko A. (SRC), Appiah Onwona- Agyemang (SRC) Anochi (See attendance Register)

Introduction

AN introduced the team and the purpose of the meeting. He also provided a brief understanding of the proposed project activities. Issues, concerns and information were recorded from the meeting.

General

The community lacks toilet facility and thus resort to free range. Main source of water is a well for all purposes including drinking, though some use sachet water. They have low income levels and they attribute it to lack of market to do brisk trading activities. They called for staff living quarters for teachers. A single room is rented between GHC 20.00 – 40.00. They have no permanent place for dumping refuse. They have difficulty in getting fuel wood for domestic energy usage. This is attributed to land take by Ghana Gas Project and allied set ups. They have positive attitude towards the project set-up. Conflicts are mostly settled in homes.

Village Leadership

Lands are mostly family lands. To secure a parcel one has to contact the family head or the chief. Farming activities are in the area of coconut, oil palm, foodstuffs, vegetables cultivation.

Education

Levels of education attained by the women include form 4, JHS and SHS. Key problem with education is payment of fees. Some of the pupils drop out due to inability of parents to support them financially.

Economic

Economic activities are fish mongering, trading, food vending and charcoal making. Trading is their key source of income. The men mostly travel to Cote d'Ivoire and Jawe Walf to do fishing. Income levels are said to be low because most are self-employed in menial jobs. Few that are in employment with Ghana Education Service are not professionals. Households are financially maintained by women. A number of them are single parents either as a result of the fact that they are widowed, husband incapacitated or husband neglect. They spend greater part of their income on food and children's school fees. In the community they assess the wealth of an individual by the person's appearance in the public.

Farming activities

They do little farming that because the gas project has affected their farmlands. In the community about 60% are estimated to be in fishing, 30% in farming and 10% in other services. Plantations found there are coconut and oil palm. Others grow pineapples. Animal rearing is done but in free range e.g. pigs. Main farming season is from March/April. Lands are allowed to fallow for just a year with reduced proceeds. They consume almost all foodstuffs that they produce. Animals reared are sold either in the community or at Aiyinase market. Farming is done by few adults in the households. They obtain their local supplies from Aiyinase, Tikobo, Sowodade, Jawe Walf markets on weekly basis. Transportation is by car or can. They add cost of transportation to their wares before coming up with prices of goods. They experience high cost of transportation and low purchasing power in the local community. They use incomes to maintain house and keep kids in school. Petty crimes are increasing due to difficulty in maintenance of the homes. There is no police post in the community and report cases to Aiyinase.

Concerns

They have no negative concerns about the project since it is for the general benefit of the state. If it comes to the area, it will provide job opportunities for their children. Their fear is whether it will not bring diseases to the area.
It was observed that lands in the area are becoming very expensive for the local people because numerous projects are taking over their lands. They want land owners and chiefs to set out lands for the future development of the local areas. The company should consider employing the local people. They must provide community facilities such as toilets, water, clinic, community center, living quarters for teachers, and offer scholarship schemes. They called for support for waste disposal and damping. They want their Palace rehabilitated.

Question posed:

- Will the unskilled labour/ skilled labour be sourced from Sanzule / Bakanta only?

ESHIA for eni Ghana's Offshore Cape Three Points (OCTP) Phase 2 development

Meeting Notes- FGD Sanzule Women

Subject/Ref	ENI OCTP Phase II – FGD with Sanzule Women
Stakeholder and Venue	Sanzule Women Sanzule
Date of Meeting and Time	3rd of December 2014
Present	Brendon Solik, Sanzule Women (See attendance Register)

Introduction

The meeting began with introduction and background to the offshore Cape Three Points License Area Phase 2 Development and the purpose of the Environmental, Social and Health Impact Assessment. The following are the views and opinions of the participants with respect to the issues raised.

Land Tenure and Land use

Land in the village is held in association (collectively)but many of the women indicated that they do also hold land certificates as well. In order to acquire land in the village you must first go and see the elders in the village. Once you have gained approval from the elders you can visit the family who owns the land and negotiate with them. This process is the same for women and men.

The primary land uses in the village are:

- Farming; and
- Infrastructure.

Village Leadership

There are women leaders in the community. These women leaders are elected by the leaders and are part of village meetings.

Education

The women indicated that education levels in the village were high and literacy levels amongst the women is high. There is a high enrolment rate for kids starting school and almost all families send their kids to school. The women indicated that there was a slight difference between boys and girls and school with girls making a larger proportion.

There is high dropout rate of pupils between the ages of 12 and 15 due to financial pressures. Students tend to leave after JHS.

Economic / Livelihood Activities
The main economic activities are:
- Fishing;
- Farming; and
- Trading.

The women indicated that fishing brought in the most money but was also seasonal. This was followed by farming. The also indicated that they primarily sell their fishing catch and farming produce for money, but also rely on it for subsistence. In the absence of men the women indicated that they were the breadwinners. However, it was reported that income levels to differ during fishing activities. In general, income levels across the whole community are low and people tend to spend their incomes on education and food.

The formal employers in the area are: schools (teachers) and Eikwe hospital.

Agriculture
The women in the village try and sell the majority of their produce for incomes however they also use for subsistence. Crops that are planted and harvested include:
- Cassava;
- Plantain;
- Coconut;
- Pepper;
- Palm; and
- Pineapple.

The women indicated that the crop yields have increased over the past 10 years as a result of consistently good weather over the preceding years.

Livestock kept in the community includes:
- Sheep;
- Chickens; and
- Ducks.

The majority of the livestock is kept near the household in pens.

The women sell tier produce at the Aiyinasie market on a Tuesday and a Friday. The market is approximately 7 km away and the women have to travel car or taxi to get there.

The whole family is involved in farming; If a women is married, the both the husband and wife are involved in farming activities. Children are allowed to help on the weekends.

Trading
Women indicated that they sell their goods outside their houses.

Heritage
There are heritage sites and rituals that are practiced in the village (but did not want to give details). These sites are located in the 'bush' surrounding the village. The women were unsure about how it could potentially affect their heritage resources.

Policing and Crime

Conflict in the community is managed through the Chief; members of the community will go the Chiefs palace and have the issue mediated. In general, it is very peaceful in the village but occasionally hens are stolen if someone is very desperate. Finally, there are no police stations near the villages- closest one is in Aiyinasie.

Concerns and Expectations

The women were happy that the project was in their village. They feel proud and have an expectation that it will bring employment to Sanzule. The women believe that the project will bring their children employment had bring more people into the area for them to sell their food. The women believe that project will affect everyone in some way.

They women indicated that eni could enhance positive impacts by providing:
- Infrastructure in schools and scholarships for students;
- Small business development;
- A new market for people; and
- Employment for locals.

ESHIA for eni Ghana's Offshore Cape Three Points (OCTP) Phase 2 development

Meeting Notes- FGD Asemdesauzo Women

Subject/Ref	ENI OCTP Phase II – FGD with Asemdesauzo Women
Stakeholder and Venue	Ngalichi Women Ngalichi
Date of Meeting and Time	3rd of December 2014
Present	Daniel Abbrey (SRC), Brendon Solik, Asemdesauzo Women (See attendance Register)

Introduction
The meeting began with introduction and background to the offshore Cape Three Points License Area Phase 2 Development and the purpose of the Environmental, Social and Health Impact Assessment. The following are the views and opinions of the participants with respect to the issues raised.

Land Tenure and Land use
Family heads and community Chiefs and elders are responsible for assigning and allocating land in the village. The predominant use of land in the village is for farming.

Village Leadership
In general there are no women in active leadership positions within the village. There is one exception to this and this is the Queen Mother. The Queen Mother will assume leadership responsibilities in the absence of the Chief.

Education
There is no difference in the enrolment rate between boys and girls as the enter school in the village. Moreover mostly children will stay in school up to the age of 12. However, between the ages of 12 and 15 children begin to drop out as schooling becomes too expense (boys may seek additional incomes for their families)

Economic / Livelihood Activities
Farming and petty trading are the primary economic activities in the village. Additional incomes are generated by women who are hairdressers in the community. The Women in the village sell a large proportion of the crops they harvest as they need monetary income for expenses such as education and other

foodstuffs (primary expenses). Finally, women indicated that men are the breadwinners although this was said with hesitation. The women went onto say that they provide 'lots of support' to family incomes.

Agriculture

The women in the village grow and harvest the following crops:

- Maize,
- cassava,
- Okra,
- Pineapple,
- groundnuts,
- Pepper, and
- Sugar cane.

Harvested crops are then taken to the market in Aiyinasie.

Women indicated that crop yields have decreased over the past 10 years. A perception exists that this is due to the oil and gas activities. Finally, the whole family is involved in farming throughout different stages of the farming process.

Trading

Trading activities by the women in the village centre on buying and selling of domestic consumables:

- soap,
- milk,
- sugar,
- cooked food,
- clothes, and
- Local gin.

Trading activities take place at the markets at Aiyinasie and Tikobo no. 1.

Primary restrictions preventing the women from trading are a result of the construction of the Gas pipeline. The women indicated that there access to the beach has been constrained by the pipeline. They used to use footpaths which they are unable to now. Furthermore, they cannot afford a taxi. In addition, the closest market they have nearby is not a large market and therefore it is difficult sell their goods.

Health

There are no health facilities in the Village, the women travel to Eikwe to go to the hospital there and it is well equipped.

People in the village do use traditional medicine but either for small ailments or if they did get better after visiting Eikwe hospital.
The women also noted that they have a renowned traditional healer in their village.

There have been health awareness campaigns on HIV, Ebola and Cholera in the Village.

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Meeting Notes- FGD Ataubo Women

Subject/Ref	ENI OCTP Phase II FOCUS GROUP DISCUSSION – WOMEN
Stakeholder and Venue	ATUABO
Date of Meeting and Time	9/12/14
Present	Appiah Onwona-Agyemang (SRC), women of Atuabo (see attendance Register)

OBJECTIVES

- To provide information about the Project activities;
- To gather socio-economic information about the village. Specifically information about land ownership/use, village leadership, economic/livelihoods, education, health, heritage, policing and crime;
- To allow women to raise concerns/ questions about the Project; and
- To provide responses to concerns and questions, where possible. Where not possible to explore further as part of ESIA.

LAND TENURE AND LAND USE

1. Who is responsible for assigning/allocation of land in the village?

ANS: The Chief is responsible for allocating land to members of the community.

2. What process does a person need to follow in order to acquire land in your village?

ANS: A person who wants to acquire land must first identify the land and approach the family that owns the land. After negotiating with the family about the cost and mode of payments, the family must go together with the prospective buyer to the chief for approval.

3. What process do women have to follow when they want to acquire land in the village? (Prompt regarding whether women can own land or not and the reason why women cannot own land, if this is the case).

ANS: Women can acquire land and the process is the same as with men.

4. What are the main land uses in your village? (Try to ascertain the percentage of land used for infrastructure, businesses, grazing and crop farming)

ANS: Most people acquire land for residential and farming purposes. However, few acquire land for drinking spot and chop bar. We will not be able to apportion in percentage wise the proportion for such purposes.

VILLAGE LEADERSHIP

5. How many (percentage/ proportion) women form part of the village leadership? If yes, how did they get the position, (elected or selected?) If no, why not?

ANS: There are six women who are among the leadership of this community. They were selected (2 each) from the three main suburbs of the community. They were nominated by the Chief and elders based on their effort and selfless sacrifices and contributions towards the development of the town.

6. How many women are involved in politics in the village? (Prompt around the exclusion or exclusion of women in politics).

ANS: There are six women.

EDUCATION

7. What are the education levels in the village?

ANS: Few women completed basic education. Majority of the women did not go to school. However, few girls have also completed senior high school and tertiary education. The problem with this community is that as soon as people complete senior high school or tertiary institution, they leave for Takoradi, Accra and other big cities to look for jobs because there are no formal sector employment opportunities in this town.

8. What is the enrolment rate of pupils at schools? What might the reason be for this? (girls vs boys)

ANS: There is high enrolment rate for both girls and boys. All our children are in school.

9. What proportion of children attends school? For those who do not, why don't they go to school? (girls vs boys)

ANS: All children are in school. If some do not go to school, it might be financial difficulties faced by the parents.

10. Is there a difference between the percentage of boys and girls at school? If yes, what might the reason be for this?

ANS: All the boys and girls form this community attend school equally. We ensure that both boys and girls attend school.

11. What is drop-out rate of pupils from the village? (girls vs boys)

ANS: No drop out.

12. What are the differences between men and women education levels?

ANS: The men have high educational levels than women because in the olden days our parents did not understand the importance of education for girls.

ECONOMIC/ LIVELIHOODS ACTIVITIES

13. What are the main economic activities undertaken in the village? (This could refer to subsistence fishing/ farming, formal/ informal employment).

ANS: fishing, farming and petty trading.

14. What are the secondary or alternative sources of income (besides the one mentioned above)?

ANS: Apart from what we have mentioned above, we do not have any other economic activity that we depend on for our livelihood.

15. Rank economic/ livelihood activities in terms of contribution to household income/ subsistence.

ANS: Fishing, Farming and Petty trading.

16. For those who are employed who are the main employers in the District?

ANS: Ghana Education Service, Ghana Health Service.

17. Do many people farm for subsistence purposes, what do you grow, do you sell any of it (what percentage)? Prompt if this was not covered above

ANS: All the farming activities are on subsistence level. The soil is even not fertile so most of the time we have low yields. We grow cassava and some vegetables. The yields are not anything to write home about. We eat everything and even buy more from outside to supplement it.

18. Who are the main bread winners in the village households?

ANS: The men are the bread winners with active support of the women. They go to sea and bring the fish and we smoke and sell to support the homes.

19. Are you able to comment on the income levels of the village? (Break into no cash income, low, medium, high – define these categories and give approx. %).

ANS: Our income levels are low. We depend on the sea for our livelihood. Ever since they discovered the oil and started drilling we have experienced low catch. Our husbands always have low catch. Because of that our income levels keep dwindling.

20. What are the differences between men and women's income levels? (Do men earn more than women?).

We do not know the incomes of our husbands, because they do not disclose them to us. But our incomes may be higher than theirs. We take care of the homes and all the children. So we think we have higher incomes than the men.

21. What do most people spend their incomes on and where? Prompt for differences between men's and women's spending patterns, and where possible, rank the spending.

ANS: Food and education of our children.

FARMING ACTIVITIES

22. Do many people farm for subsistence purposes, what do you grow, do you sell any of it (what percentage)? Prompt if this was not covered above

ANS: We farm on subsistence purposes. We grow cassava and vegetables. We consume everything and buy even from outside to supplement it.

23. What percentage of the village depends solely on agriculture?

ANS: None of us depend solely on agriculture. We all depend on fishing and agriculture because there are times when fishing is not good and that is the time we farm. We alternate between fishing and agriculture.

24. What do you farm (crops or livestock)?

ANS: Crops and few domestic animals.

25. Farming calendar: When are the various farming activities undertaken in the year (e.g. ploughing, planting, harvesting)

ANS: We do not plough the land. We hire people to slash the weed around February and burning is done in March. We plant in April and harvest after six to eight months later.

26. Is the land left fallow, when? How has this cycle changed over time?

ANS: Yes the land is left fallow for two years before cultivation is done on the land again.

27. Has the yield changed over the past 10 years? How?

ANS: Yes. The yield has decreased considerably over the last ten years.

28. What percentage of the crops produced/ livestock breed do you sell and what percentage do you consume?

ANS: We consume all the crops that we produce. They are not even enough to satisfy us. We buy from outside to supplement what we harvest from our farms.

29. Where do you keep your livestock? Where do you graze them? (Prompt about problems surrounding the availability of grazing land, water, immunisations, etc)

ANS: We do not keep livestock on commercial basis. We have few domestic animals and we keep them in pens near our houses. We release them to graze by themselves and give them cassava peels as well.

30. How and where do you sell your produce?

ANS: As for the food crops we do not sell any. We consume all.

31. How much do you sell your produce for? (determine cost per weight)

ANS: We do not sell our produce.

32. Who is involved in farming activities (e.g., the whole family, men, women, children, hired labour)

ANS: We normally hire people to do the initial weeding for us. Then the entire family do the planting and subsequent weeding and harvesting. The harvesting is done at once. We normally harvest when we need food in the home.

TRADING

33. What trading activities are practiced in the village? Rank.

ANS: Petty trading.

34. Where do you trade?

ANS: Along the street and in front of our houses.

35. What is the distance between your village and the market?

ANS: Several kilometres.

36. What do you sell?

ANS: Fish and other groceries.

37. Where do you buy your goods? How many times a week/month do you go the buy stock? How much does it you to transport your goods to your storage space/ house before you take it to the market?

ANS: We buy from Ainyinase, Tikobo and Agona Nkwanta. The cost of transporting goods from the market to the village depends on the size and weight of the goods.

38. How do you transport your goods to your trading area/space every day?

ANS: We transport by car.

39. How do you determine the selling price of your goods?

ANS: We calculate the cost of production and add our margin, it also depends on the demand at the market.

40. **What are the main constraints for doing business in the area/district?**

ANS: Transportation is a major problem. We also do not have much capital to expand our trading activities.

41. How is the money/profits made from your trading activities spent and is this the main income for your household

ANS: we spend the profits from our trading activities on food and education of our children.

HERITAGE

42. What heritage resources (sites/ rituals, tangible/intangible) are found/practiced in your village? If yes, prompt for the story behind these sites/areas. (Don't over prompt)

ANS: We have three main shrines here. They are Amanaga, Bulakpele, and Banzama.

43. Where are these sites/areas situated?

ANS: they are located just at the outskirt of the community.

44. How do you think the project will affect these heritage resources?

ANS: the project will not affect them in any way.

POLICING AND CRIME

45. How is conflict managed in the villages and districts?

ANS: Conflicts are resolved at the Chief's palace.

46. What are the common crimes committed in the village? Where is the closest jail situated?

ANS: there is no crime in the community.

47. How has criminal activity changed over the past 10 years?

ANS: There is only petty thieving in the community which we did not see some ten years ago.

48. How many police stations are found in the village?

ANS: there is no police station in the community.

CONCERNS AND EXPECTATIONS

49. How do you feel about the proposed development? (positive and concerns)

ANS: the project will further worsen our plight. It will affect the fishing stock and restrict our husbands from going fishing in the high seas.

50. How do you think the development will affect your lives?

ANS: fish catch will reduce and income levels will also go down.

51. How do you propose the potential issues could be avoided or mitigated?

ANS: the company should give us money to undertake petty trading activities.

52. Who will be the most directly affected people, by the proposed activities? (positive and negative)

ANS: Women and children will be affected most.

53. Are you in support of the proposed activities? Why for yes or no?

ANS: Yes we support the project because it will bring development to the district and the communities around the project.

54. What can Eni do to enhance the positive impacts of the project which you have mentioned? (List one by one positive impacts and work through way of enhancing the positives)

ANS: Eni should help the communities around its project with development projects so that the communities will also feel the positive impacts of what they are doing.

HEALTH QUESTIONS FOR FOCUS GROUP MEETINGS HEALTH FACILITIES

1. What healthcare facilities are there in the village? Who uses them?

ANS: There is one CHPS compound in the Atuabo community. They normally give healthcare to everybody who visits the facility.

2. If facilities are not in the village where are the nearest facilities that are used by the community? How far (time and distance) do people have to travel to get to them?

ANS: Eikwe.

3. Why do people chose to use these facilities over others in the area? Cost? quality of service etc?

ANS: It is close to us.

4. Do people prefer to use traditional medicine over 'western' medicine? If so for what health concerns? And Why?

ANS: Few people use traditional medicine.

5. What types of traditional remedies are used? (e.g. herbal medicines and preparations; remedies such as massage, acupuncture). Where do people in this community go to receive this treatment?

ANS: Herbal medicines.

6. Are there any health awareness/ education campaigns being run in this village or this area that you know of? What do they cover?

ANS: Yes. They talk about malaria and sexually transmitted diseases.

HEALTH PROFILE

7. In general, how old are women and men when they die?

ANS: They vary but most people die between the ages of Sixty-seven and eighty years.

8. What are the most common causes of death for men and women? Why do you think they are the most common?

ANS: We are not in a position to tell.

9. What are the most common illnesses and diseases in a) men, b) women and c) children?

ANS: Malaria and waist pains.

10. Who are the most vulnerable in the community in terms of poor health?

ANS: Elderly women and children

11. Is smoking, drinking or drug use within communities common? Which communities eg towns etc? Amongst what groups (age, gender)?

ANS: Drinking is common among all age groups. Smoking is not common among the people.

12. Do people have easy access to contraception (i.e. condoms)? Is it common for people to use contraception?

ANS: we cannot tell because it is individual affair.

13. Are there transactional sex workers present in the region? If so where? What is done to control risks associated with this activity?

ANS: No.

14. Does anyone in this community or neighbouring communities suffer from HIV/AIDS? Do you know how HIV/AIDS is spread? (work with the local consultants to find an appropriate way to ask if People in the area have HIV/AIDS? If people are aware of how it is transmitted and if there is any stigma around people living with HIV/AIDS)

ANS: No.

15. What does a typical diet consists of in your community? And how does this change during the year?

ANS: A typical diet consists of pounded cassava (fufu) and soup with fish.

COMMUNITY SAFETY AND SECURITY

16. What are the main risks in terms of community safety (e.g. bushfires, road traffic accidents, dangerous fauna, uneven terrain etc)?

ANS: Bushfires.

17. Are there any issues of public and/or domestic violence in the community? What is the nature and causes of the violence?

ANS: No situation of violence nature in the community.

18. What are the main security issues in the community (e.g. presence of bandits, etc)?

ANS: No issues of security concern.

WATER AND SANITATION

19. What are the main sources of water for drinking, cooking, bathing and sanitation? (e.g. borehole, surface water supply, spring-fed).

ANS: Boreholes and wells.

20. Are there any times of year when there is no water or the supply is interrupted? What happens then? Do people have other sources to use?

ANS: We normally do not have enough water during the dry season.

21. Are latrines available for use by all households? If not, what are the typical sanitary arrangements? Do people practice open defecation?

ANS: We have public toilet in the community but some people out of disobedience to rules go out and defecate in the bushes and the beach.

22. How and where is household wastewater removed? Is it treated?

ANS: Household wastewater is thrown outside the house. We do not treat them.

23. How is household waste disposed of? E.g. closed waste bins, on the ground. Where is it taken? Is it treated?

ANS: Household waste is taken to the waste dump site at the outskirt of the town.

WOMEN'S HEALTH

24. Are there any antenatal care services in the project's area other than in the healthcare facilities mentioned previously? Where?

ANS: The CHPS compound in the community does not give antenatal services. The nurses at the facility tell us that they have been instructed to refer all antenatal cases to the health facility at Eikwe.

25. Do pregnant women attend antenatal care services? How often?

ANS: Yes; At least once a month.

26. In general are more babies born at home than in a clinic or other medical facility? Why?

ANS: Most pregnant women deliver at the hospital than in the house. We think it is safer to deliver at the hospital than in the house.

OBSERVATIONS AND PHOTOS

Could the team please note the following based on their visual observations of the village:

Are livestock and domestic animals kept in close proximity to the domestic dwelling?

ANS: Yes.

Are rodents or evidence of the presence of rodents present in the village?

ANS: No

Are piles of rubbish present in the village?

ANS: at the outskirt of the community.

Is stagnant water present in the village?

ANS: No

Could the team please take photos of any health care facilities, water sources and sanitation facilities as well as general photos of the village.

ESHIA for eni Ghana's Offshore Cape Three Points (OCTP) Phase 2 development

Meeting Notes- FGD Bakanta Women

Subject/Ref	ENI OCTP Phase II – FGD with Bakanta Women
Stakeholder and Venue	Bakanta Women Bakanta
Date of Meeting and Time	4th December 2014
Present	Belinda Ridley (ERM) (SRC), Appiah Onwona- Agyemang (SRC) Bakanta (See attendance Register)

Introduction

AO introduced the team and the purpose of the meeting. He also provided a brief understanding of the proposed project activities. Issues, concerns and information were recorded from the meeting.

Land Tenure

Previously women were not allowed to own land. Now with democracy women are allowed to own land. In order to obtain land you go to the chief and follow a set of protocols.

The main land uses in the Village are as follows:

- Housing
- Crops, (Coconut, teak, rubber)
- Livestock (Pigs)
- Trading Goods

Village Leadership

Women are leaders in the community and are voted in by other women (based on their ability to communicate verbally).

Education

All children in the community attend school up the age of 16. After this age there is a problem with students dropping out as there difficulty accessing a Secondary school.

There is a primary school in Bakanta but there is no JHS therefore students have to take a canoe to New Bakanta to get to the JHS.

The women indicated that there was difference between boys and girls in terms of school attendance. Moreover, they reported a low dropout rate.

In general there is little difference between men and women in terms of education levels (although sometimes women are better educated than men).

Economic and Livelihoods

The primary economic activity is fishing and fish mongering with framing as the alternative (Fishing was good until the seaweed began gathering along the coast). Secondary activities centre on petty trading. Fishing ranks as the primary activity contributing to household income followed by farming and trading. Furthermore, there is limited formal employment in the community and the women indicated that they do not know many people who are formally employed.

Crops harvested are used as means of income as well for subsistence purposes. Men are generally the breadwinners although it seems as though when the catch is bad women become primary contributors to the household. Generally, men earn more than women, especially when the catch is good.

Incomes are primarily spent in education and food.

Farming activities

Livestock kept by the community include:

- sheep,
- pigs,
- chicken,
- goats,
- Ducks, and
- pigs

Farming primarily takes place between April and August (land is not left fallow) as the two fishing seasons occur between August and January and March and April. Harvested crops are usually sold at the market in Aiyinasie. Prices vary and are dependent how much it cost them to produce (and there need to make a profit). Women primarily work the land but there is help from the whole family including men and children. If there is a need they will hire labourers.

There has been no change in yields in the preceding years.

Trading

Most of the women in the community are involved in trade as well. Women sell fish based goods to stores but other petty trading occurs outside their homes. When goods are sold at markets they need to travel by car and usually go twice a week.

Heritage

There are six heritage sites in the community:

- Blenviene (2) Amansule (3)Ayera (4) Bodobodi (5) Eyeboadwoba (6)Atofolepole (7) Edikefile

Policing and Crime:

There is no crime in the community and the nearest police station is in Aiyinasie.

Concerns

- Since the construction of the plant at Atuabo fishing stocks have decreased
- This project will worsen the situation for fisherman
- The plant has affected crops (unable to explain). There is a powerdy substance on the crops
- The women are expecting employment for men in the community
- Expecting trading activities to improved
- Expecting cash stipend for loss of livelihoods

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Meeting Notes- FGD Beku Women

Subject/Ref	ENI OCTP Phase II – FGD with Beku Women
Stakeholder and Venue	Beku Women Beku
Date of Meeting and Time	5th of December 2014
Present	Dr.Eric Odei (SRC), Beku Women (See attendance Register)

Introduction

The meeting began at 7.30am with introduction and background to the offshore Cape Three Points License Area Phase 2 Development and the purpose of the Environmental, Social and Health Impact Assessment. The following are the views and opinions of the participants with respect to the issues raised:

Land Tenure and Land Use
The chief and his elders are the custodians of the land. They allocate land based on need and purpose. There is no gender-based discrimination in land acquisition. The process one has to go through is the same for both men and women.
Most of the land 80% lies fallow because it cannot support crop cultivation due to the swampy and sandy nature.
Only about 10% is used for farming. The remaining 10% is used for housing.

Village Leadership
Men outnumber women in leadership positons in the village.

Education
Educational level is mostly up to junior high school level . Although males outnumber females in school enrolment , the boys tend to get attracted to fishing and soon drop out so the numbers equalise as the years go by.

Economic/ Livelihoods Activities
The main economic activities for the women in the area include fishmonging, trading in foodstuff and dressmaking. Very few are engaged in subsistence farming because all the fertile land has been bought by Ghana Gas. This has also negatively affected sale of firewood which used to be an alternative source of livelihood for the women.

Females are the main breadwinners because fishing is no longer lucrative for our men due to poor catch.
Income is mainly spent on school fees, food health and clothing

Farming Activities
Very few people are engaged in farming activities for the reason already stated. The main crop that thrives is the Palm. Plantain is also found in backyard gardens. However, if well supported, the women think they can grow beans, watermelon and pepper in the area. Livestock farming is common in the homes. Animals reared include goats, sheep and poultry. They are often sold in December and January for the Christmas festivities and also for fear of disease outbreaks among the animals in the ensuing months.

Trading
Main trading activities are fishmonging and sale of foodstuffs (Cocoyam, plantain and cassava). The foodstuffs are bought from a market in Anyinase (about 1-2 hours' drive from Baku).Baku has no market where trading can go on. Thus, the women sell their wares in front of their houses.
Main challenges in the trade include bad roads, lack of sufficient capital coupled with lack of credit facilities.

Policing and Crime
Conflicts and crime rate are almost negligible in the area. No police station in the area.

Concerns and Expectations
The women see the project as one they can benefit immensely from.
They anticipate more opportunities for employment, increase in income levels which will impact positively on their lives, and an increase in commercial activities in the area.
They expect Eni to provide them with gas cylinders and burners to use in their homes in addition to creating employment opportunities

Health Facilities
Baku has no health facility. Healthcare is sought by the community mainly from St. Martin de Porres Hospital, Eikwe because it offers a wide range of services. Less commonly patronised health facilities are Ekabaku Health Centre and Atuabo CHPS compound. The community prefers orthodox medicine to traditional medicine. The main type of traditional medicine used in the area is herbal. However, the predominate practitioners of traditional medicine in the community are spiritualists from the 12 Apostle's church referred to as NAKABA.
The health awareness /education programs are mainly about malaria, cholera and Family planning.

Health Profile
In general the women thought that women in the area lived longer than the men. They attributed it to excessive stress that the men go through.

Commonest causes of illness and disease among men and women are diabetes and hypertension whilst in children malaria is the commonest. In terms of poor health the participants thought women were the most vulnerable.
Alcoholism is common in the area with males being the predominant group.
Contraceptives are available and readily accessible. They can be obtained from Ekabaku Health Centre.
Transactional sex workers are not common in the area.The women also denied knowledge of anybody with HIV/AIDS in the community. However they know how the disease is spread namely:

- Through sex
- Sharing sharp or cutting instruments like needles
- Sharing of toothbrushes

Typical diet in the area consists of:

- Fufu (made from cassava)
- Acheke (made from cassava)
- Banku (made from maize and cassava)
- Yakayaka (made from cassava)
- Rice

Community Safety and Security
Bushfires, road traffic accidents, public and domestic violence were all said to be uncommon in the area.

Water and Sanitation
The main source of drinking water is the bore-hole but when this breaks down they resort to sachet water.
Public toilets are non-existent in the community and so the people defecate in the open along the beach or in the bush.
Household water is stored in open containers. Household waste water is thrown out in the open.

Women's Health
St.Martin de Porres hospital is the only health facility in the area that offers antenatal and delivery care. Traditional Birth Attendants encourage pregnant women to attend antenatal clinic and deliver at the hospital. Thus, every pregnant woman in the community attends antenatal clinic at least four times before delivery. Deliveries take place in the hospital more than at home.

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Meeting Notes- FGD Eikwe Women

Subject/Ref	ENI OCTP Phase II – FGD with Eikwe Women
Stakeholder and Venue	Eikwe Women Eikwe
Date of Meeting and Time	3rd December 2014
Present	Adu Nyarko A. (SRC), Dr. Eric Odei (SRC) Eikwe Women (See attendance Register)

Introduction

AN introduced the team and the purpose of the meeting. He also provided a brief understanding of the proposed project activities. Issues, concerns and information were recorded from the meeting

Land Tenure and Land Use

The chief and families own the lands in the area. Land is acquired through the elders by paying for the parcel. One has to abide by the principles that will be given to you as condition. Lands are given for the purposes of building houses, stores/shops/markets points, farming.

Village Leadership

One-third of women in decision making with as regards to community leadership. E.g., 3 women in 12 member Unit Committee

Education

Almost all children are at the JHS level. Few at SHS/ Polytechnic / Vocational / Tertiary. A high number achieve high school. Almost all school going age are in school. There is no difference in numbers of children in school with respect to gender. Differences observed are natural. Generally, men have higher level but it is changed.

Economic Activities

Key activities are fishing, trading, farming (annual). The Catholic Hospital at Eikwe brings a lot of people that makes services provision attractive. Food produced is mainly for domestic consumption few are sold. They said women are the breadwinners in the various homes. Their income levels are low especially when there are no or less fish catch. They however reiterated that there had not been any significant difference in fish caught since they all depend on the sea. They said they use most of their incomes on education (fee payment) and food.

Farming

It was clear that few are into farming (about 20%). Crops grown include cassava and pepper. April is the start of major farming season; while minor season start in October. The land is left to fallow for about a year, and has become overused leading poor yield. They produce about 30% of what they need. They also keep pen and coops for rearing domestic animals. They sell produce basically at Ainyinase, and the local market at Eikwe. A fowl sells at GH₵25.00 while a sheep goes for GH₵ 150 – 160. Farming is undertaken by both men, women.

Trading

They trade mostly in fishing, food vending and water. Ainyinase is the main market center. Market days are Tuesdays and Fridays. It takes 45 minutes about an hour drive – depending on the speed of the vehicle. They obtain their local supplies from like fish, food stuffs mainly from Ainyinase, Tikobo 1 & 2, Sowodadzemu (near Eluobo) on Mondays and Tikobo on Thursdays. They go to these centers by road transport. Pricing of goods is based on cost of purchasing the food stuff plus Transport cost. One key challenge is glut or rot due to delayed purchasing attributed to problem of low purchasing power. Profit from trading is used to pay fees and bills and food.

Police and crime

Conflict is managed at home by elders at home or at the palace. Common crimes are break inns and petty thievery. It has seen a down trend over the past 10 years. Now some are working and are able to feed themselves. There is no Police station or Post. Crimes are reported at Ainyinase**.**

Concerns

- Concerned that fisherman might be restricted at sea as regards open fishing grounds. Safety zones will be created leading to reduce fishing space.

Expectation

- Boost to the trading
- Employment opportunities for the community especially the youth
- Location of project and use of existing gas pipeline corridor will be there best alternative as it will not affect the local lands and infrastructure

- Abundant gas will result in low cost of gas for domestic use

Community needs

- Police station
- Toilet facilities
- Waste disposed and management
- Endeavor to let contractors employ qualified persons

ESHIA for eni Ghana's Offshore Cape Three Points (OCTP) Phase 2 development

Meeting Notes- FGD Krisan Women

Subject/Ref	ENI OCTP Phase II – Focus Group with Women
Stakeholder and Venue	Krisan Community
Date of Meeting and Time	3rd December 2014 at 11:15 -12:30 pm
Present	ESHIA Team: Kwame Asante (KA, SRC), Begoña Rodrigo LLodio (BRL, ERM). Krisan Community: Krisan's women organizer and other women from Krisan. See attendance register sheet for full list.

Introduction

KA introduced the team and the purpose of the meeting. He also provided a brief understanding of the proposed project activities. Issues, concerns and information were recorded from the meeting. The Focus Group with Women took place right after the Focus Group with Leaders and Elders at the Chief Palace. Around 20 women were present in the Focus Group.

History of Krisan

According to the women, an European came to this area to set up a Cristian community. The name of "Cristian community" has derived to "Krisan" the current name of the village.

Land Tenure and Land System

Women reported similar land allocation process explained by the men.

The land in Krisan is "family land" and it is granted by the family elders. The proponent shall offer drinks to the family owner so there is official proof of the agreement.

Both women and men can ask for land. Sometimes the land owner asks for distribution of the crops to the farmer in a ratio of 3:1 or 2:2 (locally called the

"abunu" or "abusa" system of lad aquistion. The farmer gives out the lad free of charge. However, the farmer shares the process 3:1 (the abusa) or fifty percent (the abunu).

Village Leadership

The woman organizer appointed by the chief and elders, is the only woman in the village leadership. She represents women's voice.

Economic activities

According to women, the main sources of income are:

1. Fish processing (sold at Eyniase, Agona Nkwanta, Asasetre, tarkwa, Bogoso, and Domase).
2. Farming (cassava, plantain, cocoyam, sugarcane, tomatoes for food and sale when there are leftovers- about 2 %).
3. Fire wood (not in march as there is no fish catch). The wood is collected from the swamps.
4. Small scale animal husbandry and poultry keeping (backyards and under coconut farms).

They pointed out that farming crops are 100% for consumption. They buy vegetables in the market as well, as the crops production is very poor.

Women reported to have higher incomes than men. When the fish catch is low, women have more money due to petty trading activities, this leads to some conflicts within the foyer. Women sell all type of goods (food, cosmetics, cassava, plantain, tomatoes, groundnut, dough, chips, etc.), they buy them mainly in Takoradi and sell in Krisan.

Their incomes are mainly spent in fish processing and farming.

The main employees in the village are teachers and nurses, representing a 5% of formal employees.

The main constraints for women doing business in the area are the following:

- Low capital;
- High transportation cost;
- Low purchase capacity of the community.

Heritage

They identified one heritage site called *Ayawale* and located near the Krisan Refugee Camp. Women cannot go there on Thursdays, cannot carry red material or go when they are in the menstruation period.

Conflicts

In case of conflict, women meet with the elders to resolve it.

Health, water and sanitation

The water sources at Krisan are:

- Processed water for drinking purposes. People have to buy drinking water.
- Groundwater (boreholes) for other uses.
- Lack of adequate toilet facilities. Majority of the people use public toilets.

They mentioned that groundwater availability is limited during the months of November, December and January.

In total, it was agreed between the women that 10 households have their own toilets at home. They mentioned that there are not enough community toilets in Krisan and that 2 additional toilets will be enough to meet the population demand.

Regarding waste, they explained that women carry the waste to the public and open deposit and burnt it sometimes when there is not enough capacity.

Women in Krisan go to Eikwe hospital to give birth. Giving birth at home is not a common practices in the village nowadays due to increase public health education on maternal and child health care. Women are aware of the safety issues involved in delivering at the hospital.

Traditional medicine is used for "spiritual diseases", as an example given, in the case the malaria lasts more than usual, there are some people in the community that would go to the traditional doctor for treatment.

Concerns

Women of Krisan expressed their positive attitude towards the new investment. They are hopeful that the new project will lead to increased business activities and will also provide employment for the youth in the area. However, they also have some concerns which are listed below:

- Some coconuts trees and farms were destroyed by construction of the new road with no compensation to lad owners nor the community. Concern that expansion of pipeline ROW may affect Krisan crops and farm land and demand that fair compensation is paid if this should occur.

- They hope that the employment rate will increase allowing the stealing rates to reduce.
- Concerns about influx of workforce and potential increase in STDs. According to their previous experience during the construction of the Krisan Refugee Camp, they expect an increase of sex workers in the area. The sex workers have already started coming in. The women are of the view that there should increase in public awareness programmes on the use of condoms and advocacy for young women to be employed.
- The women are also concerned that the increase in sex workers in the area can affect peoples' marriages and relationships with serious social problems in the community.
- Concerns about transportation during the construction period as small vehicles cannot stop to pick up people due to the presence of heavy trucks.
- Dust increase due to traffic increase during construction and the plying of heavy duty trucks getting gas from Atuabo.
- Potential damage to existing infrastructure due to construction traffic with no compensation (a borehole was destroyed by a construction truck with no compensation).

The following measures to be implemented by eni were suggested by the women during the focus group in order to enhance the potential positive impacts:

- Provision training to locals.
- Provision of at least two boreholes water pumps for the community
- Provision of two toilets to accommodate the new migrant workers in the area.
- Provision of two bus stops to keep the people especially women safe from heavy earth moving machines and trucks on the road.

Figure 1 Focus Group with Women at Krisan (3rd December, 2014)



Source: ERM, 2014

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Meeting Notes- FGD Ngalichi Women

Subject/Ref	ENI OCTP Phase II – FGD with Ngalichi Women
Stakeholder and Venue	Ngalichi Women Ngalichi
Date of Meeting and Time	5th of December 2014
Present	Dr.Eric Odei (SRC), Adu Nyarko A (SRC), Ngalichi Women (See attendance Register)

Introduction

The meeting began with introduction and background to the offshore Cape Three Points License Area Phase 2 Development and the purpose of the Environmental, Social and Health Impact Assessment. The following are the views and opinions of the participants with respect to the issues raised.

Land Tenure and Land use

Lands are owned by the Chief or families. To obtain a parcel, one has to contact the owners. They will designate someone demarcate the area requested for and pay for it. Lands are mostly acquired for housing and farming purposes.

Village Leadership

There are women incorporated in the Chief's council. There are 10 women in all that are members. Educational levels are low with few possessing SHS certificate. Over 80% of kids of school going age are in school. They indicated however that more girls drop out of schools that boys especially at the JHS level due to financial difficulties.

Economic / Livelihood Activities

The women are mostly fish mongers. Farming is not lucrative in the area because their land does not support agriculture well. The rest are into trading and provision of services. Few work with the GES. Women are mostly home sustainers. They have low income levels. In most cases their fishermen determine who should buy their fish caught, because they call other women from Esiama or Ainyinase to come and buy their fish catch.

Agriculture

The land does not yield enough. They obtain about 10% of what they consume from the farms. They grow cassava and vegetables. They start their farms in January. Mostly the fallow period for the land is 6 years because the crop yield is poor. Some keep sheep and fowls. They do not sell foodstuff grown but do so with the animals which are sold in the community. Farming is done by adult male and female.

Trading

Trading is mostly in fishing, food stuffs and provision. Main market center is Aiyinase. They travel for about an hour to get there. They send fish to sell and on return buy foodstuffs and other consumables to come and sell at the community. They transport goods via taxis and mini buses. They determine prices by including the cost of the items, the transportation cost and profit margin. Main constraints are financial and transportation coupled with low local purchasing power. Also their activities are highly dependent on fish caught. Incomes are spent on education of children in school

Police and Crime

Conflicts are settled in homes. Crimes are not common in the community. There is no police post.

Anticipation

- Employment opportunities
- Source of financial assistance
- Help women form group and given them assistance

Concerns

- Will fishermen still get fish with the coming into existence of the project as fishing grounds will reduce?
- Project should mark out the areas that are considered as safety zones.

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Meeting Notes- FGD Ngalikpole Women

Subject/Ref	ENI OCTP Phase II – FGD with Ngalikpole Women
Stakeholder and Venue	Ngalikpole Women Ngalikpole
Date of Meeting and Time	3rd of December 2014
Present	Belinda Ridley (ERM) Appiah Onwona- Agyemang, Ngalikpole Women (See attendance Register)

Introduction

The meeting began with introduction and background to the offshore Cape Three Points License Area Phase 2 Development and the purpose of the Environmental, Social and Health Impact Assessment. The following are the views and opinions of the participants with respect to the issues raised.

Land

If one requires land for farming you need to visit the chief who will then assign you a portion (free of charge). However, if you need land for house they you need to pay.

Village leadership

Many women are in leadership positions. The Chief selects individuals based skills/ entrepreneurship (apart from royal family)

Education

The level of education in the village is generally good (more women educated than men) with most of the children attending school. Children leave school primarily due to financial reasons. If there is a poor catch or women can't engage in petty trading then there is not enough money to pay for schooling. Dropout rates increase at the JHS level.

Economic Livelihood activities

Fishing and farming are the main economic activities with petty trading the main secondary activity. There is little formal employment in the in the village with a few nurses employed at the hospital the only formally employed people in the village. (This changed in the construction phase of the Ghana gas)

Most of the farming that occurs is for subsistence as they have small yields. Men are the primary bread winners (they tend to earn more) and income levels across the community are low. Primary expenditure is on food and education.

Farming

The primary crop is cassava; the women indicated that they did not farm much else. They do leave some land fallow sometimes for as much as 2 years. The yield has reduced over the past 10 years but the women are not sure why. In term of livestock sheep and chicken are kept in the village. The whole family is involved in farming including men and children.'

Trading

Trading occurs and the women houses and they travel to markets. Markets they sell their goods at include:

- Tikebo,
- Jawewaf,
- Agona Nkwanta, and
- Aiyinasie

Women travel to markets twice a week and by car. The process of their goods are determined by the price on inputs, taxi fares, and demand.

Crime

There is no conflict or crime in the village. The nearest police station is a Aiyinasie.

Concerns and Expectations

- The community believes that the project will the only benefit Sanzule.
- Fishing Activities – main concerns
- Expecting a lot of their children (youth will be employed)
- Fishermen most affected
- Complaining that there are jealousies between Sanzule and other communities (but no effect on their relationship thus far)

But overall they support the project.

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Meeting Notes KII Health Information Officer

Subject/Ref	ENI OCTP Phase II KII HEALTH PROFESSSIONAL
Stakeholder and Venue	ST. MARTIN DE PORRES HOSPITAL, EIKWE
Date of Meeting and Time	3/12/14 4.OOPM
Present	MR. Sylvester Asmah (Health Information Officer)-KEY INFORMANT DR. ERIC ODEI-INTERVIEWER

Introduction

The meeting began at 4:00 pm with an introduction, and background to the offshore Cape Three Points License Area Phase 2 Development and the purpose of the Environmental, Social and Health Impact Assessment.

HOSPITAL HEALTH INFORMATION

Patients' data are stored in a database called Health Information Management System, from which reports can be generated as and when they are needed. (See report for detailed statistics on morbidity and mortality).

ESHIA for eni Ghana's Offshore Cape Three Points (OCTP) Phase 2 development

Meeting Notes- Health KII Health Service Administrator Eikwe

Subject/Ref	ENI OCTP Phase II KII HEALTH PROFESSSIONAL
Stakeholder and Venue	ST. MARTIN DE PORRES HOSPITAL, EIKWE
Date of Meeting and Time	3/12/14 2.07PM
Present	MR.JOHN ABAKAH(Health Service Administrator)-KEY INFORMANT DR. ERIC ODEI-INTERVIEWER

Introduction

The meeting began at 2.07pm with introduction, and background to the offshore Cape Three Points License Area Phase 2 Development and the purpose of the Environmental, Social and Health Impact Assessment. The following were the responses given to the questions posed.

GOVERNMENT POLICY/NGO

1. Which NGOs or other organisations are currently active in the area to improve health conditions?

I don't know of any organisation apart from Eni Ghana that is supporting health programmes and projects in the area. Eni Ghana put up our antenatal block in this hospital.

2. What are the health projects supported by NGOs in the area? Are there any donor programs relating to health in the project area?

(See above)

3. Are there any additional NGO health programmes in the area? Are any planned for the future?

No.

4. Are there any Health Plans for this area? What do these plans cover? Aims, objectives, outcomes etc?

Yes. We have a strategic plan for this hospital which defines the line in which the hospital wants to go.(See copy).

HEALTH FACILITIES

10. What is the condition of the health facility? Is it supplied with basic utilities (running water, electricity, sanitation e.g. septic tank)? How is it kept clean?

The hospital has all basic utilities including electricity. We have three standby generators two of which are very old (About 15-30years) but the third is quite new (about 6 years old).

However, the new one (150KVA) is too small to meet our demand due to expansion of infrastructure. We need to get one or two additional generators.

Water is supplied from a borehole fixed with a pump. Water is pumped to an underground tank from which it is pumped out again into an overhead tank for distribution.

Separation of waste is being done to some extent .There is a site for biodegradables, another for plastics and other materials that can be shredded (eg. infusion bags, syringes, etc) and lastly, an incineration site. The shredded materials are processed and mixed with cement and stones to make concrete for construction of pavements in the hospital.

13. What are the arrangements for the safe and effective supply, storage and prescription of pharmaceutical products (medicines or drugs)? How does the clinic ensure they are of good quality (not counterfeit)? Can they be stored in a controlled climate and locked for controlled access?

We get supplies from the National Catholic Service, or direct supplies from accredited pharmaceutical companies. Sometimes we purchase a few from the open market. As much as possible we try to get most of our supplies from accredited pharmaceutical companies in order to avoid fake drugs.

However, stock-outs do occur occasionally and we are compelled to go to the open market. Delay in reimbursement by the National Health Insurance Scheme is really crippling us. We have a pharmacy where the drugs are stored under prescribed conditions.

14. What are the arrangements for obtaining non-pharmaceutical medical supplies including wound dressings, swabs, and sterilisation solutions? Is there an adequate supply to meet existing needs?

Quite similar to the above; the delay in reimbursement from the National Health Insurance Scheme (NHIS) has brought about occasional shortages.

15. What (if any) types of medical devices are available? *E.g. thermometers, syringes, stethoscopes, weighing equipment (scales), x-ray equipment, mobility aids, etc.*

We have two X-ray machines are available but the bigger one is broken down. Only the small mobile X-ray is being used now but we are hoping to get the bigger one fixed or receive a brand new one from Ministry of Health.

16. Do people have to pay for consultations and medication? Are there any people who cannot afford healthcare services? How many and who are these people? How do they address their healthcare needs? Is healthcare provided free to any groups (e.g. children <5 years of age and pregnant/nursing mothers)?

Yes. However, most of our clients are insured. For those who are uninsured and genuinely unable to pay, we put them on the Free Treatment List. We have now decided to enrol such clients on the National Health Insurance Scheme (NHIS) in order to minimise cost. Pregnant women, newborns (less than 6 weeks old) and staff of the hospital also enjoy free medical treatment.

17. What challenges exist in the healthcare system? What can be done to address them?

i) Human resource challenge.

ii) Delay in reimbursement from the NHIS.

iii) Lack of a mortuary.

iv) Breakdown of X-ray machine

The Hospital lacks a mortuary. When we lose a patient on the ward, the corpse is kept in a small air-conditioned room ("improvised mortuary") for a maximum of 24-48hrs whilst awaiting release to the relatives. Undue delay in claiming the corpse can cause a great deal of inconvenience. There is therefore the urgent need for a mortuary to be built. Proceeds from the mortuary could help sustain the smooth running of the hospital in times when there are financial challenges due to delay in NHIS reimbursement.

NB: Mortuary fees are not covered by the NHIS hence it can be a reliable source of revenue for the Hospital.

18. Have there been any recent changes in the health care structure?

No.

19. Have there been any changes in the level and/or quality of services? If yes, what is the reason for this?

Yes; in the positive direction. Owing to the National Health Insurance Scheme patients report early for treatment when they are sick.

20. Are there any planned changes to health care?

For the hospital we are trying to improve and expand our services

21. How do you record information on diseases and health conditions of patients? Do you have any statistics on health care in this area that you could share?

Referred to Health information Officer

22. Describe the typical training of the medical staff in the facility. What (if any) additional training and competency is needed?

Typically all the various categories of clinical staff have undergone the requisite training in approved health institutions and are qualified to work (see Human Resource plan).We need a paediatrician in the hospital.

23. What is the ratio of healthcare staff per population number? Has this changed i.e. has there been an increase in the number of people using the service?

(See human resource plan)

24. Do existing services meet demand?

The types of services we provide meet a lot of the client's medical needs. However, there are some areas where we lack the capacity to provide needed services.

E.g. We do not have a paediatrician to handle our under five cases properly.

Eye care services and dental services are also non-existent.

ESHIA for eni Ghana's Offshore Cape Three Points (OCTP) Phase 2 development

Meeting Notes- Health KII Medical Director Eikwe

Subject/Ref	ENI OCTP Phase II KII HEALTH MEDICAL DIRECTOR
Stakeholder and Venue	ST. MARTIN DE PORRES HOSPITAL EIKWE
Date of Meeting and Time	3/12/14 3.30PM
Present	DR. PAUL COOPER-KEY INFORMANT DR.ERIC ODEI-INTERVIEWER

Introduction

The meeting began at 3.30pm with introduction, and background to the offshore Cape Three Points License Area Phase 2 Development and the purpose of the Environmental, Social and Health Impact Assessment. The following were the responses given to selected questions posed.

17. What challenges exist in the healthcare system? What can be done to address them?

Human Resource is a great challenge. Most of the midwives are ageing and will soon go on retirement. The doctors are also not enough.

Plans are far advanced for the construction of a hostel for nursing students on rotation. The idea is that they will be encouraged come and work in the hospital when they complete their training. In the long term there is the need to establish a midwifery training school right here in Eikwei. A proposal for this has been developed by the Regional Director of Health Services. The Regional Director has consulted the Traditional authorities about this.

With regard to doctors I have sent an application to the Ghana Medical and Dental Council to make this hospital a site for housemanship training. This will bring more doctors some of whom may decide to stay on and work after their housemanship. At the moment I need about 4-5 medical officers and a pediatrician. The need for a paediatrician is critical as the large number of deliveries we conduct give rise to a large number of newborns to take care of. We are sponsoring some doctors-in-training (one in China and another in Ukraine). One doctor is also being sponsored for specialist training in Obstetrics and Gynaecology in Ghana.

19. Have there been any changes in the level and/or quality of services? If yes, what is the reason for this?

Yes. There has been a remarkable improvement in the quality of services in Obstetrics and Gynaecology as well as Surgery due to availability of Specialists in these areas at the moment. This was not the case a few years back. Now a wide range of surgical cases including some orthopedic cases are being

20. Are there any planned changes to health care?

As already discussed

ESHIA for eni Ghana's Offshore Cape Three Points (OCTP) Phase 2 development

Meeting Notes- Health KII Sub District Public Nurse Eikwe

Subject/Ref	ENI OCTP Phase II KII HEALTH PROFESSIONAL(SUB-DISTRICT PUBLIC HEALTH NURSE)
Stakeholder and Venue	ST. MARTIN DE PORRES HOSPITAL, EIKWE
Date of Meeting and Time	3/12/14 11.10AM
Present	DR. ERIC ODEI-TEAM MEMBER CONDUCTING THE INTERVIEW MISS GRACE ENYAN-KEY INFORMANT

Introduction

The meeting began at 11.10am with introduction, and background to the offshore Cape Three Points License Area Phase 2 Development and the purpose of the Environmental, Social and Health Impact Assessment. The following were the responses given to the questions posed.

GOVERNMENT POLICY/NGO

1. Which NGOs or other organisations are currently active in the area to improve health conditions?

a. Eni Ghana- Supports Maternal and Child Health Programs

b. Ghana AIDS Commission-Supports the training of peer educators and 'Models of Hope for persons with HIV/AIDS.

2. What are the health projects supported by NGOs in the area? Are there any donor programs relating to health in the project area?

Yes. In addition to the aforementioned, Eni Ghana has:

i. constructed a new antenatal clinic for the Hospital

ii. provided a 4x4 vehicle for outreach programs

iii. provided funds for various trainings and procurement of equipment for Maternal and Child health programs in the sub-district

3. Are there any additional NGO health programmes in the area? Are any planned for the future?

No.

4. Are there any Government health programmes in the area? What are these and what do they cover? What success have they had?

The Government-led Health Programs and activities include:

i. Reproductive and Child Health Program which covers:

- Adolescent Health

- Antenatal Care including home visits
- Supervised Delivery including Domiciliary midwifery
- Postnatal Care including home visits
- Family Planning
- Management of STIs
- Child Welfare Clinic which covers:
    - Growth Monitoring
    - Immunisation(Expanded Program on Immunisation)
    - Vitamin A supplementation

ii. Integrated Disease Surveillance and Response which covers:

a. Surveillance of selected communicable diseases of public health concern

b. Case detection and contact tracing into the community of patients with infectious diseases like: cholera, tuberculosis, yaws, measles, meningitis etc.

c. Disease outbreak investigations

iii. School Health Program which involves periodic visits to the Schools to:

c. Conduct physical examination/screening of pupils in selected classes in order to pick up diseases/conditions of public health concern e.g. yaws

d. Educate them on personal hygiene, disease prevention

e. Treat minor ailments

iv. Health Promotion which covers Information, Education and Communication on Health

Success story:

We exceed our target for Antenatal care (ANC) coverage most of the time. Postnatal coverage has also seen an upward trend in recent times. In 2013 the coverage for PNC was 69% though the target was 60% (See annual report) due to increase in home visits and education of mothers.

5. Are there any Health Plans for this area? What do these plans cover? Aims, objectives, outcomes etc?

Yes. I know the District Health Admnistration has a strategic plan for the district. You may get a copy from the District Director of Health Services at Nkroful.

HEALTH FACILITIES

6. Does the Ministry of Health have standards regarding health infrastructure (e.g. number of hospitals per districts, number of health centres per chiefdoms, number of physicians per districts / chiefdoms etc)?

Yes. In this hospital we have a Strategic plan drawn for 2013-2017 on which our annual workplan is based.(See copy)

7. What healthcare facilities are available for communities (i.e. first aid post, clinic, hospital)?

The facilities include:

i. St. Martin de Porres Hospital which serves as a referral hospital for the other facilities

ii. Atuabo CHPS compound which serves Atuabo town and Asemda-Suazo

iii. Sanzule CHPS compound which serves Sanzule, Bakanta and the Ewe Community(located near Sanzule)

8. What types of services do they provide (traditional healing, treatment, vaccinations, check-ups, surgery, HIV-AIDS testing, ante-natal, child birth, etc)?

Both CHPS compound offer basic care to the communities they serve. This includes:

i. Treatment of minor ailments

ii. Reproductive Health mainly family planning and postnatal care(Home visits)

iii. Child Health, mainly Child Welfare Clinic including immunisation, Growth Monitoring and Vitamin A supplementation

Antenatal Clinics and Supervised deliveries are not provided by the CHPS compounds. They only educate pregnant women, encourage them to attend antenatal clinic at the Hospital and to deliver in the Hospital. Rarely, they may perform emergency delivery as they have all been trained on how to conduct deliveries.

The hospital provides Medical, Surgical, Obstetric and Gynaecological services in addition to all the Public health services already mentioned including HIV counselling and testing and antiretroviral therapy (ART).

10. Does the clinic have access to an ambulance or other vehicle to transport patients?

The hospital has an ambulance but the CHPS compounds do not. Patients who are referred from the CHPS compounds often come by public transport. However, the ambulance could be called to transport such patients to the Hospital if need be.

11. How many people does the clinic/health facility serve?

The hospital serves a wide catchment area, much larger than the subdistrict population(See Annual report). Some even travel all the way from Cote d'ivoire to access medical services at the hospital.

12. What is the condition of the health facility? Is it supplied with basic utilities (running water, electricity, sanitation e.g. septic tank)? How is it kept clean?

The hospital has all basic utilities including electricity. However, frequent power fluctuations have become a nuisance. Quite recently, an analyzer in the lab and an autoclave got damaged by these.

13-15 Referred to Hospital Administrator

16. Do people have to pay for consultations and medication? Are there any people who cannot afford healthcare services? How many and who are these people? How do they address their healthcare needs? Is healthcare provided free to any groups (e.g. children <5 years of age and pregnant/nursing mothers)?

Yes. Without National Health Insurance Scheme most will not be able to pay for consultations but fortunately most of the clients are insured. Those who cannot afford include the poor and needy. These are put on Free Treatment List but I do not know the exact number. Health care is also free for all pregnant women and newborns up to 6weeks postpartum.

17. What challenges exist in the healthcare system? What can be done to address them?

There are funding challenges due to delayed reimbursement from the National Health Insurance Scheme.

Human resource is also a challenge. The number of midwives is woefully inadequate considering the high number of deliveries conducted per month. There are only 8 midwives and the average monthly deliveries conducted are over 250.Doctors are also not enough. Only 3 are at post at the moment: 1 MO, 1 Surgeon, and 1 Obstetrician Gynaecologist**.**

18, 19, 20, 22, 23, 24 Referred to the Health Services Administrator (HSA) for response

21. Referred to the Health Information Officer (HIO) for response

TRADITIONAL MEDICINE

25. Do people use traditional medicine or visit traditional healers? Is this form of medicine/practitioner preferred over 'western' medicine?

A lot; they often start with traditional medicine at home and end up with western medicine. Superstition is very common here. About 85% of patients attribute their conditions to spiritual causes.

26. What types of therapy are used? (e.g. herbal medicines and preparations; remedies such as massage, acupuncture). Where do people in this community go to receive this treatment?

The traditional healers are mainly herbalists who use herbal preparations for remedies. The spiritualist operates in prayer camps built by the 12 Apostles' Church (locally called "Nakaba") and they use prayers and religious rituals to heal.

LIFESTYLE INDICATORS

27. Are there any antenatal care services in the project's area other than in the healthcare facilities mentioned previously? Where? What are the distances from the project's area?

No.

28. What is the level of care provided to pregnant and nursing mothers?

Pregnant women receive antenatal care, supervised delivery and post natal care. Here we also practice domiciliary midwifery where clients who want to deliver at home can call for a midwife to attend to her at home when she gets into labour

29. Do pregnant women attend antenatal care services? How often?

Yes. Most of them are able to make at least four visits.

30. In general are more babies born at home than in a clinic or other medical facility?

The converse is true. Out of 2847 deliveries recorded last year(2013), only 38 were home deliveries.

COMMUNITY SAFETY AND SECURITY

31. Are there any awareness and education regarding safety hazards and safety risk management in the communities?

Eni Ghana is supporting an awareness and education campaign about the hazards of mining among pregnant women who engage in illegal small scale mining.

32. What are the main risks in terms of community safety (e.g. bushfires, road traffic accidents, dangerous fauna, uneven terrain etc)?

The main risks here are Road Traffic Accidents (RTA) especially involving motor-bicycles.

33. Are rail / road traffic incidents and accidents common? Describe the types of incidents that occur.

They are not very common but they do occur occasionally

34. Are there any issues of public and/or domestic violence in the project area? What is the nature of the violence?

Not common but rape victims often report here for management.

36. What do you think might be the main causes of violence? E.g. breakdown in community cohesion, use of alcohol and drugs, mental illness, stress and anxiety, etc.

Not common so I cannot tell with certainty what the cause is.

37. Has the incidence of violent crime declined or increased in the last five years? Why is that?

Not common so difficult to tell. But recently isolated incidents of burglary have been reported in the community.

38. 38. How are acts of violence addressed?

They are reported to the police.

39. What are the main security issues in the project's area (e.g. presence of bandits, farmers and pastoralists from neighbouring countries crossing the borders to utilise better quality agricultural land etc)?

Security issues are not common in the area

HEALTH PROFILE

40. What is the life expectancy of men and women from birth?

My estimate will be 55 years for men and 65 for women

41. What are the most common causes of death for men and women? Why do you think they are the most common? Do you have any statistics for this?

The men mostly die from:

i. Cardiac Arrest
ii. Diabetes
iii. Hypertension

The women die from:

i. Old Age
ii. Septicemia

(These may not be very accurate. See the HIO for the statistics)

42. What are the most common illnesses and diseases? Are there any differences in age and gender and if so, why? Why do you think these are the most common?

The common illnesses are:

i. Upper Respiratory Tract Infection
ii. Diabetes
iii. Hypertension
iv. HIV/AIDS (80% female and 20% male; due to biological make-up of women and sociocultural factors that favour men over women in negotiating for sex)
v. Malaria (Mostly in the under fives due to low immunity and more exposure to mosquito bites)
vi. Septicemia (Mostly among neonates due to low immunity)
vii. (See the HIO for the more accurate statistical information)

HIV /AIDS is common in the area due to proximity to Cote d'ivoire which has higher HIV/AIDS prevalence

43. Has the disease profile for the area changed in the last 5 years? If so why?

Diabetes and Hypertension are on the ascendancy. Diarrhoeal cases have become seasonal with periodic outbreaks of cholera especially in August and September.

Reason for rise in Hypertension and Diabetes is the adoption of 'western' food and lifestyle.

Cholera outbreaks are due to unhygienic practices.

44. What is the infant mortality rate in the project area? What is the maternal mortality (i.e. death of mother during child birth) rate in the project area?

Referred to the Health Information Officer

45. What are the most common causes of death in children under the age of 5 years?

Children often die from Neonatal Septicemia, Prematurity and Malaria.

46. How effectively are these issues being managed by the existing health care system?

A lot of education is ongoing about the need to attend antenatal clinic when pregnant, supervised delivery, breastfeeding practices and the care of the newborn. Malaria interventions that are ongoing include the Indoor Residual Spraying (IRS) by AngloGold Ashanti, bednet distribution, Early diagnosis and treatment of confirmed malaria cases.

47. Have there been changes in types of illnesses? If so, why do you think this is?

See 43 above

48. Who are the most vulnerable in the community in terms of poor health?

Women and children

49. Is smoking within communities common? Amongst what groups (age, gender)?

Smoking of cigarettes is not common within this community but quite recently smoking of marijuana has become very common among the youth (males).

50. Is the drinking of alcohol common? Among what groups (age, gender)?

Drinking of alcohol is also common amongst men in the agegroup 18-50 years

51. Is drug use common? If so, what types? Amongst what groups (age, gender)?

Yes. Marijuana is common among the young men

DISEASES

52. What are the main communicable (infectious) diseases in the project's area (e.g. diarrhoeal diseases, acute respiratory infections (ARIs), tuberculosis etc)?

Malaria

Skin infection

Acute Respiratory infections

HIV/AIDS (Almost every house has at least one case)

53. How prevalent is malaria in the project area?

Referred to HIO

54. Are livestock and domestic animals kept in close proximity to the domestic dwelling? Have there been any cases of livestock-related disease or illness?

Yes. Sheep are reared close to houses where people live. Keeping of dogs and pigs is not allowed in the community.

No case of livestock-related illness has been recorded.

55. Is there any knowledge relating to rates or incidents of non-communicable (chronic) diseases in the community? (e.g. heart disease, stroke, cancer, chronic respiratory diseases, obesity and diabetes).

Referred to HIO

SEXUALLY-TRANSMITTED INFECTIONS (STIS) INCLUDING HIV/AIDS AND HIGH RISK SEXUAL PRACTICES

56. Are Sexually Transmitted Diseases (STDs) common?

The common STIs are:

HIV/AIDS

Syphillis (Among pregnant women)

Hepatitis B

Gonorrhea

57. Which ones are more common (e.g. syphilis, Hepatitis, HIV/AIDS). What is the main reason for their occurrence: drug use, blood transmission, and sexual transmission?

Referred to HIO

58. What is the prevalence of STDs in the project's area?

Referred to HIO

59. What is the level of awareness and understanding in the project area about HIV/AIDS, how it is spread and how to protect against acquiring it?

Awareness about the disease is good. Almost every adult knows about its mode of transmission and preventive measures. Since 1994 we have been sensitising the community about the disease and the availability of Antiretroviral therapy (ART) here.

60. Do people have easy access to contraception (i.e. condoms)? Is it common for people to use contraception?

Yes. Although Catholics do not endorse any family planning method except the natural method (like cycle beads), I keep condoms in the ART clinic for clients who come for treatment.

61. Are transactional sex workers reported in the project's area? What is done to control risks associated with this activity? (e.g. education programmes etc).

Not common in this community but I hear they are in Esiamah. Condoms are provided in all hotels in the town.

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Meeting Notes- Health KII District health Administration Nkroful

Subject/Ref	ENI OCTP Phase II KII DISTRICT OFFICIALS
Stakeholder and Venue	DISTRICT HEALTH ADMINISTRATION, GHANA HEALTH SERVICE NKROFUL
Date of Meeting and Time	8/12/14 12.00PM
Present	ELIZABETH CORNEY JUDITH OKINE SAFO ANKOMAH CHARLES BORNEY OSEI EVANS DR. ERIC ODEI-INTERVIEWER

INTRODUCTION

The meeting began at 12.00pm with introduction, and background to the offshore Cape Three Points License Area Phase 2 Development and the purpose of the Environmental, Social and Health Impact Assessment. The following were the responses given to the questions posed:

The district has the following Healthcare facilities:

1. St. Martins de Porres hospital
2. Anyinase Health Centre
3. Nkroful Health Centre
4. Salma CHPS compound
5. Nyame Bekyere CHPS
6. Edusuazo CHPS compound
7. Atuabo CHPS compound
8. Sanzule CHPS compound

The health programmes, plans and activities can all be seen in the District Strategic plans (See Report)

The introduction of the CHPS concept and attempts to make CHPS zones coincide with electoral areas is a major change in health care.

THE MAIN CHALLENGES OF THE DISTRICT INCLUDE:

1. Lack of funding for most of the programmes and activities

2. Inadequate Office accommodation for the District Health Directorate
3. Lack of midwives to conduct deliveries in remote areas. The CHO's are not allowed to conduct deliveries. This does not augur well for the prevention of maternal mortalities in remote and deprived areas
4. Inadequate financial support for the implementation of CHPS.
5. Lack of the following services in the district:
    a. Dental Care
    b. Mental Health
    c. Eye care
    d. Occupational health and Safety
    e. Physiotherapy
    f. Cancer care

The Ministry of Health/Ghana Health Service plans for health infrastructure and human resource are incorporated in our strategic plan.

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Meeting Notes- Asemda-Suazo KII Education

Subject/Ref	ENI OCTP Phase II – Key Informant Interview (KII) Education
Stakeholder and Venue	Education key informants.
Date of Meeting and Time	5th of December 2014
Present	Danial Abbrey (SRC)

GENERAL

1. How many schools are found in the area?

ANS: One basic school (Primary/Kindergarten)

2. How many of the schools are public and private schools? (Get a break down of each type of school (primary =xxx, secondary =xxx, etc).

ANS: One public school

3. How are the public schools funded?

ANS: Funded by the government

4. How many terms are there in a school year?

ANS: Three terms

5. What are the main problems/concerns about education?

ANS The main problems are lack of the following:

- Accommodation for teachers
- Structure/building for kindergarten section
- Toilet facility
- Teaching materials
- ICT equipment

STATUS OF SCHOOLS

6. How many children are currently enrolled at the schools?

ANS: A total of 117 pupils

7. What are the main subjects taught at the school?

ANS: English language, Nzema language, mathematics, Integrated science, Citizenship/social studies, ICT, Creative arts, Religious and Moral Education.

8. What is the availability of learning materials at the schools?

ANS: The school lack learning materials. It has to improvise

9. How much are the school fees? Are the fees a once off payment or are they paid per term?

ANS: Students do not pay fees. The government absorbs the fees through the capitation grant. Students are however made to pay GHc 3 and GHc 2 as printing and PTA fees respectively

10. What is the current teacher/pupil ratio? (Why high/low).

ANS: There are 2 trained and 4 untrained teachers in the school

11. What are the general conditions of the school infrastructure in the area?

ANS: The school's infrastructure is fairly good

ABOUT THE PUPILS

12. Approximately, what proportion of the population is literate/ illiterate? If possible, break into male and female and age groups.

ANS: An estimated 60% of the population is literate.

13. What is the average level of education attained by the people in the village?

ANS: Majority adults have Primary of Middle School Leaving Certificates, while the youth have JHS OR SHS qualification.

14. What proportion of the children in the area attend school? (Prompt about the reasons of low/high attendance)

ANS: Almost all children of school-going age attend school because of the importance attached to education in the community in recent times. Parents see it as the only avenue for escaping poverty

15. Is there a difference between the attendance rates of boys vs girls, why?

ANS: There are more girls in school than boys. A reflection of the fact that there are more females than males in the community.

16. What is the rate of absenteeism? What are the main causes of high/low absenteeism? (Prompt about absenteeism between boys and girls).

ANS: Absenteeism in the school is estimated around 10%

17. What is the drop-out rate of the pupils?

18. What is the drop-out rate of between boys and girls? Why is it higher for girls/boys?

ANS: About 10% drop out of school. Majority are boys.

19. What is the highest Grade children have to reach in order to qualify for tertiary education?

SENIOR HIGH SCHOOL

20. Where do the children taught at the school come from? (Try to get an idea of how far these children have to travel and how they get to school if they are not leaving with relatives or in a boarding house).

ANS: All come from the community

21. Where are the children from outside the village housed? Are there any boarding facilities?) If there are, where are they located? What are their conditions (in terms of cleanliness, lighting, safety, etc)?

22. Do many children from the village attend school elsewhere? Where and why?

ANS: Since there are no Junior High School in the community, they go to neighbouring Atuabo to continue their education upon completion of primary school.

CONCERNS AND EXPECTATIONS

23. How do you feel about the proposed development? (positive and concerns)

ANS: The project is a good one because it will create job opportunities in the area

24. How do you think the development will affect your lives?

ANS: Eni is likely to invest in the social infrastructure of the community and help improve on the educational standards of project communities

25. How do you propose the potential issues could be avoided or mitigated?

26. Who will be the most directly affected people, by the proposed activities? (Positive and negative).

27. Are you in support of the proposed activities? Why for yes or no?

28. What can Eni do to enhance the positive impacts of the project which you have mentioned? (List one by one positive impacts and work through way of enhancing the positives.)

- Eni should employ the locals
- The company should set up a task force to monitor any adverse impacts of their operations.
- Workers should be given orientation on the effect of the social life on the community, e.g. education of HIV/AID

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Meeting Notes- KII Education Sanzule

Subject/Ref	ENI OCTP Phase II – Key Informant Interview (KII) Education
Stakeholder and Venue	Education key informants.
Date of Meeting and Time	4th of December 2014
Present	Daniel Abbrey (SRC) and Brendon Solik (ERM), Teachers of Sanzule (See attendance register)

OBJECTIVES

- To provide information about the Project activities;
- To gather socio-economic information about the village. Specifically information about education system;
- To allow informant to raise concerns/ questions about the Project; and
- To provide responses to concerns and questions, where possible. Where not possible to explore further as part of ESIA.

GENERAL

1. How many schools are found in the area?

ANS: There are 2 primary schools (1 public, 1 private), a junior school and a vocational school.

2. How many of the schools are public and private schools?

ANS: As above

3. How are the public schools funded?

ANS: The government funds all, except the private schools

4. How many terms are there in a school year?

ANS: 3 terms

5. What are the main problems/concerns about education?

ANS: The main problems that were reported by the teachers were as follows:

- Funding- cannot recoup school fees and lack of public funding;

- Teaching and learning materials;
- Staff infrastructure- accommodation, offices, common room;
- School infrastructure- desks offices etc.
- water and sanitation on school property;
- Feeding centre;
- Attendance at schools.

STATUS OF SCHOOLS

1. How many children are currently enrolled at the schools?

Sanzule Wisdom Academy	Pre-school, Primary, JHS	145	138	283
Sanzule/Krisan DA JHS	JHS	58	70	128
Sanzule/Krisan Primary	Primary	22	14	36
Charlotte Dolphyne Training Institute	Year 1 – Year 4	228	116	344

2. What are the main subjects taught at the school?

ANS: Primary school: English language, Nzema language, mathematics, integrated science, citizenship/social studies, ICT, Creative arts, Religious and Moral Education.

ANS: JHS: English language, Nzema language, mathematics, integrated science, Citizenship/social studies, Basic in Technology, ICT, Religious and Moral Education.

3. What is the availability of learning materials at the schools?

ANS: The school lack learning materials

4. How much are the school fees? Are the fees a once off payment or are they paid per term?

ANS: Fees are free but student are expected to pay the following per term:

PT- 2 cides

Junior entry fee 8 cides

Junior 3 cides

Computer user fee- 2.5 cides

Primary 1 cide

5. What is the current teacher/pupil ratio? (Why high/low).

6. What are the general conditions of the school infrastructure in the area?

- Difficult learning environment;
- Multiple kids per desk with limited learning materials.
- They have not received textbooks this year yet.
- Lack of accommodation for teachers
- Poor ventilation in classrooms
- Lack of office and Teacher common room
- Lack of sanitation facilities

ABOUT THE PUPILS

1. Approximately, what proportion of the population is literate/ illiterate?

ANS: 20% literate, Males slightly more than females (60:40)

2. What is the average level of education attained by the people in the village?

ANS: Senior high school

3. What proportion of the children in the area attend school?

ANS: About 70% of kids attend school

4. Is there a difference between the attendance rates of boys vs girls, why?

ANS: More girls attend than boys (60:40). This is result of the changes in perception about women.

5. What is the rate of absenteeism? What are the main causes of high/low absenteeism? (Prompt about absenteeism between boys and girls).

ANS: The rate of absenteeism is quite high the older the kids become. Money is an issue. Boys have a higher rate of absenteeism than girls. Also, some pupils only attend 2-3 times a week.

6. What is the drop-out rate of the pupils?

ANS: Three years ago it was quite bad, but it has reduced recently.

7. What is the drop-out rate of between boys and girls? Why is it higher for girls/boys?

ANS: Boys drop out more than girls because they tend to go fishing

8. What is the highest Grade children have to reach in order to qualify for tertiary education?

Senior high school

9. Where do the children taught at the school come from?

ANS: Children can come from between Beku and Bakanta often as far as 4km (walk)

10. Where are the children from outside the village housed? Are there any boarding facilities?) If there are, where are they located? What are their conditions (in terms of cleanliness, lighting, safety, etc)?

11. Do many children from the village attend school elsewhere? Where and why?

ANS: They travel out of the town to attend Senior high school at Essiama, Nkroful, etc.

CONCERNS AND EXPECTATIONS

12. How do you feel about the proposed development? (positive and concerns)

ANS: Positive:

- New infrastructure to the community;
- Social investment in the community;
- Market opportunities for local produce;
- Employment.

Negative:

- Outside people taking local jobs;
- Not enough local content;
- Access to land and fishing grounds;
- Influx concerns- teenage pregnancies;
- Environmental hazards- pollution spillages
- Access to recreational activities.

13. How do you think the development will affect your lives?

14. How do you propose the potential issues could be avoided or mitigated?

ANS: Implementation of the EMP;

Education campaigns to incoming workers;

Social and labour plans;

Orientation to community behaviours.

15. Who will be the most directly affected people, by the proposed activities? (Positive and negative)

ANS: Positive:

- Youth- employment and business development
- Children- better schools

Negative:

- People who lose their land;
- Women- teenage girls will be vulnerable

16. Are you in support of the proposed activities? Why for yes or no?

ANS: All support the project

17. What can Eni do to enhance the positive impacts of the project which you have mentioned? (List one by one positive impacts and work through way of enhancing the positives)

ANS: Invest in health and education infrastructure.

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Meeting Notes- KII Education Atuabo

Subject/Ref	ENI OCTP Phase II – Key Informant Interview (KII) Education
Stakeholder and Venue	Education key informants.
Date of Meeting and Time	3rd December 2014 at 17:00GMT
Present	ESHIA Team: Kwame Asante (KA, SRC), Begoña Rodrigo LLodio (BRL, ERM). Atuabo Community: 1. Mr. Anthony (Head Master at Atuabo Junior High School. Mr. Richard Nsiah, Acting Head teacher, Atuabo Methodist Primary School.)

Introduction

KA introduced the team and the purpose of the meeting to the respective Key Informants. He also provided a brief understanding of the proposed project activities to the head teachers: at both the KG -Primary and Junior High School.

General

There is only one public school school system at Atuabo: KG (1-2 years), Primary (class 1 – 6) and Junior High School (grade 7 – 9). There is also one private school. However, since the school was not in session and the head master had travelled at the time of visits, the team could not obtain information on the school. Details on the JHS school were collected during the KII-Education conducted at the school.

Both the KG- primary and the Junior High Schools are funded by the government of Ghana through the capitation grant. However, neither of the schools has received basic school materials and teaching supplies (e.g., textbooks, exercise books, chalk, students' register and students' report cards) nor funds (average GH C200.00 – GH C500.00) for any school-based assessment reports since the last two years.

The primary school which serves as the main center for the Basic Education Certificate Examination in the Nzema area has a serious roof leakage and makes school work difficult during the rainy season which coincides with the BECE examinations. The school does not have access to toilet facilities for both teachers and pupils.

The main problem at the both schools is thus, the lack of economic resources. The teachers also described the enrollment figures as low. They explained that people who graduate from higher education in the cities do not come to their communities to serve as role models for the other children. The children do see education as an important area worth investing their time. The other reason is that parents are prepared to spend of their children's education. There is general poverty in the Atuabo and Nzema area.

The academic level is perceived as very low, the main reasons for this is that the students don't follow the education at home, the poor English level of the students and the lack of teachers.

Status of Schools

Information on student enrollment was not asked in this interview as the teacher had no information available. This information on school enrollment was provided during the KII at Atuabo.

Table I: Enrollment Figures for Junior High School, 2014/2015 (Atuabo)

Level	No. of Students	No. of Males	Percentage of males	No. of Females	Percentage of Females
Form 1	39	23	43.75 %	16	56.25 %
Form 2	30	13	43.3 %	17	56.60 %
Form 3	16	11	68.75 %	5	31.25 %
Totals	85	47	55.29 %	38	44.70 %

Source: SRC & ERM

Table II: **Enrollment Figures for Junior High School. 2013/2014 (Atuabo)**

Level	No. of Students	No. of Males	Percentage of males	No. of Females	Percentage of Females
Form 1	41	21	51.21 %	20	48.78 %
Form 2	28	16	57.14 %	12	42.85 %

Form 3	32	15	44.11 %	17	55.88 %
Totals	101	52	51.48 %	49	48.51 %

Source: SRC & ERM

Table III: Enrollment for KG – Primary 6: Atuabo

KG 1	No. of Students	No. of Males	Percentage of Males	No. of Females	Percentage of Females
KG 1- 2	100 +	-	-	-	-
Primary 1	47	22	46.80 %	25	53.19 %
Primary 2	46	25	54.34 %	21	45.65 %
Primary 3	47	25	53.19 %	22	46.80 %
Primary 4	32	15	46.87 %	17	53.12 %
Primary 5	35	22	62.85 %	13	31.14 %
Primary 6	32	17	53.12 %	15	46.87 %
Total	271	126	46.49 %	113	53.50 %

Source: SRC & ERM

At the Junior High School level, the main subjects taught at the primary school are, core: English, maths, integrated sciences, social studies, religion and moral. The electives subjects include Ghanaian language, Basic Design and Technology (BDT) , religious and moral education, French and Information Communication Technology (ICT).

In principle, basic education is supposed to be free in Ghana. However, as a result of obvious lack of support of from government, the Parent Teacher Association (PTA) has voluntarily agreed to pay GH C2.00 (two Ghana Cedis) per term/ per student. This may vary from a school to another and also between years. For example, an extra classes attracts an additional fees of GH C10.00 (ten Ghana cedis)

According to the Key Informant, the current teacher/pupil ratio is about 1/40 for the Krisan-Sanzule School.

With regards to the general conditions of the schools, the kindergarten does not have latrines. All important documents are kept at the house of the Head teacher.

In addition, there is lack of furniture for students, black boards, playing filed for children with roof leakage and broken doors and windows to classrooms.

The Junior High school has a latrine (for both males and females) which was provided by the American Peace Corp sometime last year. According to the KI, the school building was renovated (including roofing and added beams, reinforcement of pillars, and fresh painting) with the support of the Member of Parliament for the Ellembele Constituency through an NGO. The school has a descent office for the Head teacher and store for the administrative documents.

About the pupils

According to the Key Informant, about 65 % of the population is illiterate with male ratio of 40 % to female- 60 % . He also mentioned that in general, children after Junior High School are not able to read and write in English. Only 30 % male students and 10 % of female students would normally enroll into the Senior High School. Some of the reasons for the trend is attributed to the intelligence level of the children, poverty in the area, and sometimes late start of school by some children. For example, the Key Informant mentioned some children who attained age 15 years before they left the primary school. Another interesting trend mentioned was that normally more girls start school than boys. However, getting to the later years, the retention rate for boys past that of girls. Many girl drop out (25 %) from school as compared to boys (15 %). Many girls are report for dropping out from school due to teenage pregnancies, ending up with petty trading and parents do not appear worried and bothered. The male students also resort for fishing and going for money.

The nearest Senior High School is located at Nkroful, the capital of the Ellembele District Assembly and the students following the Secondary School need to move from Krisan.
Approximately between a 80-90% of children in the area attend school. However, there is a high rate of absenteeism, estimated in a 50% mainly due to poverty and teenage pregnancy in the case of girls. Absenteeism would be higher in boys than in girls (40% boys and 20% girls), a situation which affects quality teaching and education. There is also an estimated drop out of 30 % for girls due to teenage pregnancy and poverty. Girls are not able to go back to school after having children. KII recommended that an awareness creation and public education programmes for both girls and parents are organized in order to protect girls in the community.

The students at the Atuabo Junior High School come from Atuabo, Asemda (1 km), Ekabaku (1 km) and a small number from Beyin (2 km plus) away. All the students walk from their various destinations to school.

Concerns, expectations of the project

The Key Informant described the project as a good one and hoped that it may have some positive impacts like the following;

- People from the community may benefit from employment from the construction of the pipelines to the other stages of the project.
- The project may also be a motivation for students since they will people in the corporate world with the gas industries.
- The project's employment and skills needs can serve as a guide for students' future selection of area of studies at the University level.
- The project may provide some scholarships for clever but needy students to pursue higher education in the future.
- Hopefully, the project will address some of the gaps in the education infrastructure and needs in the community. The Key Informant mentioned help with basic educational learning materials.
- Possible improvement on the infrastructure and also accessible roads to contain the heavy traffic of trucks and earthmoving machines in the area.
- The moving in of other auxiliary services like banks can also bring employment and open up opportunities for loans and credit facilities.
- Payment of compensation to affected members of the community will address poverty issues to some extent.

Concerns and Fears

- The project may lead to increase in school dropouts for both males and females. The males may want to work and obtain income while the girls can easily be attracted by the workers and get themselves pregnant. Some of the young girls are already involved with the migrant workers.
- Pollution of the environment during the construction phase.
- Concerns over unknown effects of the flaring of the gas.
- The increasing cost of living due to movement of people to live and work in the area.
- Difficult for teachers to find reasonably affordable accommodation compared to a few years ago. Almost all landlords want to rent out their homes to oil and gas workers. Some teachers have already been sent away from their homes due to their inability to pay.

Mitigating Intervention of Eni

- Advocacy and public awareness programme (for company workers and community leaders and paretns) to protect girls thereby, reducing the incidence and prevalence of teenage pregnancies in the community.
- Organize assertiveness training programme for girls to appreciate holding on and completing their education.

- Institute and enforce laws on men who go out with and impregnate female students.
- ENI can help Atuabo to build a computer laboratory and serve the other schools in the zone.
- Eni can help the community with the enforcement of the child labour laws in order to avoid students dropping out from school to work.
- Organizing educational tours for students to meet workers and motivate themselves to stay in school.
- Setting up special scholarships for girls.
- 

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Meeting Notes- of Educators Bakanta

Subject/Ref	ENI OCTP Phase II – KII Educators of Bakanta
Stakeholder and Venue	Ms Grace and Mrs Elizabeth (KG Educators)
Date of Meeting and Time	3rd of December 2014
Present	Belinda Ridley (ERM), Appiah Onwona-Agyemang (SRC)

Introduction

AO introduced the team and the purpose of the meeting to the respective Key Informants. He also provided a brief understanding of the proposed project activities.

General

The school term is made up of 3 terms and Bakanta has the following schools (public):

- Primary School;
- Kindergarten; and
- Preprimary.

The educators primary issues were the:

- Lack of text books;
- Lack of Facilities;
- Poorly maintained infrastructure;
- Lack of support from the government;
- Old desk and chairs and not enough;
- No electricity in the school; and
- No toilets – pupils have to use the 'bush'

Status of Schools

Schooling is free and there are approximately 70 children enrolled in school. The following subjects are taught:

- Language literacy (English /Nzema)
- Numeracy
- Creativity (arts, modelling, drawing) parents buy (PTA Parent Teacher Association)
- Environmental studies (science)
- Religious (moral studies)

Pupils

The Ratio of pupils to teachers is 45 to 1 for class 1 and for 25 per teacher class 2.

Statistics for schooling is as follows:

- 60% illiterate
- Average level in village, majority junior high (60%)
- 95% attend school, dropping towards JHS (80%), Secondary - a problem
- Some for B&G
- Absenteeism: not a problem
- 6-30 points to qualify for tertiary

No students travel into Bakanta for schooling, however some students (from outside) travel to the JHS in New Bakanta.

It is difficult for teachers to remain at the JHS in Bakanta as there is no teacher accommodation meaning teachers have to travel into Bakanta to teach.

Concerns

Bakanta may be moved away by the Project?

The teachers had concerns that the construction of the project will impact the fisherman. Furthermore, benefit will only be felt if the Project employ members of Bakanta and there will be limited benefit if they only employ people from outside the community.

People were employed during the Ghana Gas project but now they have been laid off since the construction phase is over. Construction workers were able to buy food and goods whilst employed on the project

Generally speaking there was no noticeable increase in crime and accidents due to the Ghana Gas Project.

There is a fear that the flares will have an effect on the health of the people.

The educators have not noticed any pattern of economic impacts

They do not have a problem with the Project if there are no health implications and if it generates employment and opportunity for people.

They have not heard from eni before and are only just getting to know the company.

ESHIA for eni Ghana's Offshore Cape Three Points (OCTP) Phase 2 development

Meeting Notes- of Educators Catholic Primary School

Subject/Ref	ENI OCTP Phase II – KII Educators of Eikwe
Stakeholder and Venue	Educators in Eikwe Catholic Primary School
Date of Meeting and Time	3rd of December 2014
Present	Adu Nyarko A. (SRC), Dr. Eric Odei (SRC) Educators of the Catholic Primary School, Eikwe (See attendance Register)

Introduction

AN introduced the team and the purpose of the meeting. He also provided a brief understanding of the proposed project activities. Issues, concerns and information were recorded from the meeting.

General

There are two schools in Eikwe:

- Catholic school (Kindergarten, Primary and JHS) and
- Private – Oxford Preparatory (Primary/ JHS/ kindergarten
  Crèche (Jehovah))

In the Catholic primary school there are 238 pupils and 70 in the Kindergarten. The number of students in the JHS was unknown. The Catholic school is a public school and his supported by the Government as well as the Catholic Church. The private Oxford Preparatory has a total of 233 students which is made up of:

- Oxford JHS 74(Boys 42, Girls 32)
- Primary (119)Boys 57 Girls 62;
- Kindergarten (Boys 15 and girls 15)

The school year consists of 3 terms for academic year and in general no school fees are paid for the government primary school (although there are fees for the private school).
This was noted as one of the key challenges of the school where fees are:

- Primary (class 4-6)-GH₵55.00
  (class 1-3)-GH₵50.00

- JHS: GH₵80.00

The total staff at the Catholic School is 10. The average pupil literacy rate is 75% with girls slightly higher (80%) than boys (70%).

Pupils

There are more girls in school in general. Attendance rate is high – over 45/54 pupils in class go to school daily. A case study of a class 6= 50/54 present
Drop out is not experience at the Primary, it happens only at the JHS level but it is very low. In terms of performance, best grade: about 20% get it. Best grade in 2014 – Aggregate 24. Most of the pupils are from the community. They stay with parents/ caretakers. Dropout rate is negligible. Mostly in the community, the only dynamics are that some of the pupils are withdrawn by their parents from the public school to private school.

Poor performance attributed partly to shed parental responsibility – do not buy books/ items needed for the kids. Other factors are

- Poor motivation for pupils – teaching materials like books, pens, pencils, chalk etc.

Concerns about the project

The teachers expressed the following concerns about the project:

- Will affect positively – e.g. Job creation
- Give opportunities to the community
- Whole communities can be affected. E.g. Gas explosion / leakage
- Positive anticipation:
  - Will create jobs for the people
  - CSR for the project area communities
  - Scholarship schemes for the pupils students
- More intensive education on the operations to be run so as to make people aware and adapt to changes that may come

ESHIA for eni Ghana's Offshore Cape Three Points (OCTP) Phase 2 development

Meeting Notes- Education KII Krisan

Subject/Ref	ENI OCTP Phase II – Key Informant Interview (KII) Education
Stakeholder and Venue	Education key informants, Krisan
Date of Meeting and Time	3rd December 2014 at 17:00GMT
Present	ESHIA Team: Kwame Asante (KA, SRC), Begoña Rodrigo LLodio (BRL, ERM). Krisan Community: Francis Nyanzu (Head Master at Ngalichi and Supervisor of the schools at district level).

Introduction

KA introduced the team and the purpose of the meeting. He also provided a brief understanding of the proposed project activities as the interviewers were not present at the village meeting.

General

There is only one school in Krisan (primary school) and is located mid-way between Krisan and Sanzule, at approximately 2 km from Krisan. Details on this school were collected during the KII-Education conducted at Sanzule. However, the Krisan's Chief identified two KII who might provide relevant information on education situation and constraints within its community.

The only school in Krisan is the public primary school shared between Krisan and Sanzule. There is no Kindergarten or Junior High School.

The primary school is funded by the government. However, neither basic school materials and supplies (e.g., textbooks, exercise books, chalk, students register and students report cards) nor funds (average GH C200.00 – GH C500.00) have been received during the past 2 years from the government. The main problem at the school is thus, the lack of economic resources.

The academic level is perceived as very low, the main reasons for this is that the students don't follow the education at home, the poor English level of the students and the lack of teachers.

Status of Schools

Information on student enrollment was not asked in this interview as the teacher had no information available. This information has been provided in the KII Education for Sanzule.

The main subjects taught at the primary school are: English, maths, sciences, social studies, religion and moral education, Ghanaian language, environmental studies (only for BS1 to BS3) and Basic Design Technology and creative arts (the last two only at Junior High School).

There are no scholar fees. However, the Parents Association usually requires a payment (PTA) of 2 cedis/term/student which are paid by the parents of the students. This may vary from a school to another and also between years.

According to the Key Informant, the current teacher/pupil ratio is about 1/40 for the Krisan-Sanzule School.

With regards to the general conditions of the schools, the kindergarten does not have latrines. The Junior High school has latrines, not enough for all the students. The infrastructure has poor maintenance (broken windows). In addition, there is no office for the head teacher to store the administrative documents and materials and the play space is full of sand. All important documents are kept at the house of the Head teacher. In addition, there is lack of furniture for students, black boards, playing filed for children with roof leakage and broken doors and windows to classrooms.

About the pupils

According to the Key Informant, 70% of the population is illiterate. He also mentioned that in general, children after Junior High School are not able to read and write in English. Only 5% of the students would enroll into the Senior High School.

The nearest Senior High School is located at Nkroful, the capital of the Ellembele District Assembly and the students following the Secondary School need to move from Krisan.

Approximately between a 80-90% of children in the area attend school. However, there is a high rate of absenteeism, estimated in a 50% mainly due to poverty and teenage pregnancy in the case of girls. Absenteeism would be higher in boys than

in girls (40% boys and 20% girls), a situation which affects quality teaching and education. There is also an estimated drop out of 30 % for girls due to teenage pregnancy and poverty. Girls are not able to go back to school after having children. KII recommended that an awareness creation and public education programmes for both girls and parents are organized in order to protect girls in the community.

The Krisan-Sanzule primary school received students mainly from Krisan, Sanzule and the Krisan Refugee Camp but also from Eikwe and Bakanta.

Concerns, expectations of the project

- People from the community may benefit from employment thereby addressing the poverty concerns in the community. However, there is no guarantee for employment for people in the community.
- Hopefully, the project will address some of the gaps in the education infrastructure and needs in the community. For example, the project can help schools with basic educational learning materials and improve on the infrastructure.
- Fear that the project will attract thieves and armed robbers into the community due to the presence of migrant workers, sex workers and others.
- Concerns over known and unknown health consequences of the project.
- Expectation for scholarships for children from Krisan, Sanzule, Asemda and Nyamebekyere.

The meeting ended at 17:45 am.

ESHIA for eni Ghana's Offshore Cape Three Points (OCTP) Phase 2 development

Meeting Notes- KII Education Ngalichi and Beku

Subject/Ref	ENI OCTP Phase II – Key Informant Interview (KII) Education
Stakeholder and Venue	Education key informants, Ngalichi
Date of Meeting and Time	3rd December 2014 at 17:00GMT
Present	ESHIA Team: Kwame Asante (KA, SRC), Begoña Rodrigo LLodio (BRL, ERM). Atuabo Community: 1. Mr. Anthony (Head Master at Atuabo Junior High School. Mr. Richard Nsiah, Acting Head teacher, Atuabo Methodist Primary School.)

Introduction

KA introduced the team and the purpose of the meeting. He also provided a brief understanding of the proposed project activities.

General

1. K.G – aku 66 (boys=28, girls =38)
   Ngalichi – 101 (boys =61, girls =40)
2. Primary Ngalichi i – 301 Boys =166, girls=135
3. JHS 87 (Boys =52, Girls =32)

- Score = past 4 years =100%
- Best grade 12 – 30

4. School run on 3 terms

Enrolment in school encouraging
JHS Subjects taught: English, Mathematics, Science, Social Studies, Citizenship Education, RME, ICT, Creative Art, BDT, and Ghanaian Languages
Teacher/Pupil ratio: Primary- 1: 50 (6 teachers), JHS -1: 17 (5 teachers)

Challenges

- Poverty
- School feeding program
- No school fees paid, however, supplies is inadequate for pupils

About the Pupils

- Literate 70%
- Cannot read 30%
- All children of school going age get enrolled
- For those who drop out are few boys, mostly girls
- Absenteeism is very high – most children fend for themselves. Other children from Baku and Ngalichi attend school in the community. Also there are children who attend other private schools outside the community.

Concerns

- Whether the project will push income levels high
- Migrant workers – especially drivers impregnate the young girls
- Accommodation for the teachers not available/ too expensive
- Migrates workers for example the Chinese pay higher rates / dollars forcing teachers out of occupancy
- Safety issues as the road becomes busy with vehicular movement
- Offer scholarship to pupils to higher level
- Community sensitization / education to understand the projects

The meeting ended at 17:45.

ESHIA for eni Ghana's Offshore Cape Three Points (OCTP) Phase 2 development

Meeting Notes- KII Education Ngalikpole

Subject/Ref	ENI OCTP Phase II – KII Education Ngalikpole
Stakeholder and Venue	Mensah Shadrack His apartment, Eikwe
Date of Meeting and Time	4th of December 2014 at 2pm
Present	Belinda Ridley (ERM), Appiah Onwona-Agyemang (SRC), Mensah Shadrack

Introduction

AO introduced the team and the purpose of the meeting to the respective Key Informants. He also provided a brief understanding of the proposed project activities.

General

There is a public kindergarten funded by the government in the in the village. However, this kindergarten is not linked to any primary school or JHS. Therefore all the preparation done with the kids at the school can sometimes be fruitless.
There is also a problem with teacher accommodation at the village as there are no teachers' lodgings and teachers have to travel and or find accommodation themselves. Other key problems include:

- Late delivery of school resources by Government (Chairs, chalk, books etc.); and
- No electricity in the school.

School Status

There are 56 pupils enrolled at the KG with the three teachers taking care of the pupils. The subjects that are taught include:

- English,
- Mathematics,
- Environmental and Social,
- Creativity, and
- Drawing (RME).

The conditions of the school are generally good and the roof is intact however, there are open windows and doors and no toilet facility.

About the Pupils

The majority of people in the village only have basic education and there is a low literacy rate in the community with only with 32% of village being literate (men higher in general than women). Despite this most of the children in the village attend school - approximately 82%. There is a higher attendance in girls than boys at the kindergarten level however this changes at the JHS level where there is a high dropout rate of girls. The higher dropout rate is attributed to poverty and early pregnancy. The majority of the students taught at the school are from the community. After kindergarten children go to school elsewhere.

Health

There are no health facilities or health workers, community members travel to the hospital in Eikwe for treatment. Community members do use traditional medicine as well as western medicine (unsure of how many). Traditional medicines are used for skin sores or even malaria and re often herbal in nature.

There have been health campaigns for illnesses which are run by the Eikwe hospital. Moreover the District Assembly education office has given lectures on Hygiene, HIV, good waste water disposal practice and general water safety.

In general people die in their mid-50's and mostly from old age. However, Malaria is a common disease in the village with women and children the most vulnerable (malnutrition is not common). Men in the community smoke (5%) and take drugs (5%) with about 30% of the population consuming alcohol.

There is access and awareness of contraception (unsure of how many women use contraceptives). Women go to Eikwe hospital for pregnancy related issues. He is not aware of any prostitution.

There is a high prevalence of HIV because of migration to the area and hospital.

A typical diet in the community consists of (access to food not a problem):

- Fish
- Vegetables/bananas
- Rice

The community is generally safe with road accidents, drownings, and petty crime/ conflict uncommon.

There is piped water at the village although it does not work at the school and is without most of the year. Waste disposal occurs at the back of the house.

Concerns

Criminality may increase as influx occurs and incomes rise. The presence of money in the community may change people's behaviors. Concerned that there will be a change of attitude in people (sense of place).

There will also be benefits from the economic opportunities.

ESHIA for eni Ghana's Offshore Cape Three Points (OCTP) Phase 2 development

Meeting Notes- KII Tourism

Subject/Ref	ENI OCTP Phase II – KII with Hotel Operators (Tourism)
Stakeholder and Venue	Tenack Beach Resort, Beyin
Date of Meeting and Time	7th December 2014
Present	Kwame Asante (SRC) Joseph N. Acquaye (Director) and Martin Kwarkye (Manager)

Interviews were held with the Director and Manager of Tenack Beach Resort on the tourism situation of the project area.

Since the hotel started operating in October 2010, business was initially poor. The concept was for tourists from afar to lodge during their visit to tourism locations in the area.

The resort was however then mostly patronised by students during holidays. But between, 2012 to 2014 when oil and gas projects started coming to the area, business picked up. Patronage of Lonrho's consultants alone contributed significantly to the high cash flow of the resort o the extent that it turned the place around and since then business has been booming.

In recent times however, tourism activities has declined because of the fear of Ebola

Tourism site patrons of the hotel often visit are:

- Nzulezu
- Ankasa Forest near the Elubo Boarder
- Turtle watch at Benyi
- Appolonia Fort
- Whale watching site Benyin (which happens in October, November and December)

These tourism sites need to be well developed and marketed by the Ghana tourism board

The challenge faced by the tourism and hospitality business in the area is:

- Poor road network,
- Lack of capital for expansion, and
- Poor human resource and customer care

The past months have seen tourists visiting the area because of the gas project.

This eni project is also expected to bring more tourists to the area.

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Meeting Notes- Krisan Refugee Camp Manager

Subject/Ref	ENI OCTP Phase II – KII with Krisan Refugee camp manager
Stakeholder and Venue	Krisan Refugee camp manager, Krisan
Date of Meeting and Time	5th of December 2014
Present	Belinda Risley, Brendon Solik (ERM) Bannerman- Martin (Camp Manager)

Introduction

Belinda Ridley gave an introduction to the project. She explained the different elements of the project and the potential impacts it would have on the surrounding communities.
Belinda Ridley then engaged with the Manager through a series of questions. The manager's responses and concerns were recorded.

Responses and Concerns

The Refugee Camp has been located in Krisan since 1997 and was initially constructed to house refugees from the Liberian Civil War. UNICEF originally constructed the camp and the Ghana government provided assistance through labour. The Camp is now maintained through UNHCR with some assistance from the Ghanaian government.

There are approximately 40 nationalities represented in the refugee camp (Central African Republic and DRC are the most populous nationalities represented). Other nationalities include, Sudan, Chad, Benin and Eritrea.

The Manager indicated that they have not received people from Ebola affected countries or people fleeing the virus. In recent years there have been efforts by the Ghana government to send refugees back to their country (however this process is voluntary) recently 80 Liberians returned to Liberia.

The second option for assimilation is for local integration of refugees into local communities. In this case refugees are given a lump sum of money.

Approximately 35% of the inhabitants of the camp are skilled.

Social infrastructure includes a primary school, 10 churches and one mosque.

The camp receives very limited support from the private sector and they have no contact with oil and gas companies operating in the region. The manager reported that the Anglo Gold supported mosquito spraying program had taken place in the village.

Conflict/crime/tension

In the past there had been lots of tension. This was based on the fact that refugees were operating 'outside' the boundary of their Camp. The refugees would fell trees in the forests to make charcoal. However, the refugees and Krisan community members have now reached an understanding and seem to be cooperating 'illegally'.

Since the arrival of the Ghana gas project that Camp manger indicated that there had been an increase in petty crime. In the refugee camp there had been 6 cases of petty crime in the previous month.

Skills

Many of the refugees have skills which are used in the surrounding communities. For example there are men from Togo who have borehole drilling skills which are sometimes employed in the surrounding communities.

General

There has been some talk about the eni project in the Camp but in general there is very little interest in the project.

Appendix E

Structured Questionnaire for FGD's for Women, Men and Elders and Fishing Groups

FOCUS GROUP DISCUSSION - LEADERS AND ELDERS

1.	Date: 02/12/2014
2.	Name of Settlement/Commune/ village:
3.	Names of Participants: *Please see attendance register*
4.	Names of Team members conducting the discussion:

OBJECTIVES:

- To provide information about the Project activities;
- To gather socio-economic information about the village. Specifically information about demographic, land use and ownership, leadership structure, economic/ livelihoods, education, heritage and policing and crime;
- To allow leaders and men to raise concerns/ questions about the Project; and
- To provide responses to concerns and questions, where possible. Where not possible to explore further as part of ESHIA.

GENERAL

1. What is the history of the village? When was it established and why was it established here?

2. What are the divisions of labour in the village? *(Roles and responsibilities of men vs. women).*

3. What are the general problems/concerns that you face in the village?

DEMOGRAPHICS

4. What is the total population and number of households in the village?

5. What is the gender composition of the village *(approximate percentage)?*

6. Is there in/out-migration into the village?

7. Who do you think are the most vulnerable groups and why are they particularly vulnerable? *(People previously discriminated against or who have not received equal opportunities to other groups)?*

8. What is the attitude towards women working?

9. During the past 5 years has there been any conflict or tension?

10. How is tension/conflict managed?

VILLAGE LEADERSHIP

11. How is the village/district structured in terms of administrative functions?

12. Which Paramount Chief do you report to?

13. What are the roles and responsibilities of the Chiefs?

14. Who represents the government administration at village level?

LAND TENURE AND LAND USE

15. Who 'owns' the village land *(land where village is located and fields)?*

16. What % is state land and % customary land?

17. Who is responsible for assigning/allocation of land in the village?

18. What process does a person need to follow in order to acquire land in your villages*? (How long does it take to complete this process?)*

19. What process do you need to follow when dealing with inherited land different to the one for land acquisition?

20. What process do women have to follow when they want to acquire land in the village? *(Prompt regarding whether women can own land or not and the reason why women cannot own land, if this is the case).*

21. Do people have formal 'ownership' certificates? If not, how can the land owner be identified?

22. What are the main land uses in your village?

EDUCATION

23. What are the education levels in the village?

24. What is the enrolment rate of pupils at schools? What might the reason be for this? *(girls vs boys)*

25. What proportion of the children attend school? For those who do not, why don't they go to school? *(girls vs boys)*

26. Is there a difference between the percentage of boys and girls at school? If yes, what might the reason be for this?

27. What is drop-out rate of pupils from the village? *(girls vs boys)*

28. What are the differences between men and women education levels?

ECONOMIC AND LIVELIHOODS ACTIVITIES

29. What are the main economic activities undertaken in the village?

30. What are the secondary or alternative sources of income *(besides the one mentioned above)*

31. Rank economic/ livelihood activities in terms of contribution to household income/ subsistence.

32. If access to livelihood activities is disrupted, how would the villagers adapt and survive?

33. What is the level of unemployment in the village?

34. For those who are formally employed who are the main employers in the District?

35. Who are the main bread winners in the village households? *(Prompt about female-headed households)*

36. Are you able to comment on the income levels of the village? *(Break into no cash income, low, medium, high – define these categories and give approx. %)*

37. What are the differences between men and women's income levels? *(Do men earn more than women?)*

38. What do most people spend their incomes on and where? *Prompt for differences between men's and women's spending patterns, and where possible, rank the spending.*

39. How is wealth measured in the village? *(e.g., in Kenya, the more cattle you have, the more wealthy people are perceived to be)*

FARMING ACTIVITIES

40. Do many people farm for subsistence purposes, what do you grow, do you sell any of it (what percentage)? *Prompt.*

41. What percentage of the village depends solely on agriculture?

42. What do you farm *(crops or livestock)?*

43. Farming calendar: When are the various farming activities undertaken in the year *(e.g. ploughing, planting, harvesting)*

44. Is the land left fallow, when? How has this cycle changed over time?

45. Has the yield changed over the past 10 years? How?

46. What percentage of the crops produced/ livestock breed do you sell and what percentage do you consume?

47. Where do you keep your livestock? Where do you graze them? *(Prompt about problems surrounding the availability of grazing land, water, immunisations, etc)*

48. How and where do you sell your produce?

49. How much do you sell your produce for? *(determine cost per weight)*

50. Who is involved in farming activities *(e.g., the whole family, men, women, children, hired labour)?*

51. What trading activities are practiced in the village? *Rank.*

52. Where do you trade?

53. What is the distance between your village and the market?

54. What do you sell?

55. Where do you buy your goods? How many times a week/month do you go the buy stock? How much does it you to transport your goods to your storage space/ house before you take it to the market?

56. How do you transport your goods to your trading area/space everyday?

57. How do you determine the selling price of your goods?

58. What are the main constraints for doing business in the area/district?

59. How is the money/profits made from your trading activities spent and is this the main income for your household?

HERITAGE

60. What heritage resources (sites/ rituals, tangible/intangible) are found/practiced in your village? If yes, prompt for the story behind these sites/areas. *(Don't over prompt)*

61. Where are these sites/areas situated?

62. How do you think the project will affect these heritage resources?

63. What festivals/rituals are undertaken in the village? Why are they undertaken? When do they happen?

POLICING AND CRIME

64. How is conflict managed in the villages and districts?

65. What are the common crimes committed in the village? Where is the closest jail situated?

66. How has criminal activity changed over the past 10 years?

67. How many police stations are found in the village?

CONCERNS AND EXPECTATIONS

68. How do you feel about the proposed development? *(positive and concerns)*

69. How do you think the development will affect your lives?

70. How do you propose the potential issues could be avoided or mitigated?

71. Who will be the most directly affected people, by the proposed activities? *(positive and negative)*

72. Are you in support of the proposed activities? Why for yes or no?

73. What can Eni do to enhance the positive impacts of the project which you have mentioned? *(List one by one positive impacts and work through way of enhancing the positives)*

1 HEALTH QUESTIONS FOR FOCUS GROUP MEETINGS

1.1 HEALTH FACILITIES

1. What healthcare facilities are there in the village? Who uses them?

2. If facilities are not in the village where are the nearest facilities that are used by the community? How far (time and distance) do people have to travel to get to them?

3. Why do people chose to use these facilities over others in the area? Cost? quality of service etc?

4. Do people prefer to use traditional medicine over 'western' medicine? If so for what health concerns? And Why?

5. What types of traditional remedies are used? (e.g. herbal medicines and preparations; remedies such as massage, acupuncture). Where do people in this community go to receive this treatment?

6. Are there any health awareness/ education campaigns being run in this village or this area that you know of? What do they cover?

1.2 HEALTH PROFILE

7. In general, how old are women and men when they die?

8. What are the most common causes of death for men and women? Why do you think they are the most common?

9. What are the most common illnesses and diseases in a) men, b)women and c) children?

10. Who are the most vulnerable in the community in terms of poor health?

11. Is smoking, drinking or drug use within communities common? Which communities eg towns etc? Amongst what groups (age, gender)?

12. Do people have easy access to contraception (i.e. condoms)? Is it common for people to use contraception?

13. Are there transactional sex workers present in the region? If so where? What is done to control risks associated with this activity?

14. Does anyone in this community or neighbouring communities suffer from HIV/AIDS? Do you know how HIV/AIDS is spread? *(work with the local*

consultants to find an appropriate way to ask if People in the area have HIV/AIDS? If people are aware of how it is transmitted and if there is any stigma around people living with HIV/AIDS)

15. What does a typical diet consists of in your community? And how does this change during the year?

1.3 COMMUNITY SAFETY AND SECURITY

16. What are the main risks in terms of community safety (e.g. bushfires, road traffic accidents, dangerous fauna, uneven terrain etc)?

17. Are there any issues of public and/or domestic violence in the community? What is the nature and causes of the violence?

18. What are the main security issues in the community (e.g. presence of bandits, etc)?

1.4 WATER AND SANITATION

19. What are the main sources of water for drinking, cooking, bathing and sanitation? (e.g. borehole, surface water supply, spring-fed).

20. Are there any times of year when there is no water or the supply is interrupted? What happens then? Do people have other sources to use?

21. Are latrines available for use by all households? If not, what are the typical sanitary arrangements? Do people practice open defecation?

22. How and where is household wastewater removed? Is it treated?

23. How is household waste disposed of? E.g. closed waste bins, on the ground. Where is it taken? Is it treated?

1.5 OBSERVATIONS AND PHOTOS:

Could the team please note the following based on their visual observations of the village:

- Are livestock and domestic animals kept in close proximity to the domestic dwelling?
- Are rodents or evidence of the presence of rodents present in the village?
- Are piles of rubbish present in the village?
- Is stagnant water present in the village?
- Could the team please take photos of any health care facilities, water sources and sanitation facilities as well as general photos of the village.

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17. Are there any issues of public and/or domestic violence in the community? What is the nature and causes of the violence?

18. What are the main security issues in the community (e.g. presence of bandits, etc)?

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19. What are the main sources of water for drinking, cooking, bathing and sanitation? (e.g. borehole, surface water supply, spring-fed).

20. Are there any times of year when there is no water or the supply is interrupted? What happens then? Do people have other sources to use?

21. Are latrines available for use by all households? If not, what are the typical sanitary arrangements? Do people practice open defecation?

22. How and where is household wastewater removed? Is it treated?

23. How is household waste disposed of? E.g. closed waste bins, on the ground. Where is it taken? Is it treated?

1.5 OBSERVATIONS AND PHOTOS:

Could the team please note the following based on their visual observations of the village:

- Are livestock and domestic animals kept in close proximity to the domestic dwelling?
- Are rodents or evidence of the presence of rodents present in the village?
- Are piles of rubbish present in the village?
- Is stagnant water present in the village?
- Could the team please take photos of any health care facilities, water sources and sanitation facilities as well as general photos of the village.

FOCUS GROUP DISCUSSION - FISHERMEN

Note to team: Please note down the following

1. Date:
2. Name of Settlement/Commune/ village
3. Names of Participants: *(capture using an attendance register)*
4. Names of Team members conducting the discussion

Introduce yourselves and the project and explain the purpose of the inquiry. Explain that you are carrying out a survey in the community as part of the plans for the Eni Project.

OBJECTIVES:

- To provide information about the Project activities;
- To gather socio-economic information about the village. Specifically information about fishing activities, etc;
- To allow fishermen to raise concerns/ questions about the Project; and
- To provide responses to concerns and questions, where possible. Where not possible to explore further as part of ESIA.

FISHING ACTIVITIES

1. What are your main sources of income?

2. Do you have any alternative sources of income?

3. Where do you fish?

4. When do you fish? *(What time of day, month, year)?*

5. What types of fish do you catch?

6. How much fish do you catch *(break down according to fish types?)*

7. Have your fish catches changed over the past 10 years? *(Prompt, around the decrease/ increase of in stock, what they think has caused the changes? Don't let them blame oil activities as the stocks have been decreasing historically – prompt around this point)*

8. How do you sell your fish *(e.g. to intermediary, direct to households, at market, contract with buyer)*. How has this changed over the past 5 years?

9. Are the fish catches predominantly used for home consumption or are they sold? *(try to establish %)*

10. How do men's and women's jobs differ in the fishing activities?

11. Which activities are the most lucrative?

CONCERNS AND EXPECTATIONS

12. How do you feel about the proposed development? *(positive and concerns)*

13. How do you think the development will affect your lives?

14. How do you propose the potential issues could be avoided or mitigated?

15. Who will be the most directly affected people, by the proposed activities? *(positive and negative)*

16. Are you in support of the proposed activities? Why for yes or no?

17. What can Eni do to enhance the positive impacts of the project which you have mentioned? (List one by one positive impacts and work through way of enhancing the positives.)

HEALTH QUESTIONS FOR FOCUS GROUP MEETINGS

HEALTH FACILITIES

1. What healthcare facilities are there in the village? Who uses them?

2. If facilities are not in the village where are the nearest facilities that are used by the community? How far (time and distance) do people have to travel to get to them?

3. Why do people chose to use these facilities over others in the area? Cost? quality of service etc?

4. Do people prefer to use traditional medicine over 'western' medicine? If so for what health concerns? And Why?

5. What types of traditional remedies are used? (e.g. herbal medicines and preparations; remedies such as massage, acupuncture). Where do people in this community go to receive this treatment?

6. Are there any health awareness/ education campaigns being run in this village or this area that you know of? What do they cover?

HEALTH PROFILE

7. In general, how old are women and men when they die?

8. What are the most common causes of death for men and women? Why do you think they are the most common?

9. What are the most common illnesses and diseases in a) men, b)women and c) children?

10. Who are the most vulnerable in the community in terms of poor health?

11. Is smoking, drinking or drug use within communities common? Which communities eg towns etc? Amongst what groups (age, gender)?

12. Do people have easy access to contraception (i.e. condoms)? Is it common for people to use contraception?

13. Are there transactional sex workers present in the region? If so where? What is done to control risks associated with this activity?

14. Does anyone in this community or neighbouring communities suffer from HIV/AIDS? Do you know how HIV/AIDS is spread? *(work with the local*

consultants to find an appropriate way to ask if People in the area have HIV/AIDS? If people are aware of how it is transmitted and if there is any stigma around people living with HIV/AIDS)

15. What does a typical diet consists of in your community? And how does this change during the year?

COMMUNITY SAFETY AND SECURITY

16. What are the main risks in terms of community safety (e.g. bushfires, road traffic accidents, dangerous fauna, uneven terrain etc)?

17. Are there any issues of public and/or domestic violence in the community? What is the nature and causes of the violence?

18. What are the main security issues in the community (e.g. presence of bandits, etc)?

WATER AND SANITATION

19. What are the main sources of water for drinking, cooking, bathing and sanitation? (e.g. borehole, surface water supply, spring-fed).

20. Are there any times of year when there is no water or the supply is interrupted? What happens then? Do people have other sources to use?

21. Are latrines available for use by all households? If not, what are the typical sanitary arrangements? Do people practice open defecation?

22. How and where is household wastewater removed? Is it treated?

23. How is household waste disposed of? E.g. closed waste bins, on the ground. Where is it taken? Is it treated?

OBSERVATIONS AND PHOTOS:

Could the team please note the following based on their visual observations of the village:

- Are livestock and domestic animals kept in close proximity to the domestic dwelling?
- Are rodents or evidence of the presence of rodents present in the village?
- Are piles of rubbish present in the village?
- Is stagnant water present in the village?
- Could the team please take photos of any health care facilities, water sources and sanitation facilities as well as general photos of the village.

FOCUS GROUP DISCUSSION – WOMEN

Note to team: Please note down the following in your note book

1. Date:
2. Name of Settlement/Commune/ village
3. Names of Participants: *(capture using an attendance register)*
4. Names of Team members conducting the discussion

Introduce yourselves and the project and explain the purpose of the inquiry. Explain that you are carrying out a survey in the community as part of the plans for the Eni Project.

OBJECTIVES:

- To provide information about the Project activities;
- To gather socio-economic information about the village. Specifically information about land ownership/use, village leadership, economic/livelihoods, education, health, heritage, policing and crime;
- To allow women to raise concerns/ questions about the Project; and
- To provide responses to concerns and questions, where possible. Where not possible to explore further as part of ESIA.

LAND TENURE AND LAND USE

1. Who is responsible for assigning/allocation of land in the village?

2. What process does a person need to follow in order to acquire land in your village?

3. What process do women have to follow when they want to acquire land in the village? *(Prompt regarding whether women can own land or not and the reason why women cannot own land, if this is the case).*

4. What are the main land uses in your village? *(Try to ascertain the percentage of land used for infrastructure, businesses, grazing and crop farming).*

VILLAGE LEADERSHIP

5. How many (percentage/ proportion) women form part of the village leadership? If yes, how did they get the position, (elected or selected?) If no, why not?

6. How many women are involved in politics in the village? *(Prompt around the exclusion or exclusion of women in politics).*

EDUCATION

7. What are the education levels in the village?

8. What is the enrolment rate of pupils at schools? What might the reason be for this? *(girls vs boys)*

9. What proportion of the children attend school? For those who do not, why don't they go to school? *(girls vs boys)*

10. Is there a difference between the percentage of boys and girls at school? If yes, what might the reason be for this?

11. What is drop-out rate of pupils from the village? *(girls vs boys)*

12. What are the differences between men and women education levels?

ECONOMIC/LIVELIHOODS ACTIVITIES

13. What are the main economic activities undertaken in the village? *(This could refer to subsistence fishing/ farming, formal/ informal employment).*

14. What are the secondary or alternative sources of income *(besides the one mentioned above)?*

15. Rank economic/ livelihood activities in terms of contribution to household income/ subsistence.

16. For those who are employed who are the main employers in the District?

17. Do many people farm for subsistence purposes, what do you grow, do you sell any of it (what percentage)? *Prompt if this was not covered above*

18. Who are the main bread winners in the village households?

19. Are you able to comment on the income levels of the village? *(Break into no cash income, low, medium, high – define these categories and give approx. %).*

20. What are the differences between men and women's income levels? *(Do men earn more than women?).*

21. What do most people spend their incomes on and where? *Prompt for differences between men's and women's spending patterns, and where possible, rank the spending.*

FARMING ACTIVITIES

22. Do many people farm for subsistence purposes, what do you grow, do you sell any of it (what percentage)? *Prompt if this was not covered above*

23. What percentage of the village depends solely on agriculture?

24. What do you farm *(crops or livestock)?*

25. Farming calendar: When are the various farming activities undertaken in the year *(e.g. ploughing, planting, harvesting)*

26. Is the land left fallow, when? How has this cycle changed over time?

27. Has the yield changed over the past 10 years? How?

28. What percentage of the crops produced/ livestock breed do you sell and what percentage do you consume?

29. Where do you keep your livestock? Where do you graze them? *(Prompt about problems surrounding the availability of grazing land, water, immunisations, etc)*

30. How and where do you sell your produce?

31. How much do you sell your produce for? *(determine cost per weight)*

32. Who is involved in farming activities *(e.g., the whole family, men, women, children, hired labour)*

TRADING

33. What trading activities are practiced in the village? Rank.

34. Where do you trade?

35. What is the distance between your village and the market?

36. What do you sell?

37. Where do you buy your goods? How many times a week/month do you go the buy stock? How much does it you to transport your goods to your storage space/ house before you take it to the market?

38. How do you transport your goods to your trading area/space everyday?

39. How do you determine the selling price of your goods?

40. What are the main constraints for doing business in the area/district?

41. How is the money/profits made from your trading activities spent and is this the main income for your household

HERITAGE

42. What heritage resources (sites/ rituals, tangible/intangible) are found/practiced in your village? *If yes, prompt for the story behind these sites/areas. (Don't over prompt)*

43. Where are these sites/areas situated?

44. How do you think the project will affect these heritage resources?

POLICING AND CRIME

45. How is conflict managed in the villages and districts?

46. What are the common crimes committed in the village? Where is the closest jail situated?

47. How has criminal activity changed over the past 10 years?

48. How many police stations are found in the village?

CONCERNS AND EXPECTATIONS

49. How do you feel about the proposed development? *(positive and concerns)*

50. How do you think the development will affect your lives?

51. How do you propose the potential issues could be avoided or mitigated?

52. Who will be the most directly affected people, by the proposed activities? *(positive and negative)*

53. Are you in support of the proposed activities? Why for yes or no?

54. What can Eni do to enhance the positive impacts of the project which you have mentioned? *(List one by one positive impacts and work through way of enhancing the positives)*

HEALTH QUESTIONS FOR FOCUS GROUP MEETINGS

HEALTH FACILITIES

1. What healthcare facilities are there in the village? Who uses them?

2. If facilities are not in the village where are the nearest facilities that are used by the community? How far (time and distance) do people have to travel to get to them?

3. Why do people chose to use these facilities over others in the area? Cost? quality of service etc?

4. Do people prefer to use traditional medicine over 'western' medicine? If so for what health concerns? And Why?

5. What types of traditional remedies are used? (e.g. herbal medicines and preparations; remedies such as massage, acupuncture). Where do people in this community go to receive this treatment?

6. Are there any health awareness/ education campaigns being run in this village or this area that you know of? What do they cover?

HEALTH PROFILE

7. In general, how old are women and men when they die?

8. What are the most common causes of death for men and women? Why do you think they are the most common?

9. What are the most common illnesses and diseases in a) men, b)women and c) children?

10. Who are the most vulnerable in the community in terms of poor health?

11. Is smoking, drinking or drug use within communities common? Which communities eg towns etc? Amongst what groups (age, gender)?

12. Do people have easy access to contraception (i.e. condoms)? Is it common for people to use contraception?

13. Are there transactional sex workers present in the region? If so where? What is done to control risks associated with this activity?

14. Does anyone in this community or neighbouring communities suffer from HIV/AIDS? Do you know how HIV/AIDS is spread? *(work with the local*

consultants to find an appropriate way to ask if People in the area have HIV/AIDS? If people are aware of how it is transmitted and if there is any stigma around people living with HIV/AIDS)

15. What does a typical diet consists of in your community? And how does this change during the year?

COMMUNITY SAFETY AND SECURITY

16. What are the main risks in terms of community safety (e.g. bushfires, road traffic accidents, dangerous fauna, uneven terrain etc)?

17. Are there any issues of public and/or domestic violence in the community? What is the nature and causes of the violence?

18. What are the main security issues in the community (e.g. presence of bandits, etc)?

WATER AND SANITATION

19. What are the main sources of water for drinking, cooking, bathing and sanitation? (e.g. borehole, surface water supply, spring-fed).

20. Are there any times of year when there is no water or the supply is interrupted? What happens then? Do people have other sources to use?

21. Are latrines available for use by all households? If not, what are the typical sanitary arrangements? Do people practice open defecation?

22. How and where is household wastewater removed? Is it treated?

23. How is household waste disposed of? E.g. closed waste bins, on the ground. Where is it taken? Is it treated?

WOMEN'S HEALTH

24. Are there any antenatal care services in the project's area other than in the healthcare facilities mentioned previously? Where?

25. Do pregnant women attend antenatal care services? How often?

26. In general are more babies born at home than in a clinic or other medical facility? Why?

OBSERVATIONS AND PHOTOS:

Could the team please note the following based on their visual observations of the village:

- Are livestock and domestic animals kept in close proximity to the domestic dwelling?
- Are rodents or evidence of the presence of rodents present in the village?
- Are piles of rubbish present in the village?
- Is stagnant water present in the village?
- Could the team please take photos of any health care facilities, water sources and sanitation facilities as well as general photos of the village.
  55.

Note to Team: *some of the information required for this can be gathered through general observation.* ***Where ever possible take pictures of the village infrastructure, such as sanitation facilities, dumping area, water pumps, etc.***
Not much prompting is required when filling this out, so it should not take long to fill out. That being said, don't rush informants if they are giving you more information than you need, as some of what they tell you can assist the baseline study at a later date.

Questions	Categories	Responses and Other Comments
GENERAL		
Name of the Village:		
District:		
Village Chief:		
Distance from ORF: ***(this can be filled out later using Google Earth)***		
Distance from nearest market or other economic hub:		
Village History: *How long has the community been living in this area? Why did they move here*?		

Questions	Categories	Responses and Other Comments			
DEMOGRAPHIC PROFILE					
Population Size: *(Prompt regarding population growth rate over the past 5 years and the reasons for growth or decline)*					
Number of households:					
Gender composition: ***(try and get a feel of male:female ratio)***					
Main ethnic groups:					
Main languages *(spoken, written & read):*					
Primary economic activities undertaken in the Village ***(how do people make a living, what are they growing/ trading/ catching)***					
Age distribution *(prompt around whether are lots of old people in the village, children, are there specific age groups "missing" from the village?):*	**0-5 years old**	**6-18 years old**	**19-35 years old**	**36-59 years old**	**60 + years old**
Main religions: *(Prompt regarding traditional religious practises)*					

Questions	Categories	Responses and Other Comments	
Education Levels: (%) *(try to get an idea of the general education levels in the village)*	**Primary School:**		
	Secondary:		
	High School:		
	Tertiary Education:		
	Illiterate:		
Level of Unemployment: (%)	**Employed:**	**Unemployed:**	**Economically Inactive:**
Skills Levels: (%)	**Highly Skilled:**	**Semi-Skilled:**	**Unskilled:**
Tourism Attractions: *(are there any tourism attractions in the village?)*			
Heritage sites/resources near/ at the village:			

Questions	Categories	Responses and Other Comments								
Social Grants: *(number of people dependent on and type of grants received)*	**Old age pension:**	**Disability grant:**		**Child support grant:**		**Multiple grant:**		**Other:**		
GENERAL INFRASTRUCTURE & SERVICES										
No. of Schools in the Village:	**Primary**	**Secondary**				**High School**				
No. of Health Facilities:	**Hospitals:**	**Clinics:**		**Health Posts:**		**Health Centres:**		**Mobile Clinics:**		**Other:**
Road Infrastructure:	**Gravel:**	**Paved**				**Other:**				
Primary Means of Transportation:	**Bicycles:**	**Motorbikes:**		**Taxis:**		**Buses:**		**Railway:**	**Walking:**	**Trucks:**
Sanitation Facilities:	**Formal system:**	**Pit Latrines:**			**VIP Latrines:**			**No Toilets:**		**Other:**
Waste Management:	**Collected:**	**Dumpsite outside village:**			**Burnt:**			**Roadside Dump:**		**Other:**

Questions	Categories	Responses and Other Comments					
Energy Sources:	**Electricity:**	**Gas:**	**Firewood:**	**Charcoal:**	**Solar Power:**	**Ethanol/ Biomass:**	**Paraffin:**
Water Sources:	**Piped inside house:**	**Piped outside house:**	**Communal Taps:**	**Hand Pumps**	**Boreholes:**	**Rivers/Streams:**	**Rain water:**
	Water tanks:	**Water Vendors:**	**Wells:**	**Other**			
Types of Housing:	**Brick houses:**	**Mud houses:**	**Corrugated Iron houses:**	**Traditional houses:**	**Shacks:**	**Other:**	

Appendix F

Structured Questionnaire for KII's

What healthcare facilities are there in the district?

What challenges does the healthcare sector face in this district eg funding, lack of resources etc?

What health care plans, programmes and activities are undertaken and planned in the district?

How has health in the district changed in the last 5 years, why do you think this is?

KII EDUCATION PRACTITIONER

Note to team: Please note down the following in your note book

1. Date
2. Venue
3. Names of Participants
4. Names of Team members conducting the discussion

Introduce yourselves and the project and explain the purpose of the inquiry. Explain that you are carrying out a survey in the community as part of the plans for the Eni Project.

OBJECTIVES:

- To provide information about the Project activities;
- To gather socio-economic information about the village. Specifically information about education system;
- To allow informant to raise concerns/ questions about the Project; and
- To provide responses to concerns and questions, where possible. Where not possible to explore further as part of ESIA.

GENERAL

1. How many schools are found in the area?

2. How many of the schools are public and private schools? *(Get a break down of each type of school (primary =xxx, secondary =xxx, etc).*

3. How are the public schools funded?

4. How many terms are there in a school year?

5. What are the main problems/concerns about education?

STATUS OF SCHOOLS

1. How many children are currently enrolled at the schools?

2. What are the main subjects taught at the school?

3. What is the availability of learning materials at the schools?

4. How much are the school fees? Are the fees a once off payment or are they paid per term?

5. What is the current teacher/pupil ratio? *(Why high/low).*

6. What are the general conditions of the school infrastructure in the area?

ABOUT THE PUPILS

1. Approximately, what proportion of the population is literate/ illiterate? *If possible, break into male and female and age groups.*

2. What is the average level of education attained by the people in the village?

3. What proportion of the children in the area attend school? *(Prompt about the reasons of low/high attendance)*

4. Is there a difference between the attendance rates of boys vs girls, why?

5. What is the rate of absenteeism? What are the main causes of high/low absenteeism? *(Prompt about absenteeism between boys and girls).*

6. What is the drop-out rate of the pupils?

7. What is the drop-out rate of between boys and girls? Why is it higher for girls/boys?

8. What is the highest Grade children have to reach in order to qualify for tertiary education?

9. Where do the children taught at the school come from? *(Try to get an idea of how far these children have to travel and how they get to school if they are not leaving with relatives or in a boarding house).*

10. Where are the children from outside the village housed? Are there any boarding facilities?) If there are, where are they located? What are their conditions *(in terms of cleanliness, lighting, safety, etc)?*

11. Do many children from the village attend school else where? Where and why?

CONCERNS AND EXPECTATIONS

12. How do you feel about the proposed development? *(positive and concerns)*

13. How do you think the development will affect your lives?

14. How do you propose the potential issues could be avoided or mitigated?

15. Who will be the most directly affected people, by the proposed activities? *(Positive and negative)*

16. Are you in support of the proposed activities? Why for yes or no?

17. What can Eni do to enhance the positive impacts of the project which you have mentioned? *(List one by one positive impacts and work through way of enhancing the positives)*

KII HEALTHCARE PROFESSIONALS

Note to team: Please note down the following in your note book

1. Date
2. Name of Facility:
3. Closest Village:
4. Names of Participants
5. Names of Team members conducting the discussion

Introduce yourselves and the project and explain the purpose of the inquiry. Explain that you are carrying out a survey in the community as part of the plans for the Eni Project.

OBJECTIVES:

- To provide information about the Project activities;
- To gather socio-economic information about the village. Specifically information about status/conditions of the medical services as well as illnesses and availability treatment;
- To allow informant to raise concerns/ questions about the Project; and
- To provide responses to concerns and questions, where possible. Where not possible to explore further as part of ESIA.

GOVERNMENT POLICY/NGO AID

1. Which NGOs or other organisations are currently active in the area to improve health conditions?

2. What are the health projects supported by NGOs in the area? Are there any donor programs relating to health in the project area?

3. Are there any additional NGO health programmes in the area? Are any planned for the future?

4. Are there any Government health programmes in the area? What are these and what do they cover? What success have they had?

5. Are there any Health Plans for this area? What do these plans cover? Aims, objectives, outcomes etc?

HEALTH FACILITIES

6. Does the Ministry of Health have standards regarding health infrastructure (e.g. number of hospitals per districts, number of health centres per chiefdoms, number of physicians per districts / chiefdoms etc)?

7. What healthcare facilities are available for communities (i.e. first aid post, clinic, hospital)?

8. What types of services do they provide (traditional healing, treatment, vaccinations, check-ups, surgery, HIV-AIDS testing, ante-natal, child birth, etc)?

9. Where are they located? How far (time and distance) do people have to travel to get to them?

10. Does the clinic have access to an ambulance or other vehicle to transport patients?

11. How many people does the clinic/health facility serve?

12. What is the condition of the health facility? Is it supplied with basic utilities (running water, electricity, sanitation e.g. septic tank)? How is it kept clean?

13. What are the arrangements for the safe and effective supply, storage and prescription of pharmaceutical products (medicines or drugs)? How does the clinic ensure they are of good quality (not counterfeit)? Can they be stored in a controlled climate and locked for controlled access?

14. What are the arrangements for obtaining non-pharmaceutical medical supplies including wound dressings, swabs, sterilisation solutions? Is there an adequate supply to meet existing needs?

15. What (if any) types of medical devices are available? E.g. thermometers, syringes, stethoscopes, weighing equipment (scales), x-ray equipment, mobility aids, etc.

16. Do people have to pay for consultations and medication? Are there any people who cannot afford healthcare services? How many and who are these people? How do they address their healthcare needs? Is healthcare provided free to any groups (e.g. children <5 years of age and pregnant/nursing mothers)?

17. What challenges exist in the healthcare system? What can be done to address them?

18. Have there been any recent changes in the health care structure?

19. Have there been any changes in the level and/or quality of services? If yes, what is the reason for this?

20. Are there any planned changes to health care?

21. How do you record information on diseases and health conditions of patients? Do you have any statistics on health care in this area that you could share?

HEALTH PRACTITIONERS

22. Describe the typical training of the medical staff in the facility. What (if any) additional training and competency is needed?

23. What is the ratio of healthcare staff per population number? Has this changed i.e. has there been an increase in the number of people using the service?

24. Do existing services meet demand?

TRADITIONAL MEDICINE

25. Do people use traditional medicine or visit traditional healers? Is this form of medicine/practitioner preferred over 'western' medicine?

26. What types of therapy are used? (e.g. herbal medicines and preparations; remedies such as massage, acupuncture). Where do people in this community go to receive this treatment?

LIFESTYLE INDICATORS

27. Are there any antenatal care services in the project's area other than in the healthcare facilities mentioned previously? Where? What are the distances from the project's area?

28. What is the level of care provided to pregnant and nursing mothers?

29. Do pregnant women attend antenatal care services? How often?

30. In general are more babies born at home than in a clinic or other medical facility?

31. If the majority of births are at home what do you think might be some of the main reasons for this (e.g. distance to the nearest health facility, lack of ambulance service, etc)?

COMMUNITY SAFETY AND SECURITY

32. Are there any awareness and education regarding safety hazards and safety risk management in the communities?

33. What are the main risks in terms of community safety (e.g. bushfires, road traffic accidents, dangerous fauna, uneven terrain etc)?

34. Are rail / road traffic incidents and accidents common? Describe the types of incidents that occur.

35. Are there any issues of public and/or domestic violence in the project area? What is the nature of the violence?

36. What do you think might be the main causes of violence? E.g. breakdown in community cohesion, use of alcohol and drugs, mental illness, stress and anxiety, etc.

37. Has the incidence of violent crime declined or increased in the last five years? Why is that?
38. How are acts of violence addressed?

39. What are the main security issues in the project's area (e.g. presence of bandits, farmers and pastoralists from neighbouring countries crossing the borders to utilise better quality agricultural land etc)?

HEALTH PROFILE

40. What is the life expectancy of men and women from birth?

41. What are the most common causes of death for men and women? Why do you think they are the most common? Do you have any statistics for this?

42. What are the most common illnesses and diseases? Are there any differences in age and gender and if so, why? Why do you think these are the most common?

43. Has the disease profile for the area changed in the last 5 years? If so why?

44. What is the infant mortality rate in the project area? What is the maternal mortality (i.e. death of mother during child birth) rate in the project area?

45. What are the most common causes of death in children under the age of 5 years?

46. How effectively are these issues being managed by the existing health care system?

47. Have there been changes in types of illnesses? If so, why do you think this is?

48. Who are the most vulnerable in the community in terms of poor health?

49. Is smoking within communities common? Amongst what groups (age, gender)?

50. Is the drinking of alcohol common? Among what groups (age, gender)?

51. Is drug use common? If so, what types? Amongst what groups (age, gender)?

DISEASES

52. What are the main communicable (infectious) diseases in the project's area (e.g. diarrhoeal diseases, acute respiratory infections (ARIs), tuberculosis etc)?

53. How prevalent is malaria in the project area?

54. Are livestock and domestic animals kept in close proximity to the domestic dwelling? Have there been any cases of livestock-related disease or illness?

55. Is there any knowledge relating to rates or incidents of non-communicable (chronic) diseases in the community? (e.g. heart disease, stroke, cancer, chronic respiratory diseases, obesity and diabetes).

SEXUALLY-TRANSMITTED INFECTIONS (STIS) INCLUDING HIV/AIDS AND HIGH RISK SEXUAL PRACTICES

56. Are Sexually Transmitted Diseases (STDs) common?

57. Which ones are more common (e.g. syphilis, Hepatitis, HIV/AIDS). What is the main reason for their occurrence: drug use, blood transmission, and sexual transmission?

58. What is the prevalence of STDs in the project's area?

59. What is the level of awareness and understanding in the project area about HIV/AIDS, how it is spread and how to protect against acquiring it?

60. Do people have easy access to contraception (i.e. condoms)? Is it common for people to use contraception?

61. Are transactional sex workers reported in the project's area? What is done to control risks associated with this activity? (e.g. education programmes etc).

Appendix g

Stakeholder Register

Stakeholder Identification				
Macro areas	Stkh. ID	Stakeholder name*	Category	
			Category Lev. I	Category Lev. II
Onshore	1	Ministry of Energy & Petroleum	Institutions	Governments and Ministries
Onshore	2	Ministry of Environment, Science, Technology and Innovation	Institutions	Governments and Ministries
Offshore	3	Ministry Of Fisheries And Aquaculture Development	Institutions	Governments and Ministries
Onshore	4	Ministry of Roads and Highways	Institutions	Governments and Ministries
Onshore	5	Environmental Protection Agency	Institutions	Federal – national- state authorities and agencies
Offshore	6	Fisheries Commission	Institutions	Federal – national- state authorities and agencies
Offshore	7	Petroleum Commission	Institutions	National market regulation and competition Authorities

Offshore	8	Ghana National Petroleum Corporation (GNPC)	Institutions	Federal – national- state authorities and agencies
Offshore	9	Ghana National Gas Company	Institutions	Federal – national- state authorities and agencies
Offshore	10	Ghana Maritime Authority	Institutions	Federal – national- state authorities and agencies
Onshore	11	Ghana Ports & Harbour Authority	Institutions	Federal – national- state authorities and agencies
Onshore	12	Ghana Ports & Harbour Authority: Western Region	Institutions	Provincial / regional agency and authorities
Onshore	13	Ghana Tourism Authority	Institutions	Federal – national- state authorities and agencies
Onshore	14	Ghana Museums and Monument Board	Institutions	Federal – national- state authorities and agencies
Onshore	15	Wildlife Division of Forestry Commission	Institutions	Federal – national- state authorities and agencies
Offshore	16	Marine Police	Institutions	Federal – national- state authorities and agencies

Offshore	17	Ghana Navy	Institutions	Federal – national- state authorities and agencies
Onshore	18	Enterprise Development Center (Jubilee & Ministry of Energy)	Institutions	Federal – national- state authorities and agencies
Offshore	19	Marine Fisheries Research Divison	Institutions	Federal – national- state authorities and agencies
Onshore	20	Western Region Administration	Institutions	Provincial / regional agency and authorities
Onshore	21	EPA: Western Region	Institutions	Provincial / regional agency and authorities
Offshore	22	Fisheries Commission - Western Region	Institutions	Provincial / regional agency and authorities
Onshore	23	Western Region Coordinating council (WRCC)	Institutions	Provincial / regional agency and authorities

Onshore	24	Ghana Health Service- Western Region- Regional Health Directorate	Institutions	Provincial / regional agency and authorities
Onshore	25	Ghana Tourism Authority- Western Region	Institutions	Provincial / regional agency and authorities
Onshore	26	Ghana Education Service- Western Region	Institutions	Provincial / regional agency and authorities
Onshore	27	Western Regional House of Chiefs	Institutions	Local agency and authorities
Onshore	28	Jomoro District Assembly	Institutions	Local agency and authorities
Onshore	29	Ellembelle District Assembly	Institutions	Local agency and authorities
Onshore	30	Sekondi Takoradi Metropolitan Assembly	Institutions	Local agency and authorities
Onshore	31	Shama District Assembly	Institutions	Local agency and authorities

Onshore	32	Nzema East District Assembly	Institutions	Local agency and authorities
Onshore	33	Ghana Health Service (Ellembelle)	Institutions	Local agency and authorities
Onshore	34	Ghana Education Service (Ellembelle)	Institutions	Local agency and authorities
Onshore	35	Sanzule Community	Communities	Surrounding communities
Onshore	36	Anochi Community	Communities	Surrounding communities
Onshore	37	Beku Community	Communities	Surrounding communities
Onshore	38	Ngalichi Community	Communities	Surrounding communities
Onshore	39	Ngalikpole Community	Communities	Surrounding communities
Onshore	40	Eikwe Community	Communities	Surrounding communities
Onshore	41	Krisan Community	Communities	Surrounding communities
Onshore	42	Bakanta Community	Communities	Surrounding communities

Onshore	43	Atuabo Community	Communities	Surrounding communities
Onshore	44	Asemde-Sauzo Community	Communities	Surrounding communities
Offshore	45	Fisherman of Shama	Communities	Surrounding communities
Offshore	46	Fisherman of Essiama	Communities	Surrounding communities
Offshore	47	Fisherman of Upper Dixcove	Communities	Surrounding communities
Offshore	48	Fisherman of Upper Axim	Communities	Surrounding communities
Offshore	49	Fisherman of Half Assini	Communities	Surrounding communities
Offshore	50	Fisherman of Sekondi	Communities	Surrounding communities
Offshore	51	National Fisheries Association of Ghana	Civil society	National organizations / NGO / Associations representing specific interests (advocacy groups and pressure groups)

Offshore	52	Ghana National Canoe Fisherman Council	Civil society	National organizations / NGO / Associations representing specific interests (advocacy groups and pressure groups)
Offshore	53	Current Large Marine Ecosystem (GCLME)	Civil society	International research centres
Onshore	54	Ghana Wildlife Society	Civil society	National organizations / NGO / Associations representing specific interests (advocacy groups and pressure groups)
Onshore	55	Ricerca e Cooperazione	Civil society	International organizations / NGO / Associations fort social care, which support development and local projects

Onshore	56	Friends of the Nation (Ghana)	Civil society	National organizations / NGO / Associations fort social care, which support development and local projects
Onshore	57	Conservation Foundation (Ghana)	Civil society	National organizations / NGO / Associations fort social care, which support development and local projects
Onshore	58	Oil Watch Ghana	Civil society	Local media (websites, jourmnals, others)
Offshore	59	Tullow Oil	Contractors, suppliers, business partners and non partners	International oil companies
Offshore	60	Kosmos	Contractors, suppliers, business partners and non partners	International oil companies

ANNEX B – BIOPHYSICAL BASELINE REPORTS

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B. BIOPHYSICAL BASELINE

This Annex provides additional data and details to support the biophysical baseline description contained within Chapter 6 of the ESHIA Report. Please note that additional figures of the sampling locations are contained within Chapter 6 and are additionally supported by maps included in Annex C.

This Annex includes additional information on the following aspects:

- **Atmosphere** including additional description of the local meteorological conditions (wind speed, wind direction, precipitation) as well as data from sampling of air pollutants
- **Onshore geophysical components** including physico-chemical surface water and groundwater sampling results
- **Flora and Fauna** including species

B.1 ATMOSPHERE

This Section is meant to describe the climate, air quality and noise baseline conditions of the Project area, meant as the eni Concession and the abutting communities.

The available data reported in the following Sections is the result of the field surveys performed by ESL in March 2014 and October 2014 at monitoring points shown in Table B.1 and of other literature data available for the Project area. A complete list of reference documents is included in Chapter 14.

Table B.1 Monitored Locations and Parameters with Respective GPS Coordinates

Location	GPS Coordinate	Parameters monitored
Sanzule Town	N 04° 57' 38.1" W 002° 27' 16.9"	CO_2, NO_2 , SO_2, VOCs, TSP, PM_{10} Noise Meteorological data
Ayigbe Town	N 04° 57' 27.8" W 002° 26' 44.5"	CO_2, NO_2, SO_2, VOCs, TSP, PM_{10} Noise Meteorological data
eni Concession [1]	N 04° 57' 52.5" W 002° 27' 05.3"	CO_2, NO_2 , SO_2, , VOCs, TSP, PM_{10} Noise Meteorological data
Note: [1] The monitoring point labeled as eni Concession is located about 1 km south-west of the ORF planned location.		

Source: eni Ghana Offshore Cape Three Points Baseline Studies, Sanzule-Bakanta. Air Quality Technical Report (ESL Consulting, 2014)

B.1.1 Climate and Meteorology

The purpose of this Section is to describe the climate and seasonal distribution of the meteorological parameters of the Project area, including the eni Concession and the abutting communities (Sanzule and Ayigbe Town).

Regional Climate

The regional climate of southwest Ghana is characterized by the Inter Tropical Convergence Zone (ITCZ). As the ITCZ moves seasonally northwards or southward it leads to a change in the air mass that is prevalent in the region. As a result during the boreal winter, climate is dominated by dry and continental air from the Sahara, while the humid and warm maritime air from the Atlantic Ocean is prevalent during the boreal summer. This alternation leads to the existence of two well-marked seasons, dry and wet respectively.

Rainfall values present high inter annual variability with maximum values usually taking place in between May and July and again between September and November. Dry season occurs between December and April.

Temperatures in the region are relatively stable throughout the year with mean temperatures varying between 25 and 27 ºC between November and April and between 21 and 23°C from July to September. Average relative humidity shows a consistent daily variation, reaching 95 percent overnight and decreasing to 70 percent to 80 percent during the day (REF.3).

The prevailing wind is from the south-west. The region experiences few storms and moderate wave action.

Local Climate

A set of primary data, related to air temperature, relative humidity and wind speed and direction, were collected during two field surveys performed in March 2014 (dry season, REF. 1) and October 2014 (wet season, REF. 2). A 24-hr on site monitoring was undertaken; the meteorological station was installed at a height of 4 m above the ground level ensuring free flow of winds, and integrated into the AQM 60 for real-time and per minute measurement. The meteorological data, particularly wind speed, is useful for interpreting the baseline data as well as for prediction analysis.

Furthermore, secondary data, obtained from the onshore meteorology and climatology stations of Takoradi and Axim in the western coast for the period 1999-2008 (REF. 4), was collected to integrate the climate and meteorology baseline with precipitation data.

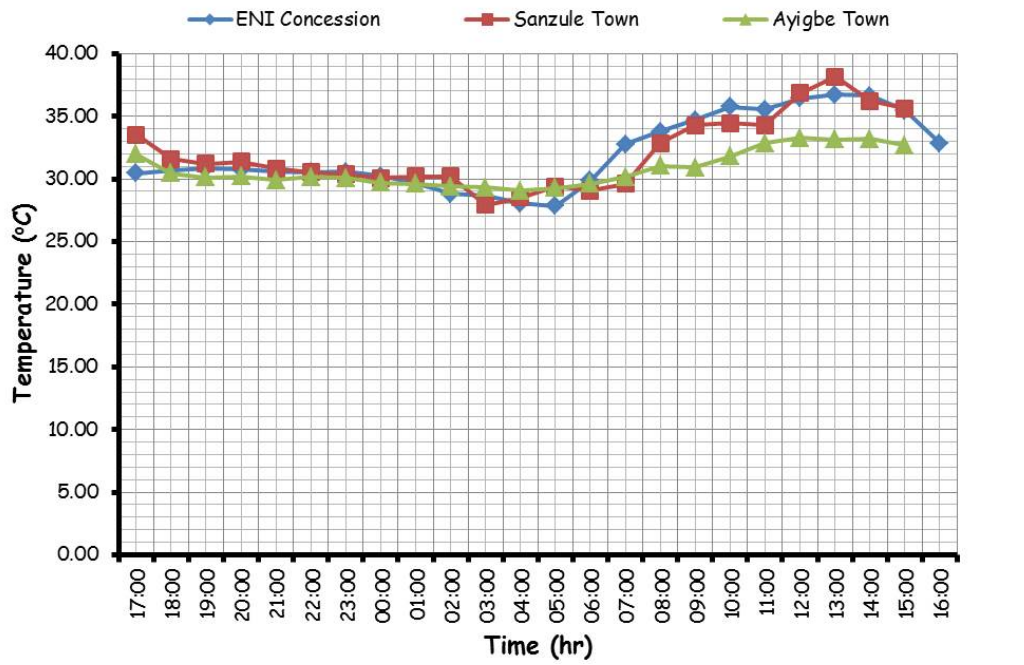
Temperature

During the dry season, the monitored air temperature ranged:

- from 27.49 °C to 38.09 °C, with an average of 32.03±2.90 °C, at the proposed eni Concession site;
- from 27.3 °C to 39.3 °C with an average of 31.97±2.80 °C, at Sanzule Township; and
- from 28.39 °C to 35.99 °C with an average of 30.84±1.53°C, at Ayigbe Town.

The lowest recorded temperature in the area occurred at 06:00 hrs in the Sanzule Township and the highest temperature occurred at 13:00 hrs in the same location. Air temperature showed a gradual increase from 06:00 hrs after which it declined gently from 14:00 hrs to 05:00 hrs (Figure B.1).

Figure B.1 Hourly Temperature Variations during the Dry Season



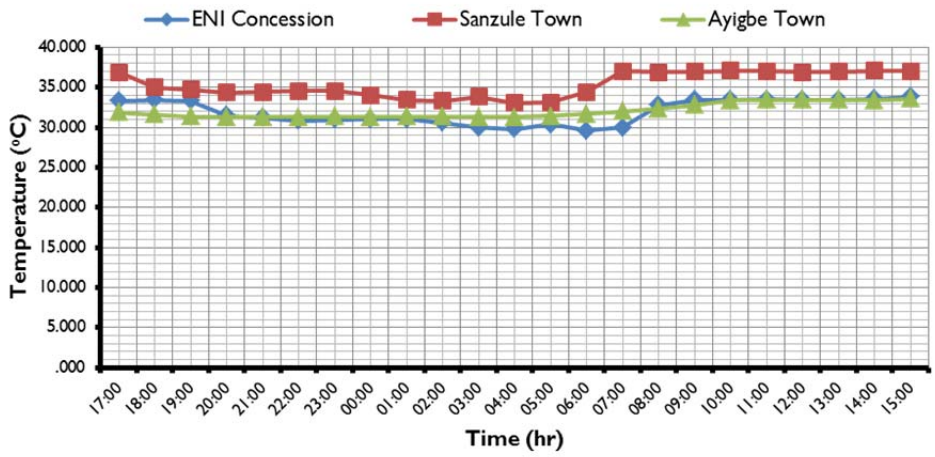
Source: eni Ghana Offshore Cape Three Points Baseline Studies, Sanzule-Bakanta. Air Quality Technical Report – Dry season (ESL Consulting, 2014) (REF. 1).

During the October, 2014 wet season survey the 24-hour monitored air temperature ranged:

- from 28.47 °C to 34.15 °C, with an average of 31.82±1.99 °C, at the eni Concession;
- from 31.97 °C to 37.65 °C with an average of 35.37±2.00 °C, at Sanzule Township;and
- from 30.89 °C to 34.10 °C with an average of 32.06±1.01°C, at Ayigbe Town.

Temperature patterns for all locations indicate steady night-time trends, rising sharply at 7:00 GMT, and then steadily until 17:00 GMT. With the exception of the readings at the eni Concession area, which recorded 24-hour average less than the monitoring value for similar study during the dry season, the wet season temperatures were numerically higher than the dry season values. The temperature distribution for wet season is provided as Figure B.2.

Figure B.2 Hourly Temperature Variations during the Wet Season



Source: eni Ghana Offshore Cape Three Points Baseline Studies, Sanzule-Bakanta. Air Quality Technical Report – Wet season (ESL Consulting, 2014) (REF. 2).

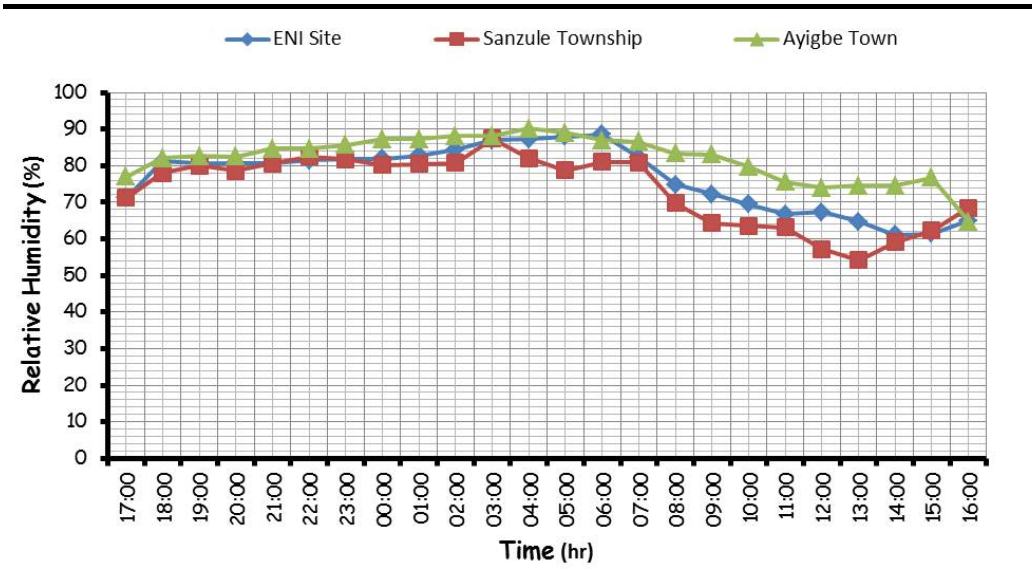
Relative Humidity

The pattern of distribution for relative humidity was converse to that of the air temperature as Figure B.3 for dry season and as Figure B.4 for wet season.

During the dry season, relative humidity throughout the monitored area varied between 52.2-90.6% with an average value of 76.7%, 74.09% and 82.49% for the eni Concession, Sanzule township and Ayigbe town correspondingly. This suggests an eastward increase in daily humidity regimes. Generally, the relative humidity tends to increase overnight reaching 90.6% and decrease to 52% during the day. There was a gradual decrease from about 03:00 to about 16:00 hrs, followed by a gradual increase from 17:00 hrs to 03:00 hrs.

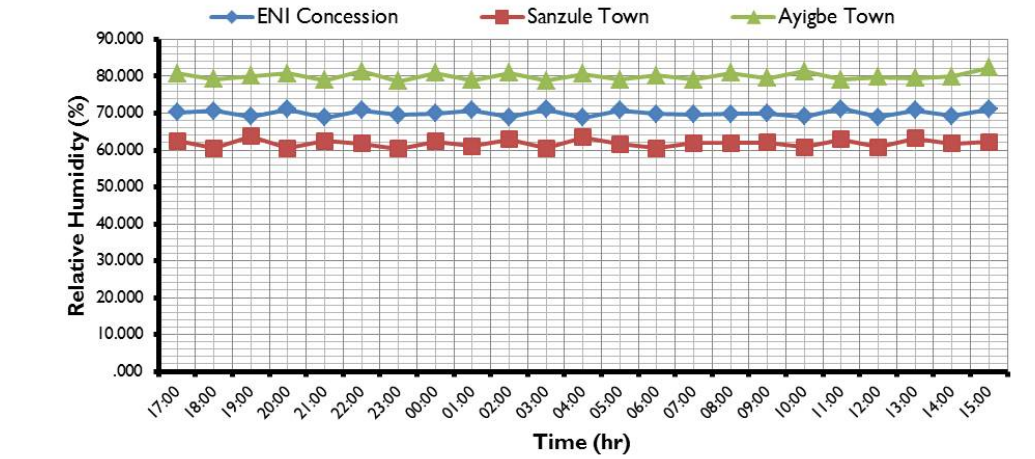
During the wet season, relative humidity throughout the monitored area varied between 57.51 – 85.19% with 24-hour average values of 69.95%, 61.81% and 79.95% for the eni Concession, Sanzule Township, and Ayigbe town respectively. The hourly distributions indicate high relative humidity at Ayigbe town and the least at Sanzule township. Also, narrow and regular fluctuating pattern was observed across all the locations, against a general increase overnight recorded during the dry season.

Figure B.3 Hourly Relative Humidity Variations during the Dry Season



Source: eni Ghana Offshore Cape Three Points Baseline Studies, Sanzule-Bakanta. Air Quality Technical Report – Dry season (ESL Consulting, 2014) (REF. 1).

Figure B.4 Hourly Relative Humidity Variations during the Wet Season



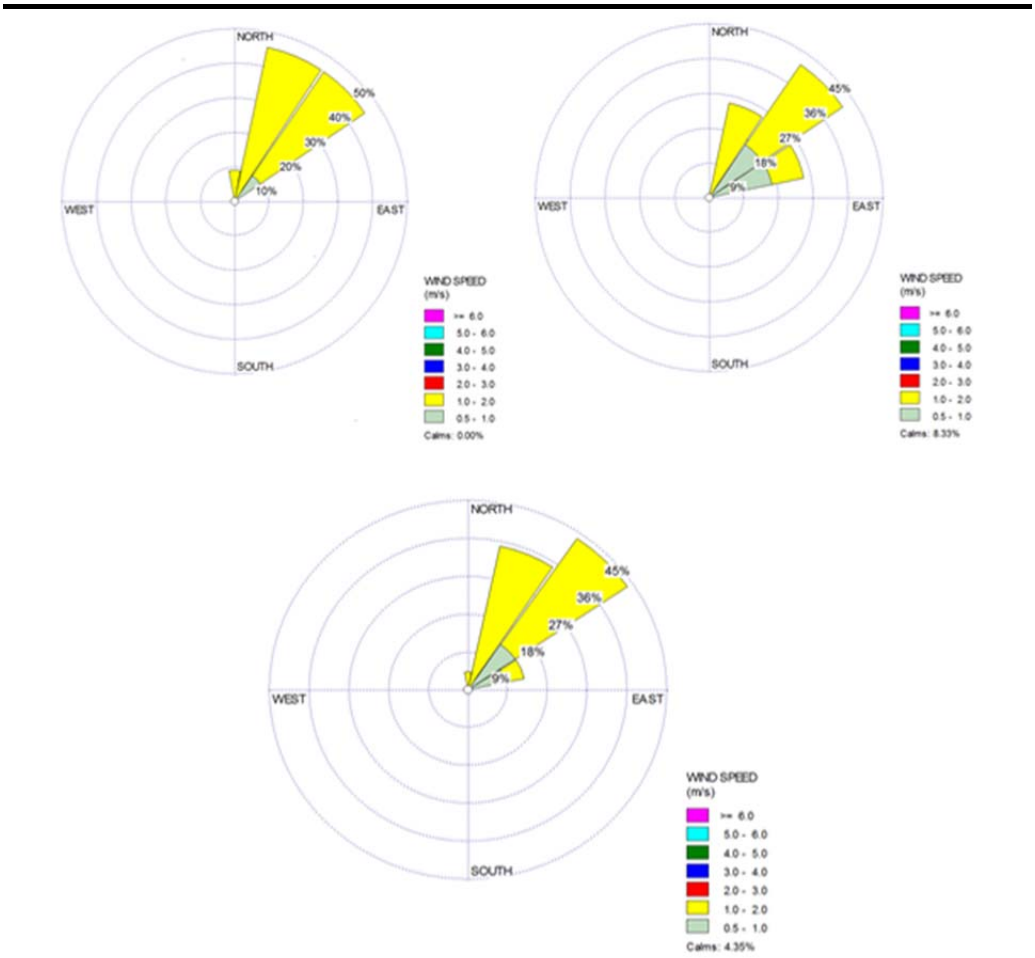
Source: eni Ghana Offshore Cape Three Points Baseline Studies, Sanzule-Bakanta. Air Quality Technical Report – Wet season (ESL Consulting, 2014) (REF. 2).

Wind Regime

The wind rose plots below depict the local meteorological condition for period, daytime and night-time during the dry season (Figure B.5 to Figure B.7) and the wet season (Figure B.8 to Figure B.10).

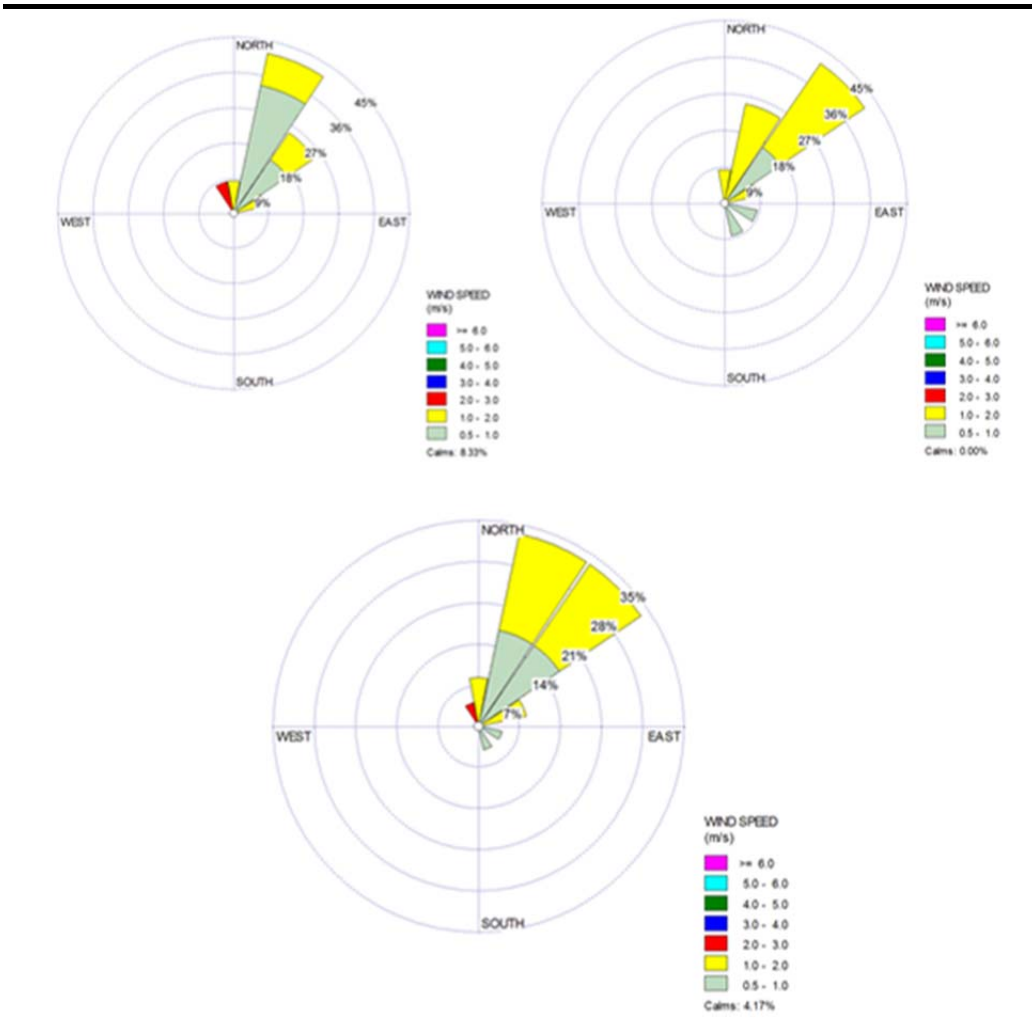
During the dry season, wind directions in all the monitored locations were predominantly from the north-east; at the eni Concession monitoring location also a south-eastern component was recorded, especially during night-time. The wind speed at the two near shore locations (Sanzule Township & Ayigbe Town) recorded a moderate increase from 23:00 hrs to 03:00 hrs; this declined from 04:00 hrs to 06:00 hrs. Generally, the speed of wind in the area is relatively stable. The highest wind speed blew in the southerly direction (175.9°) at about 03:00 hrs. The zero calm recorded for Sanzule township and Ayigbe town day-time indicate a continuous wind blowing for the entire monitoring period. It is therefore expected that any pollutants within the Sanzule township and Ayigbe town are likely to be dissipated to the south-west. Calm night-time windspeeds in the two near-shore locations and day, night and the entire period for the eni Concession were however found to be low. Table B.2 reports the detail of the average wind speed and calm recorded during the field survey performed in March 2014.

Figure B.5 Wind Rose Plot for Day-Time (Left), Night-Time (Right) and 24hour Period (Bottom Middle) for Ayigbe Town during the Dry Season



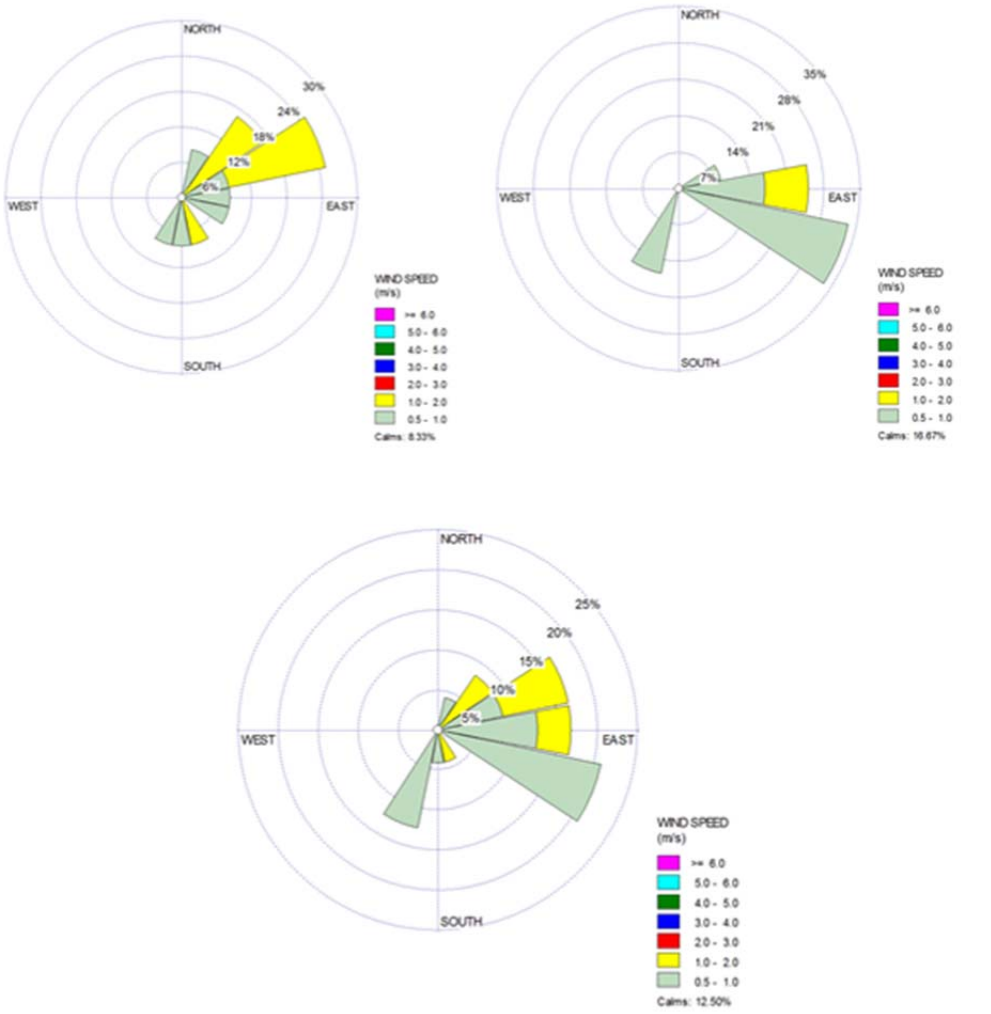
Source: eni Ghana Offshore Cape Three Points Baseline Studies, Sanzule-Bakanta. Air Quality Technical Report – Dry season (ESL Consulting, 2014) (REF. 1).

Figure B.6 Wind Rose Plot For Day-Time (Left), Night-Time (Right) and 24hour Period (Bottom Middle) for Sanzule Town during the Dry Season



Source: eni Ghana Offshore Cape Three Points Baseline Studies, Sanzule-Bakanta. Air Quality Technical Report – Dry season (ESL Consulting, 2014) (REF. 1).

Figure B.7 Wind Rose Plot for Day-Time (Left), Night-Time (Right) and 24hour Period (Bottom Middle) for eni Concession during the Dry Season



Source: eni Ghana Offshore Cape Three Points Baseline Studies, Sanzule-Bakanta. Air Quality Technical Report – Dry season (ESL Consulting, 2014) (REF. 1).

Table B.2 Average Wind Speed and Calm Recorded during the Dry Season at the Monitoring Sites

Location	Time	Average Wind Speed (m/s)	Calm (%)	Wind Direction (Blowing to)
eni Concession	Day-time	0.69	8.33	North-East North-West
	Night-Time	0.47	16.67	North-East
	Overall Period	0.58	12.50	North-East North-West
Sanzule town	Day-time	0.36	0.00	North-East North-West South-East
	Night-Time	0.36	8.33	North-East North-West
	Overall Period	0.86	4.17	North-East North-West South-East
Ayigbe town	Day-time	1.31	0.00	North-East South-East South-West
	Night-Time	0.86	8.33	North-East South-East South-West
	Overall Period	1.07	4.35	North-East South-East South-West

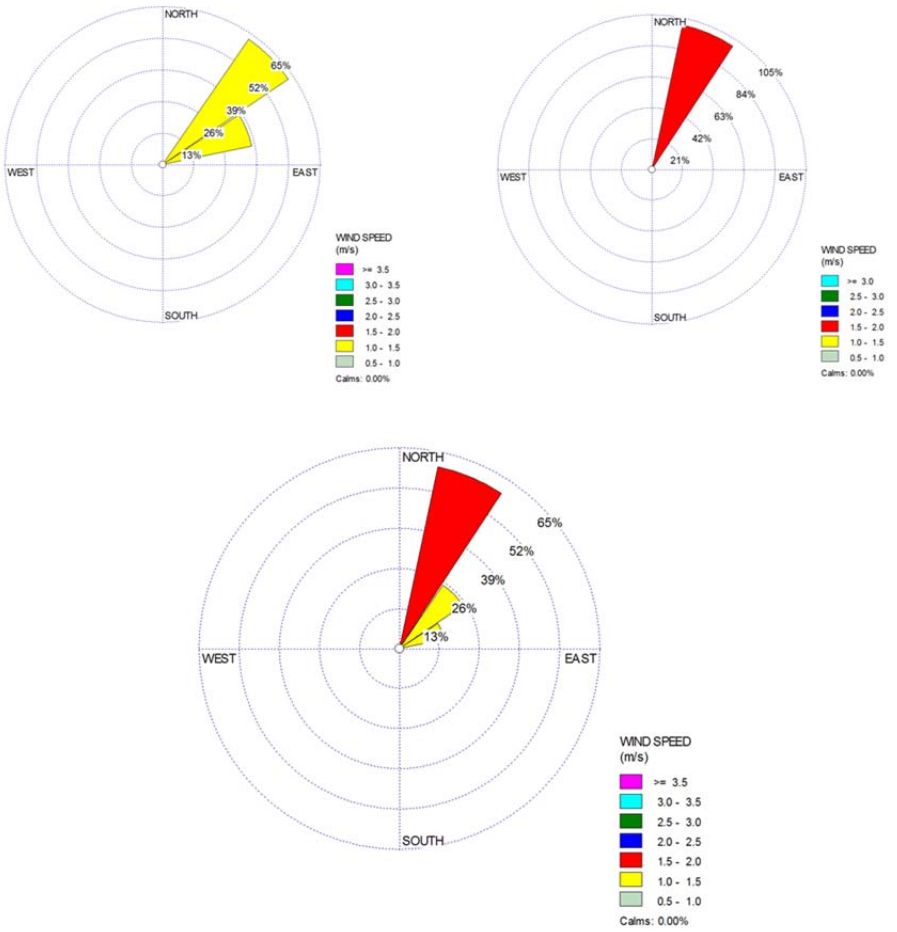
Source: eni Ghana Offshore Cape Three Points Baseline Studies, Sanzule-Bakanta. Air Quality Technical Report – Dry season (ESL Consulting, 2014) (REF. 1).

During the wet season wind directions in all the monitored locations were predominantly in the north-east, showing the same wind behaviour recorded during the dry season.

The plots for Ayigbe town indicate an increase in wind speed from 1 – 1.5 m/s category to 1.5 – 2 m/s during night-time. Wind speed at the Sanzule Township was mostly within the 1 – 1.5 m/s range with slight fluctuations. Wind speed recorded for eni Concession ranged from 0 to 1.5 m/s. Generally, the speed of wind in the area was relatively stable. The highest wind speed blew in the southern direction (175.9^{o}) at about 03:00 hrs. The zero calm recorded for Sanzule town (night-time) and Ayigbe town (throughout the period) indicate a continuous wind blowing for the entire monitoring period. It is therefore expected that air pollutants within the Sanzule town at night and Ayigbe town are likely to be blown away to other places during the zero calm periods.

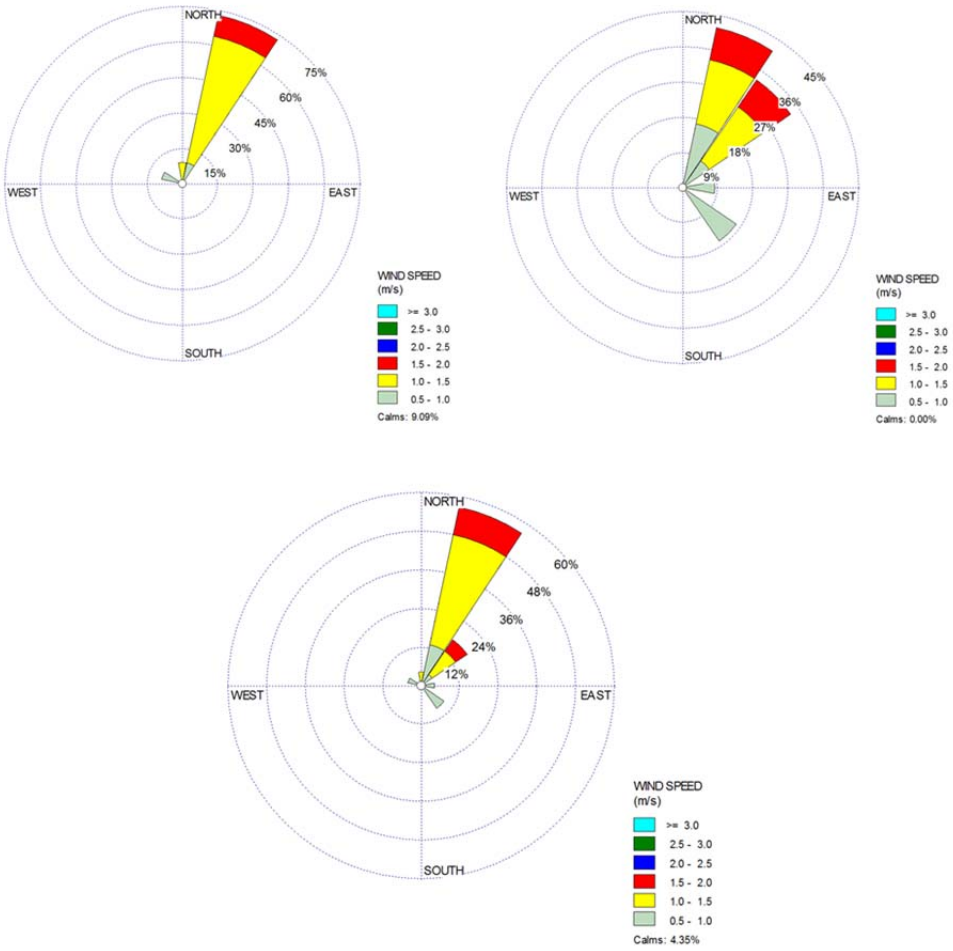
Table B.3 reports the detail of the average wind speed and calm recorded during the field survey performed in October 2014.

Figure B.8 Wind Rose Plot for Day-Time (Left), Night-Time (Right) and 24hour Period (Bottom Middle) for Ayigbe Town during the October, 2014 Wet Season



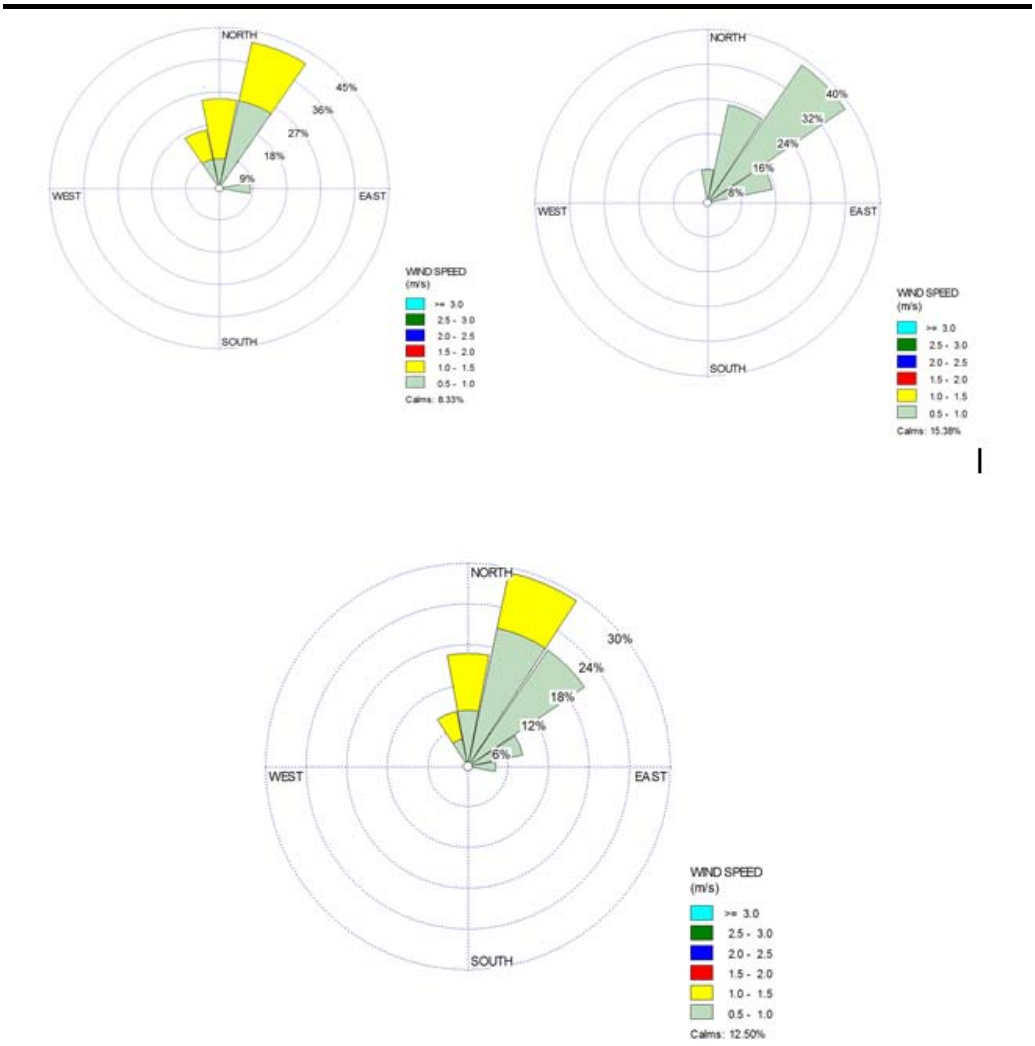
Source: eni Ghana Offshore Cape Three Points Baseline Studies, Sanzule-Bakanta. Air Quality Technical Report – Wet season (ESL Consulting, 2014) (REF. 2).

Figure B.9 Wind Rose Plot for Day-Time (Left), Night-Time (Right) and 24hour Period (Bottom Middle) for Sanzule Town during the October, 2014 Wet Season



Source: eni Ghana Offshore Cape Three Points Baseline Studies, Sanzule-Bakanta. Air Quality Technical Report – Wet season (ESL Consulting, 2014) (REF. 2).

Figure B.10 Wind Rose Plot for Day-Time (Left), Night-Time (Right) and 24hour Period (Bottom Middle) for eni Concession during the October, 2014 Wet Season



Source: eni Ghana Offshore Cape Three Points Baseline Studies, Sanzule-Bakanta. Air Quality Technical Report – Wet season (ESL Consulting, 2014) (REF. 2).

Table B.3 Average Wind Speed and Calm Recorded during the Wet Season at the Monitoring Sites

Location	Time	Average Wind Speed (m/s)	Calm (%)	Wind Direction (Blowing to)
eni Concession	Day-time	0.69	8.33	North-East
	Night-Time	0.44	15.38	North-East
	Overall Period	0.56	12.50	North-East
Sanzule town	Day-time	0.39	9.09	North-East
	Night-Time	0.86	0	North-East
	Overall Period	0.87	4.35	North-East
Ayigbe town	Day-time	1.03	0.00	North-East
	Night-Time	1.54	0.00	North-East
	Overall Period	1.34	0.00	North-East
	Night-Time	0.69	0.00	North-East North-West
	Overall Period	0.73	0.00	North-East North-West South-West

Source: eni Ghana Offshore Cape Three Points Baseline Studies, Sanzule-Bakanta. Air Quality Technical Report – Wet season (ESL Consulting, 2014) (REF. 2).

Precipitation

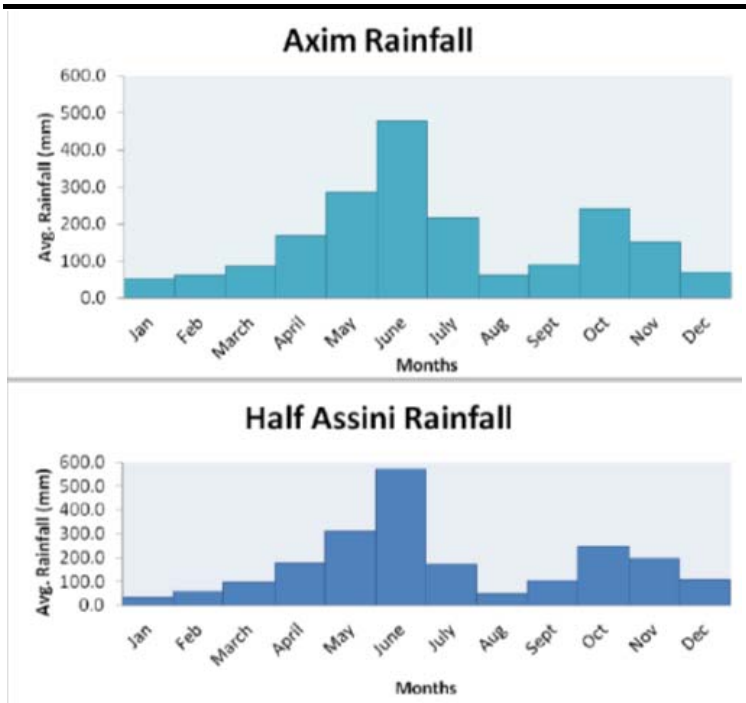
In absence of primary data collected on the field in the surroundings of the Project area, precipitation data were extracted from the onshore meteorology and climatology stations of Half Assini and Axim for the period 2002-2011 (REF. 5), from the stations of Takoradi, located in the western coast, for the period 1999-2008 (REF. 4) and from the Meteocean Design Basis developed by Saipem for the period 1931-2008 (REF. 4).

Generally, in Ghana there are two rainy seasons, the first begins in May and ends in mid-July and the second begins in late August and ends in October. The average annual rainfall is about 730 mm. Considering rainfall throughout the year, all source data show a bimodal pattern that means two peaks of precipitation in May-June and October-November.

Half Assini and Axim experience rainfall throughout the year. The average rainfall recorded in the Project area during the years 2002-2011 ranged from 0 to 1290.2 mm (Figure B.11). During the peak periods, Half Assini records slightly higher rainfall than Axim. Mean peak value

for Half Assini in June is about 568.3 mm and the mean peak value for Axim is about 479.0 mm, normally in June. Both stations experience lowest rainfall in January of 33.9 mm and 50.9 mm for Half Assini and Axim respectively. During the peak periods, Half Assini records slightly higher rainfall than Axim. Mean peak value for Half Assini in June is about 568.3 mm and the mean peak value for Axim is about 479.0 mm, normally in June. Both stations experience lowest rainfall in January of 33.9 mm and 50.9 mm for Half Assini and Axim respectively.

Figure B.11 Axim and Half Assini Average Monthly Rainfall for the Period 2002-2011

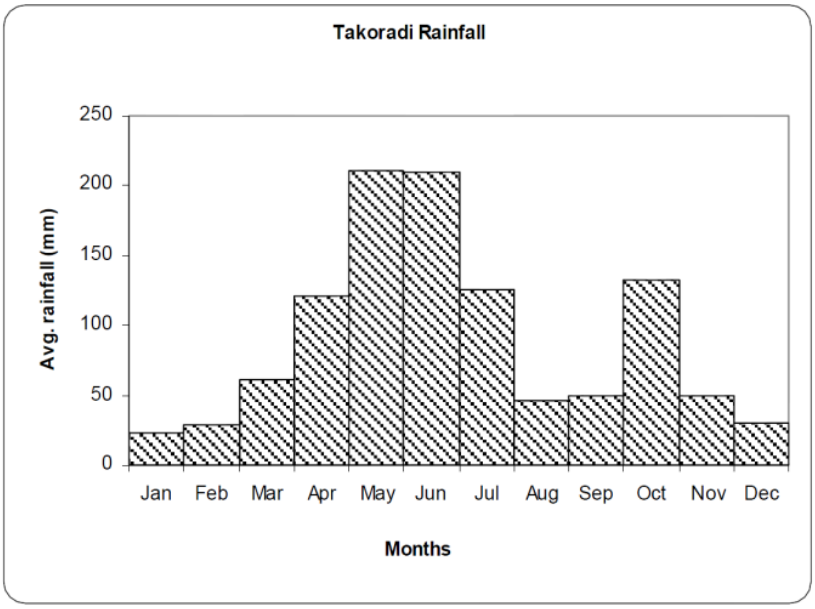


Source: Ghana Oil Services Terminal: Environmental and Social Impact Assessment (Lonrho plc, April 2014) (REF. 5)

A deeper characterization of the precipitation trend over the Project area have been assesses based on the data available for a period of more than 30 years for the Takoradi station. The trend of average monthly rainfall in Takoradi considering data collected from 1999 to 2008 (Figure B.12) and the other that cover the period 1931-1960 (

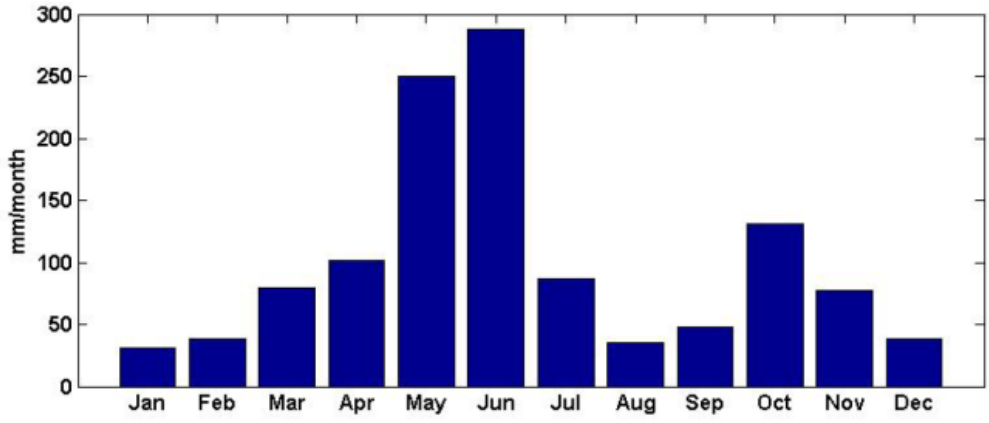
Figure B.13) are similar and confirm the occurrence of two peak periods, with only a slight difference for the peak values.

Figure B.12 Takoradi Average Rainfall for the Period 1999-2008



Source: Ghana OCTP Block Phase 1 ESHIA (ESL Consulting, November 2014) (REF. 4)

Figure B.13 Monthly Cycle of Precipitation at Takoradi for the Period 1931-1960 (Saipem - Meteocean Design Basis)



Source: Ghana OCTP Block Phase 1 ESHIA (ESL Consulting, November 2014) (REF. 4)

B.1.2 Air Quality

The AoI of the Project is characterized by the absence of major industrial activities. As a result most emissions arise from the smoke of cooking fires, generators used for power supply and vegetation clearing to create lands for farming.

Measurements of ambient air quality were carried out using the highly flexible AEROQUAL air quality monitor (AQM 60). The AQM instrument is based on analytic Gas Sensitive Semiconductor (GSS) technology. The air pollutants of interest included those that might be generated by the project or may be formed as a by-product of project emissions including nitrogen dioxide (NO_2)/Carbon dioxide (CO_2), sulfur dioxide (SO_2), volatile organic compounds (VOCs), particulate matter (TSP, & PM_{10}). The ambient concentrations were recorded for every minute for 24-hours, from which hourly concentrations and daily mean concentration were determined.

A summary of the results of the ambient air quality monitoring performed in March 2014 and October 2014, and the respective Ghana EPA guidelines and WB/IFC EHS standards are presented in Table B.4 and Table B.5. The analysis of the results of monitored concentrations for each pollutant of interest is reported in the paragraphs below.

Table B.4 Ambient Air Quality Results - Field Survey March 2014 (Dry Season)

Parameter	24 h Average Concentration			Ghana EPA 24hour time weighted average guideline	IFC/WHO Guideline µg/m³
	eni Concession	Sanzule town	Ayigbe town		
NO_2 (µg/m³)	1.90	1.88	1.38	150	40 (annual) 200 (1-hour)
SO_2 (µg/m³)	**130.34** (b)	**78.65** (b)	**218.69** (a) (b)	150	20 (24-hour) 500 (10-minute)
TSP (µg/m³)	19.04	28.76	25.72	150	NG
PM_{10} (µg/m³)	14.56	20.32	21.28	70	20 (annual) 50 (24-hour)
VOC (ppm)	0.07	0.06	0.05	NG	NG
CO_2 (µg/m³) [1]	523651.25	505007.68	496228.87	NG	NG

Notes:

NG=No Guideline
Values highlighted in **bold** exceeded the (a) Ghana EPA guideline or (b) the IFC standard.
The comparison with IFC/WHO can be done only for SO_2 and PM_{10} for which a 24-hour limit has been set by IFC/WHO.

[1] CO_2 is not considered an air pollutant, and no concentration limit or emission limit for CO_2 is defined by international stadards. Anyway, as greenhouse gas, it was included in the monitoring activity.

Source: eni Ghana Offshore Cape Three Points Baseline Studies, Sanzule-Bakanta. Air Quality Technical Report – Dry season (ESL Consulting, 2014) (REF. 1).

Table B.5 Ambient Air Quality Results - Field Survey October 2014 (Wet Season)

Parameter	24hour Average Concentration			Ghana EPA 24hour time weighted average guideline	IFC/WHO Guideline µg/m³
	eni Concession	Sanzule town	Ayigbe town		
NO_2 (µg/m³)	0.10	0.05	0.08	150	40 (annual) 200 (1-hour)
SO_2 (µg/m³)	19.74	**65.93** (b)	**30.49** (b)	150	20 (24-hour) 500 (10-minute)
TSP (µg/m³)	28.77	81.38	133.35	150	NG
PM_{10} (µg/m³)	18.42	**52.53** (b)	**84.52** (a) (b)	70	20 (annual) 50 (24-hour)
VOC (ppm)	0.07	0.02	0.04	NG	NG
CO_2 (µg/m³) [1]	542621.7	598222.89	585411.4	NG	NG

Notes:

NG=No Guideline
Values highlighted in **bold** exceeded the (a) Ghana EPA guideline or (b) the IFC standard.
The comparison with IFC/WHO can be done only for SO_2 and PM_{10} for which a 24-hour limit has been set by IFC.

[1] CO2 is not considered an air pollutant, and no concentration limit or emission limit for CO2 is defined by international stadards. Anyway, as greenhouse gas, it was included in the monitoring activity.

Source: eni Ghana Offshore Cape Three Points Baseline Studies, Sanzule-Bakanta. Air Quality Technical Report – Wet season (ESL Consulting, 2014) (REF. 2).

Nitrogen Dioxide (NO_2)

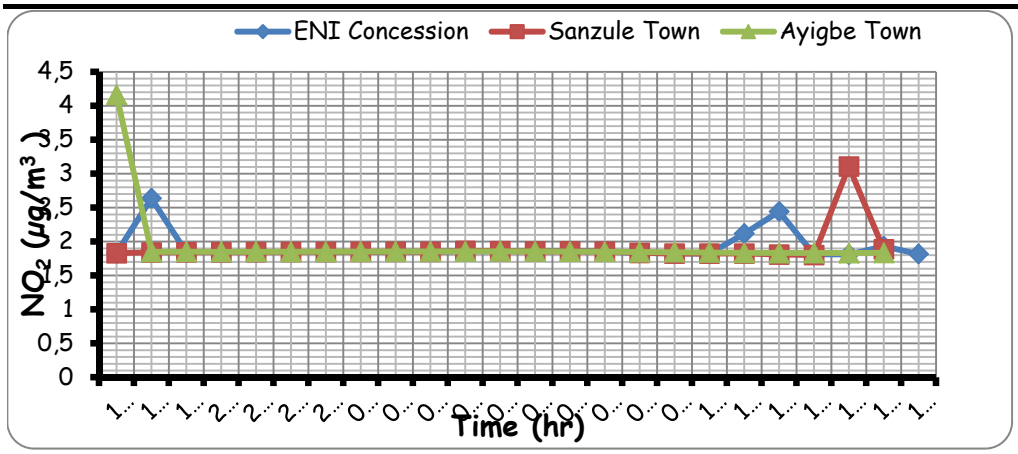
Nitrogen is an essential component of all living matter. However, excessive concentrations of certain nitrogen species including nitrogen dioxide in the atmosphere can lead to significant environmental problems including photochemical smog, global warming, stratospheric ozone depletion and acid formation. Gaseous oxides of nitrogen also exhibit a greenhouse effect. Oxides of nitrogen react with partially oxidized organic matter and sunlight under certain meteorological conditions and series of complex chemical and photochemical reactions to produce substances that affect the eyes, reduce visibility, crop damage and severe adverse human health impacts.

During the monitoring survey performed in March, 2014 (dry season), hourly variations in NO_2 concentrations were observed in the range of 1.81-4.16 µg/m³ with recorded 24hr averages values of 1.88 µg/m³, 1.38 µg/m³, and 1.90 µg/m³ for Sanzule Town, Ayigbe Town and the eni Concession respectively. Highest NO_2 concentration during the March, 2014 monitoring was

recorded at Ayigbe Town at 18:00 GMT. Generally, the NO_2 levels within the studied area were uniformly distributed with isolated peaks at 18:00 and 12:00 GMT.

The hourly variation in NO_2 levels for the three monitored locations recorded in March, 2014 is presented in Figure B.14.

Figure B.14 Variations in Hourly NO_2 Levels in the Monitored Locations during the Field Survey of March 2014 (Dry Season)

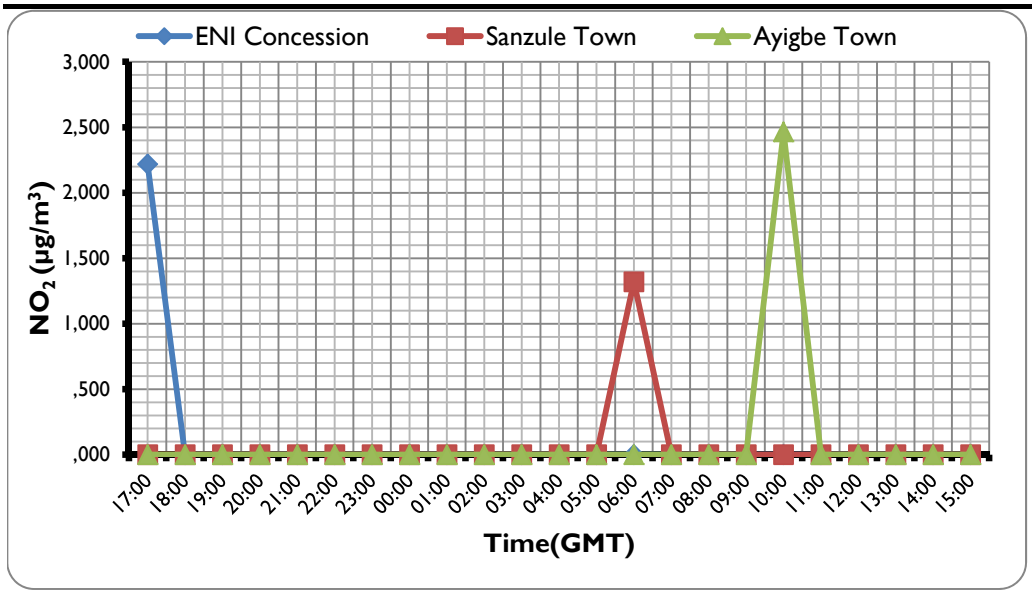


Source: eni Ghana Offshore Cape Three Points Baseline Studies, Sanzule-Bakanta. Air Quality Technical Report – Dry season (ESL Consulting, 2014) (REF. 1).

During the monitoring survey performed in October, 2014 (wet season), variations in NO_2 concentrations for the entire monitoring range from <0.01-2.47 µg/m^3 with recorded 24hr average values of 0.05 µg/m^3, 0.08 µg/m^3, and 0.10 µg/m^3 for Sanzule Town, Ayigbe Town and the eni Concession respectively. Highest NO_2 concentration during the monitoring was recorded at eni Concession at about 17:00 GMT. The hourly averages indicated uniform NO_2 distribution with isolated peaks at 17:00 (eni Concession), 6:00 (Sanzule Town) and 10:00 GMT (Ayigbe Town).

The hourly variation in NO_2 levels for the three monitored locations recorded in October, 2014 is presented in Figure B.15.

Figure B.15 Variations in Hourly NO_2 Levels in the Monitored Locations during the Field Survey of October 2014 (Wet Season)



Source: eni Ghana Offshore Cape Three Points Baseline Studies, Sanzule-Bakanta. Air Quality Technical Report – Wet season (ESL Consulting, 2014) (REF. 2).

Generally, the NO_2 averages for the wet season monitored in October, 2014 were considerably lower than the values recorded at the same locations for the dry season assessment in March.

The recorded values were considerably low comparing to the Ghana EPA permissible limit, (24-hour, 150 µg/m^3), both during dry and wet season. IFC sets an hourly concentration limit for NO_2, instead of a 24-hour limit, thus the comparison have been done between the 1-hour IFC standard (200 µg/m^3) and the hourly monitored data [1]. As described above, the maximum hourly NO_2 concentrations were observed during the dry season and ranged from 1.81 to 4.16 µg/m^3; thus the maximum value is well below the IFC limit.

Given the absence of any major industrial activity in the study area, the apparent low NO_2 levels are expect to reflect background concentrations other than anthropogenic sources.

[1] The hourly average readings for the three monitoring sites for each pollutant are reported in the documents REF. 1 and REF. 2

Sulphur Dioxide (SO_2)

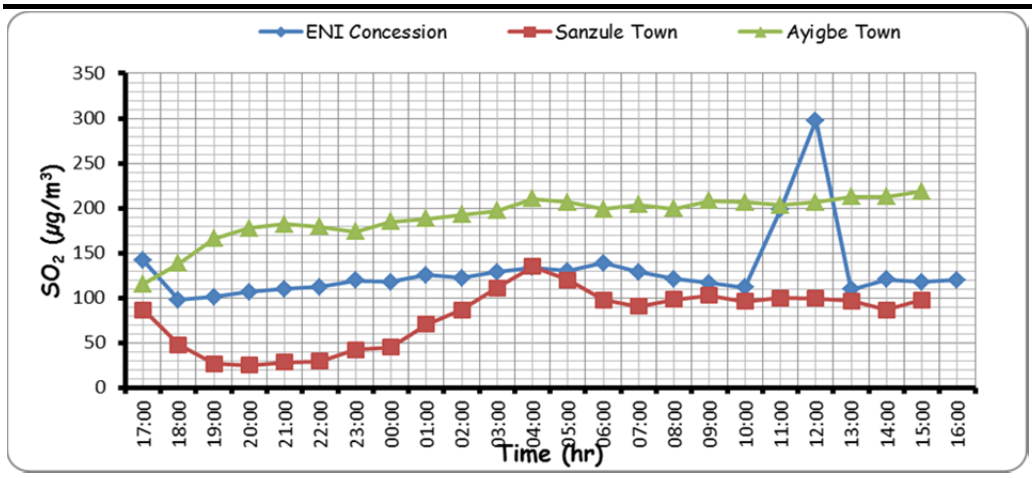
Sulphur dioxide is a major air pollutant, typically found in the combustion products of oil and coal. It is the most corrosive of the sulphur oxides while SO_3 and SO_2 could react with atmospheric water vapour to produce sulphuric acid, which can be precipitated as acid rain. The major adverse health effects associated with exposure to SO_2 pertains to the upper respiratory tract. SO_2 is a respiratory irritant with constriction of the bronchioles occurring with inhalation of SO_2 at 5 ppm or more. The EPA has set a primary SO_2 standard of 1-hour concentrations not to exceed 900 µg/m^3 for industrial areas and 24 hour period not to exceed 150µg/m^3.

During the monitoring survey performed in March, 2014 (dry season), sulphur dioxide (SO_2) levels varied between 24.78 – 297.38 µg/m^3 with 24-hr averages of 78.65 µg/m^3, 218.69 µg/m^3 and 130.34 µg/m^3 for Sanzule Town, Ayibge Town and eni Concession respectively.

Spatial variation analysis revealed highest hourly SO_2 concentrations at the Ayigbe town site, which reflected in the 24-hour average of 218.69 µg/m^3 at the location exceeding the Ghana EPA permissible level of 150 µg/m^3. The IFC 24-hour limit (20 µg/m^3), more stringent than Ghanaian limit, is exceeded at all three monitoring sites.

Elevated levels of SO_2 at that monitored location could be attributed to anthropogenic activities such as smoking of fishor burning of refuse at the monitored location. Generally, SO_2 levels within the Sanzule town ranked lowest, only peaking at 04:00 GMT. The hourly variation in SO_2 levels recorded in March, 2014 for the three monitored locations is presented in Figure B.16.

Figure B.16 Variations in Hourly SO_2 Levels in the Monitored Locations during the Field Survey of March 2014 (Dry Season)



Source: eni Ghana Offshore Cape Three Points Baseline Studies, Sanzule-Bakanta. Air Quality Technical Report – Dry season (ESL Consulting, 2014) (REF. 1).

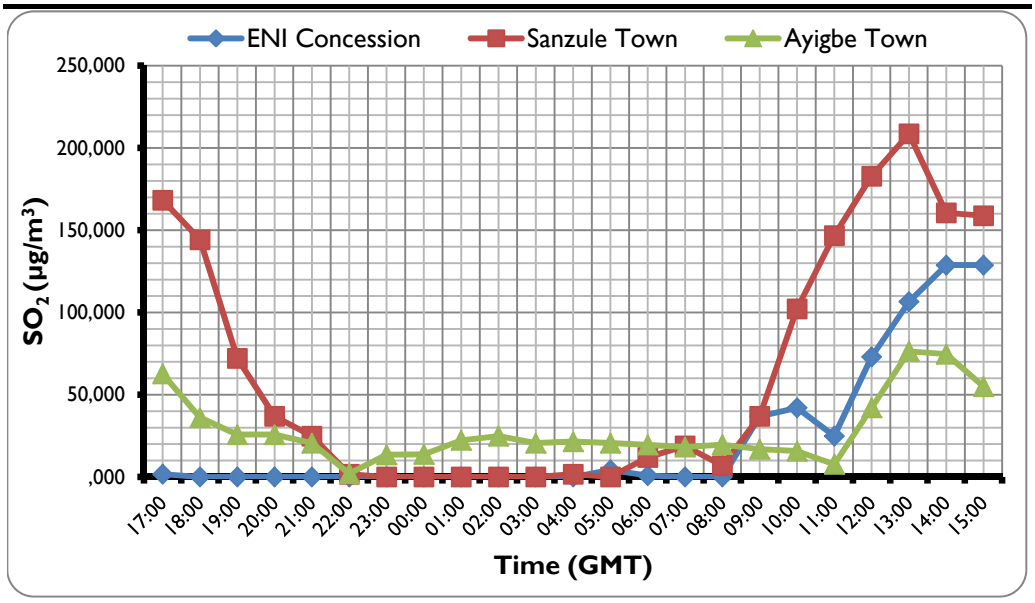
During the monitoring survey performed in October, 2014 (wet season), sulphur dioxide (SO_2) monitored levels for the three locations ranges between 0 – 231.79 µg/m^{3}with 24-hr averages of 65.93 µg/m^3, 30.49 µg/m^3 and 19.74 µg/m^3 for Sanzule Town, Ayibge Town and eni Concession respectively. The highest hourly SO_2 concentration of 208.61 µg/m^3 was recorded at the Sanzule town at 13:00 GMT. Contrary to previous assessment during the dry season, highest daily SO_2 levels were highest at Sanzule town.

Generally, SO_2 levels for all the monitored locations were low from 22:00 GMT to 8:00 GMT as seen in Figure B.17. The recorded 24-hr averages for all the locations were lower than the values obtained for the same locations during the dry season (March, 2014) monitoring: Ayigbe Town (218.69 µg/m^3), Sanzule Town (78.65 µg/m^3) and eni Concession (130.34 µg/m^3).

All the recorded hourly and 24-hourly averages were within the regulatory Ghanaian limits of 900 µg/m^3 and 150 µg/m^3 respectively. The IFC 24-hour limit (20 µg/m^3) is respected only at eni Concession, although the monitored average level is closed to the limit (19.74 µg/m^3).

The hourly variation in SO_2 levels recorded in October, 2014 for the three monitored locations is presented in Figure B.17.

Figure B.17 Variations in Hourly SO_2 Levels in the Monitored Locations during the Field Survey of October 2014 (Wet Season)



Source: eni Ghana Offshore Cape Three Points Baseline Studies, Sanzule-Bakanta. Air Quality Technical Report – Wet season (ESL Consulting, 2014) (REF. 2).

Particulate Matter (TSP & PM_{10})

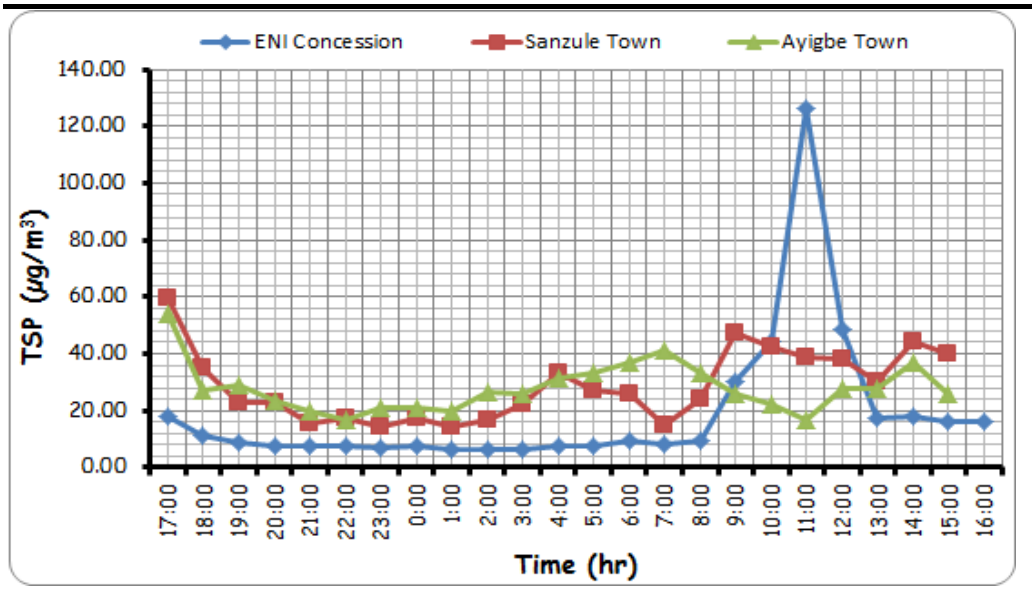
Particulate matter (PM) is a collective term used for every small solid and/or liquid particles found in the atmosphere. Tiny airborne particles or aerosols that are less than 100 micrometers (mm) are termed as total suspended particulate matter (TSP). Coarse particles (PM_{10}) are between 2.5 and 10 microns (µm) in diameter and arise primarily from natural processes, such as wind-blown dust or soil. PM and TSP result from natural or anthropogenic processes including pollen, salt spray, erosion, transportation, fuel combustion in stationary sources, industrial processes, land cleaning, wild fires and solid waste disposal (Vakeva et al. 1999, Adachi and Tainosho 2004). Several factors play vital roles in particulate matter concentrations in a particular location e.g. precipitation, temperature, humidity and wind speed and directions. The main hazard of particulate matter (fine particles) is respiratory irritation while TSP results in dust nuisance from soiling of clothes or building surfaces, reduce visibility and abrasive/ corrosive surface deterioration of materials.

During the field survey performed in March 2014 (dry season), recorded mean TSP values were 28.76 µg/m^3, 25.72 µg/m^3 and 19.04 µg/m^3 for Sanzule township, Ayigbe town and eni Concession respectively. Fluctuation in hourly TSP varied in range 6.24-125.96 µg/m^3 with values well below EPA hourly limits (Figure B.18). The concentration of TSP was low at about 18:00 GMT and increased between 3:00-5:00 GMT. The distribution pattern showed increasing levels between 08:00-11:00 GMT for the eni Concession and Sanzule town. On the other hand the Ayigbe town monitoring location showed decreasing TSP levels within the same period.

The trend observed for TSP was similar to that observed for PM_{10}, thus it is an indication that the PM_{10} is the major factor influencing TSP concentrations. The mean PM_{10} levels were highest at Ayigbe town with 24.1 µg/m^3, followed by Sanzule town and eni Concession with 23.04 µg/m^3 and 14.68 µg/m^3 in that order (Figure B.19).

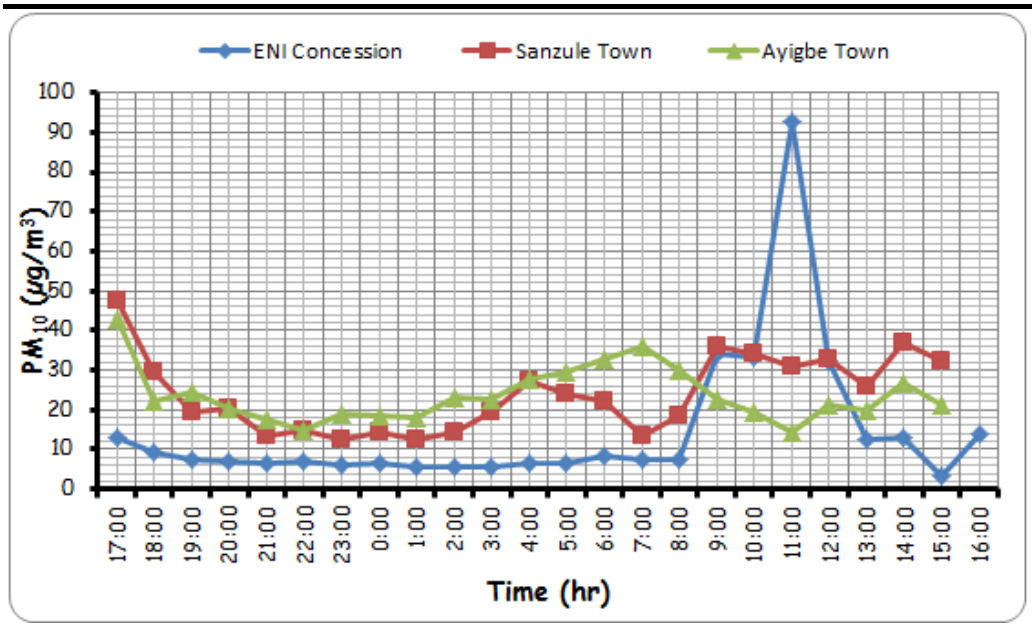
The daily average concentrations were below the Ghana EPA permissible limit, only at Sanzule town an exceedance of the IFC limit for PM_{10} was recorded. The relatively low particulate and suspended matter for the monitored locations may be due to natural phenomenon such as wind-blown dust, although road dust raised by road traffic may primarily correspond to that recorded for the Sanzule town.

Figure B.18 Variations in Hourly TSP Levels in the Monitored Locations during the Field Survey of March 2014 (Dry Season)



Source: eni Ghana Offshore Cape Three Points Baseline Studies, Sanzule-Bakanta. Air Quality Technical Report – Dry season (ESL Consulting, 2014) (REF. 1).

Figure B.19 Variations in hourly PM10 levels in the monitored locations during the field survey of March 2014 (Dry season)



Source: eni Ghana Offshore Cape Three Points Baseline Studies, Sanzule-Bakanta. Air Quality Technical Report – Dry season (ESL Consulting, 2014) (REF. 1).

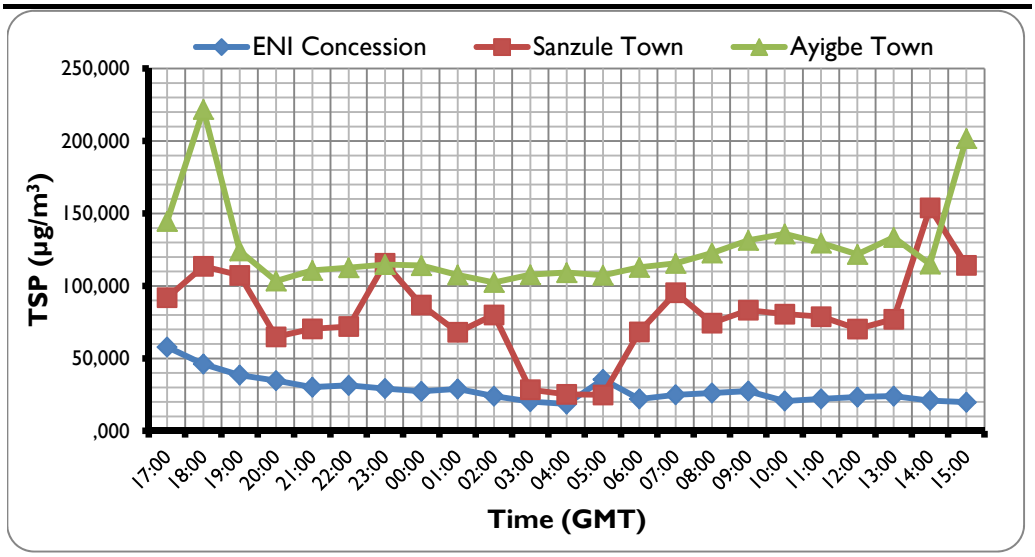
During the field survey performed in October 2014 (wet season), the 24-hour TSP averages were 81.38 µg/m^3, 133.35 µg/m^3 and 28.77 µg/m^3 for Sanzule Town, Ayigbe town and eni Concession respectively. The hourly TSP averages ranged from 24.88 to 153.93 µg/m^3 for the Sanzule Town, 102.43 to 221.82 µg/m^3 for Ayigbe Town and 18.60 to 57.88 µg/m^3 for the eni concession. All the recorded averages were below the EPA regulatory limit of 230 µg/m^3 (Figure B.20).

The hourly TSP trends indicate uniform distribution for the eni Concession, relatively uniform distribution with a couple of spikes at Ayigbe town, and highly fluctuating levels for the Sanzule Township. All the recorded 24-hour averages were higher than the averages for the dry season study. TSP levels in the monitoring locations can be attributed to the sandy nature of the area and smoking activities associated with the routine activities of the community members.

The 24-hour mean PM_{10} levels were 18.42 µg/m^3, 52.53 µg/m^3 and 84.52 µg/m^3 for the eni Concession, Sanzule town and Ayigbe Town respectively. With the exception of Ayigbe town which recorded an average exceeding the EPA guideline limit of 70 µg/m^3, the remaining locations were within the EPA permissible limit (Figure B.21). The IFC limit for PM_{10} (50 µg/m^3) instead was exceeded at Sanzule and Ayigbe town.

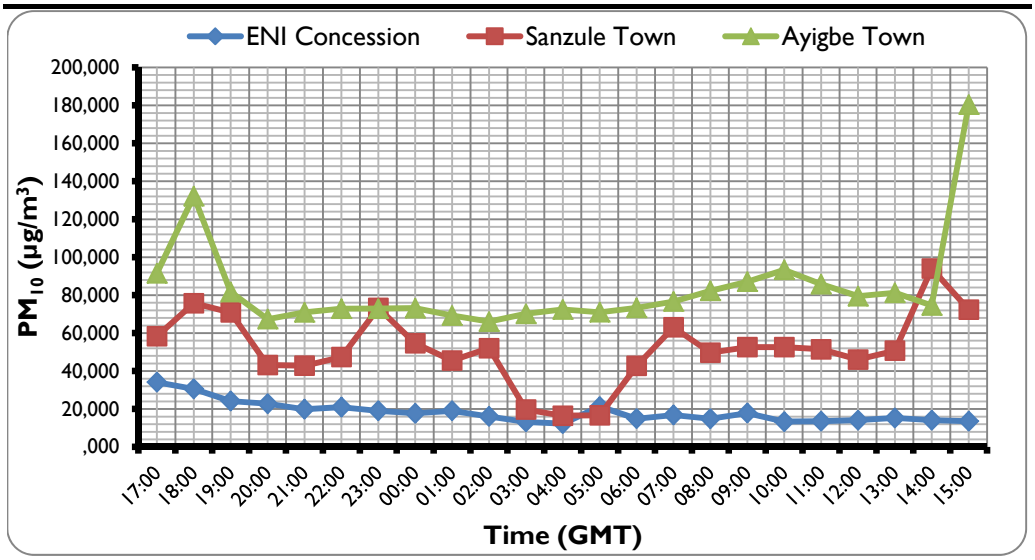
The trend observed for TSP was similar to that observed for PM_{10}, and it is an indication that the PM_{10} is the major contributor to the TSP concentrations within the monitored area. Also, the observed PM_{10} levels were higher for all locations compared to findings from the dry season assessment in March, 2014.

Figure B.20 Variations in Hourly TSP Levels in the Monitored Locations during the Field Survey of October 2014 (Wet Season)



Source: eni Ghana Offshore Cape Three Points Baseline Studies, Sanzule-Bakanta. Air Quality Technical Report – Wet season (ESL Consulting, 2014) (REF. 2).

Figure B.21 Variations in Hourly PM_{10} Levels in the Monitored Locations during the Field Survey of October 2014 (Wet Season)



Source: eni Ghana Offshore Cape Three Points Baseline Studies, Sanzule-Bakanta. Air Quality Technical Report – Wet season (ESL Consulting, 2014) (REF. 2).

Volatile Organic Compounds (VOCs)

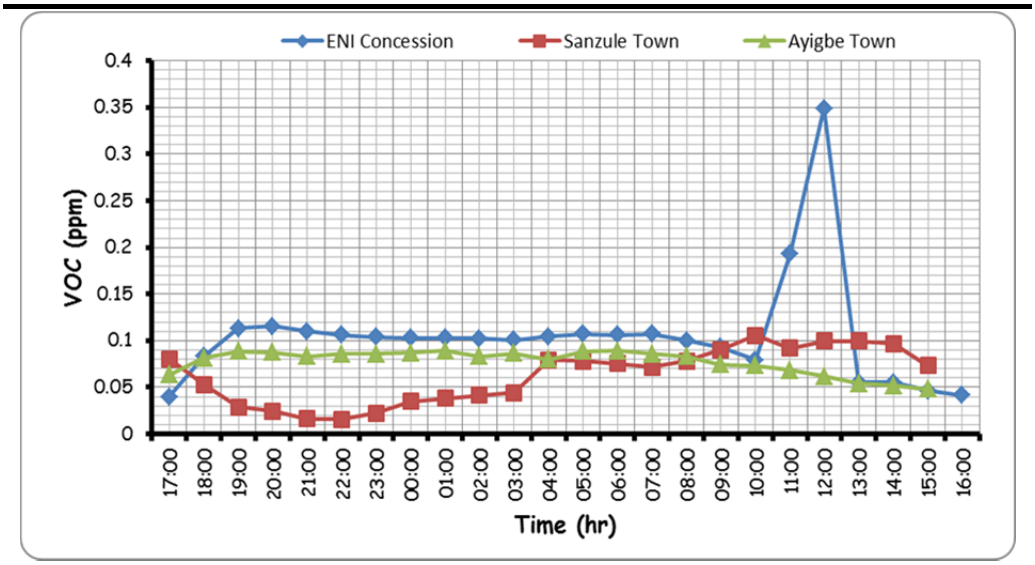
Volatile Organic Compounds (VOCs) are organic trace contaminants that can be readily separated from water into a gas phase by gas stripping. VOCs include benzene, toluene, ethylbenzene and xylene (BTEX).

Most of the VOCs are carcinogenic in nature. World Health Organization considers benzene as a Class 1 carcinogen. The Ghana EPA has no established permissible limit for VOCs.

These compounds are major constituents of petroleum products. VOCs come from either natural (biogenic) or anthropogenic sources. Biogenic VOC sources include coniferous trees and decaying vegetation. Petroleum and automobile emissions can be implicated for contributing massively to ambient volatile organic compound levels.

In March, 2014 (dry season), VOCs levels throughout the study area were low with mean 24-hour values of 0.06 ppm, 0.05 ppm and 0.07 ppm were recorded for Sanzule Township, Ayigbe Town and eni Concession respectively. The hourly concentrations of VOCs were virtually stable in the study area except for recorded levels for the eni Concession which peaked at 12:00 GMT (Figure B.22).

Figure B.22 Variations in Hourly VOCs Levels in the Monitored Locations during the Field Survey of March 2014 (Dry Season)

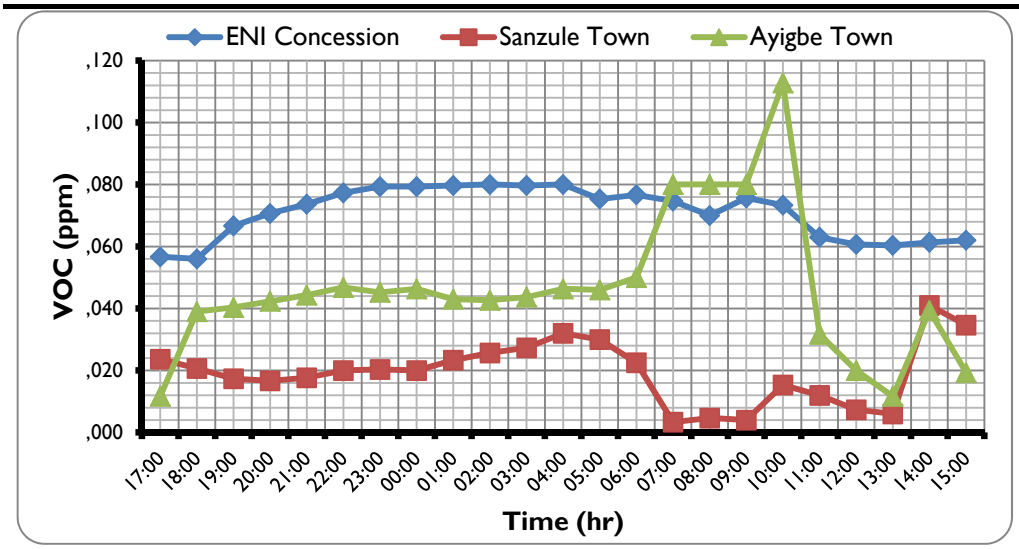


Source: eni Ghana Offshore Cape Three Points Baseline Studies, Sanzule-Bakanta. Air Quality Technical Report – Dry season (ESL Consulting, 2014) (REF. 1).

In October 2014 (wet season), VOCs levels throughout the study area were low with mean 24-hour values of 0.02 ppm, 0.04 ppm and 0.07 ppm recorded for Sanzule Town, Ayigbe Town

and eni Concession respectively. The hourly concentrations of VOCs were virtually stable in the study area except for the peak level recorded at Ayigbe Town at 10:00 GMT (Figure B.23).

Figure B.23 Variations in Hourly VOCs Levels in the Monitored Locations during the Field Survey of October 2014 (Wet Season)



Source: eni Ghana Offshore Cape Three Points Baseline Studies, Sanzule-Bakanta. Air Quality Technical Report – Wet season (ESL Consulting, 2014) (REF. 2).

The study area has no known anthropogenic sources, and given the spatial extent of low VOC levels throughout the study area, it is likely to be indicative of biogenic origin.

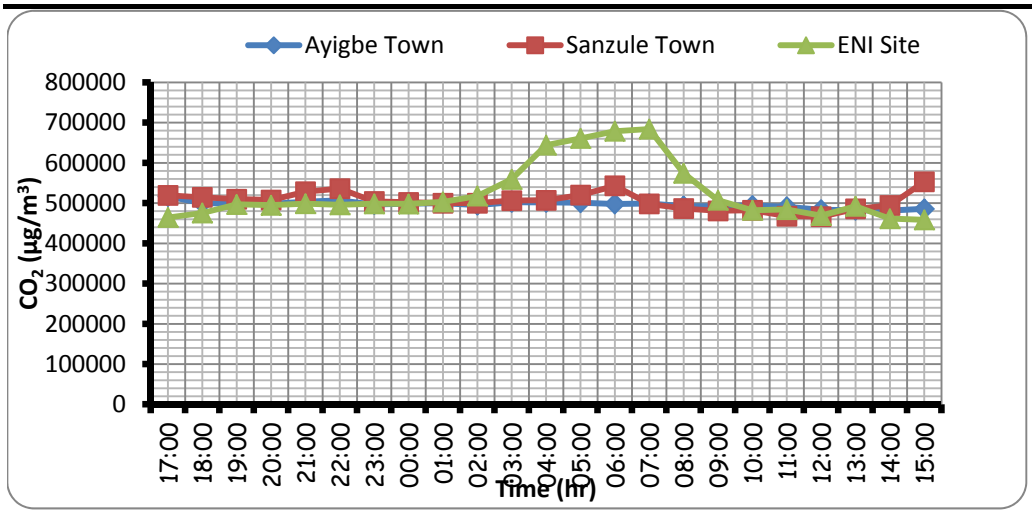
Carbon Dioxide (CO_2)

Carbon dioxide is one of the components of air. It is a by-product of respiration and complete burning of fossil fuels and organic materials. CO_2 is a useful gas to botanical life, as it is used by green plants in the presence of energy from the sun and water to synthesize carbohydrates. However, CO_2 is a greenhouse gas and has been established that atmospheric CO_2 levels contribute to global warming.

During the monitoring survey performed in March, 2014 (dry season), the recorded 24-hour average for CO_2 in Sanzule Township was 508293.6 µg/m^3, 496228.8 µg/m^3 for Ayigbe Town and 523651.25 µg/m^3 for the proposed eni Concession.

The hourly variation in CO_2 levels recorded in March, 2014 for the three monitored locations is presented in Figure B.24.

Figure B.24 Variations in Hourly CO_2 Levels in the Monitored Locations during the Field Survey of March 2014 (Dry Season)



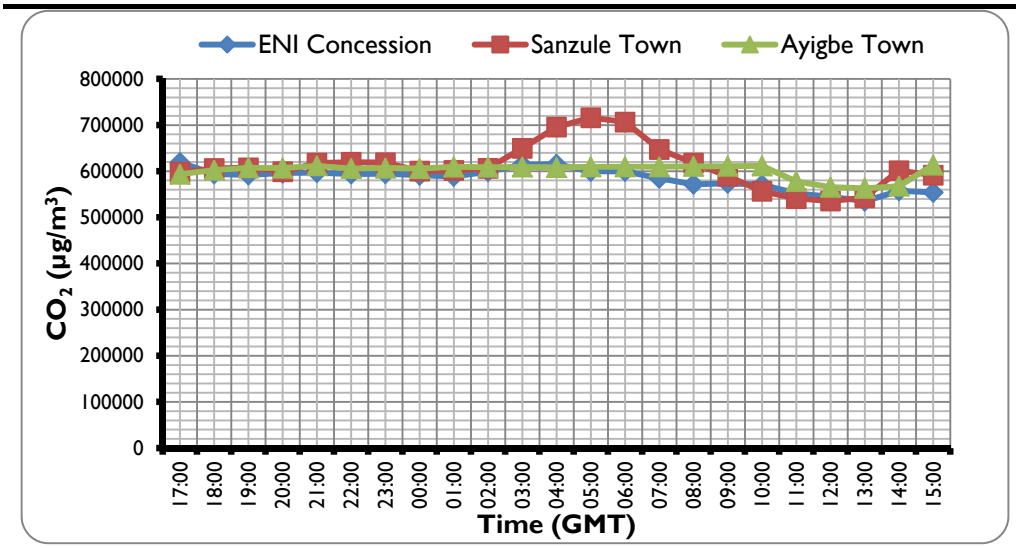
Source: eni Ghana Offshore Cape Three Points Baseline Studies, Sanzule-Bakanta. Air Quality Technical Report – Dry season (ESL Consulting, 2014) (REF. 1).

During the monitoring survey performed in October, 2014 (wet season), the recorded 24-hour average for CO_2 were 542621.70 µg/m^3 for the eni Concession, 598222.89 µg/m^3 for Sanzule Town and 585411.40 µg/m^3 for Ayigbe Town.

The recorded 24-hour CO_2 averages for all the locations were higher than the values obtained during the dry season assessment for the same locations. The hourly distributions revealed uniform trend with Sanzule Town peaking at 5:00 GMT as seen in Figure B.25. Remarkably, the period (1:00-9:00 GMT) of increasing CO_2 levels at Sanzule Town for this current assessment coincided with the period of increasing CO_2 observed for eni Concession in the previous assessment for dry season. It is an indication of the similarity in CO_2 sources within the two locations.

The hourly variation in CO_2 levels recorded in October, 2014 for the three monitored locations is presented in Figure B.25.

Figure B.25 Variations in Hourly CO2 Levels in the Monitored Locations during the Field Survey of October 2014 (Wet Season)



Source: eni Ghana Offshore Cape Three Points Baseline Studies, Sanzule-Bakanta. Air Quality Technical Report – Wet season (ESL Consulting, 2014) (REF. 2).

There is no Ghana EPA or IFC/WB established guideline for CO_2, therefore levels were not compared. Nonetheless, the relatively high CO_2 levels can be attributed to burning activities in home since most of the residents typically use firewood as their source of energy for fish smoking, cooking and other domestic activities.

B.1.3 Light, Noise and Vibration

Urban noise pollution produces direct and cumulative adverse health effects by degrading residential, social, working, and learning environments with corresponding real (economic) and intangible (well-being) losses. The World Health Organization (WHO) Guidelines for Community Noise has documented seven categories of adverse health effects of noise pollution on humans: hearing impairment, interference with spoken communication, sleep disturbances cardiovascular disturbances, disturbances in mental health, impaired task performance and negative social behavior and annoyance reactions. Noise can produce a number of social and behavioural effects in residents, besides annoyance (for review see *Berglund & Lindvall 1995*). The social and behavioural effects are often complex, subtle and indirect. Many of the effects are assumed to be the result of interactions with a number of non-auditory variables. Social and behavioural effects include changes in overt everyday behaviour patterns (e.g. closing windows, turning TV and radio to louder levels, complaining to authorities); adverse changes in social behavior (e.g. aggression, unfriendliness, non-participation); adverse changes in

social indicators (e.g. residential mobility, drug consumption, accident rates). Noise above 80 dBA is consistently associated with decreased helping behavior and increased aggressiveness.

Light, noise and vibration levels in the Project area are currently minimal due to the lack of industrial and other activities in the area. Current levels of noise are associated to domestic activities and natural sounds such as the ocean and waves.

The construction and operation of the ORF and onshore pipeline in the vicinity of Sanzule village will increase local light and noise levels and therefore this will need to be considered in the ESHIA.

The Ghana EPA has set the noise level for heavy industrial areas to be 70 dBA but residential areas range from 48 dBA (night-time) to 55 dBA (day-time). IFC/WB EHS Guideline, instead, set a limit of 45 dBA for night time and 55 dBA for day time for residential areas.

Noise levels were measured using the ACO Pacific sound level meter which is integrated into the AQM for a real-time sound level measurement. The sound meter was calibrated with ACO Pacific Acoustic Calibrator (94dB@1kHz) prior to data collection at each sampling location.

Dry Season

The summary results of the noise levels recorded at the same sampling locations as the air quality during the field survey of March 2014 are presented in Table B.6.

Variations in noise levels within the vicinity of the company were found in a range of 51.03 dBA to 62.83 dBA with a 24-hour mean of 53.33 dBA, 55.19 dBA and 59.86 for the eni site, Sanzule town and the Ayigbe town respectively. Highest noise levels were recorded at Ayigbe town probably originating from domestic activities.

Expectedly the eni Concession had relatively lower noise levels which most likely reflect the undeveloped/ forested nature of the areas. Major source of noise within the eni Concession is noise associated with birds and wind assisted tree branch movements.

The results indicate that the average noise level at Sanzule and Ayigbe town marginally exceeded the EPA permissible day-time noise level of 55 dBA and night time level of 48 dBA for residential area, and the IFC limits (55 dBA for day-time, 45 dBA for night time).

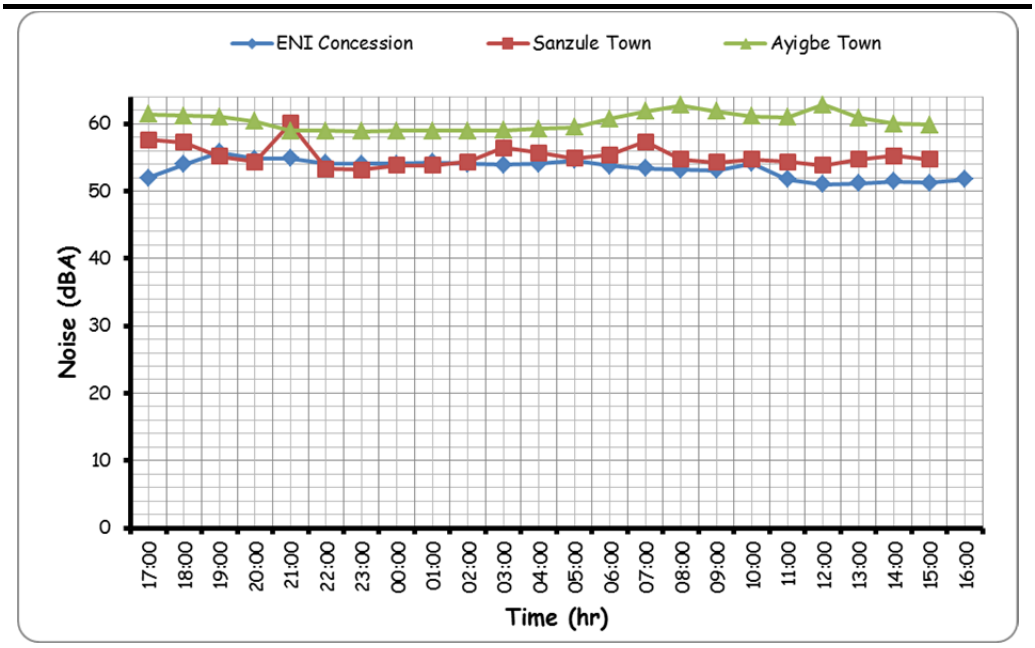
The hourly noise variation is presented in Figure B.26. Generally, the results indicate that the background noise levels at the locations were marginally high possibly due to domestic/human activities during the day. The increase in noise levels at Ayigbe and the Sansule town coincided with period of beach seine (fishing) activities. It was observed that the main sources of noise in the community were noise generated from vehicular movements, especially heavy truck movements along the road in proximity of the villages, beach seine activities, villages' activities (e.g., children playing, adults chatting, loud music/radio) and natural sources (e.g., sea waves breaking at the beach, winds).

Table B.6 Summary Statistics of Ambient Noise Results - Field Survey March 2014 (Dry Season)

Monitored Location	Measured Sound Pressure Level [dBA]							
	Average (Leq)	**Lmin**	**Lmax**	**Day Time**	**Night Time**	**LA_5**	**LA_{10}**	**LA_{50}**
Sanzule Town	55.19	53.15	60.07	55.07	55.19	53.0	53.4	54.5
Ayigbe Town	59.86	51.62	62.83	60.48	59.49	58.7	58.8	59.7
eni Concession	53.33	51.03	55.79	52.31	54.37	50.9	51.2	53.7
EPA guideline	*55*			*55*	*48*			
IFC guideline				*55*	*45*			

Source: eni Ghana Offshore Cape Three Points Baseline Studies, Sanzule-Bakanta. Air Quality Technical Report – Dry season (ESL Consulting, 2014) (REF. 1).

Figure B.26 Variations in Hourly Noise Levels in the Monitored Locations during the Field Survey of March 2014 (Dry Season)



Source: eni Ghana Offshore Cape Three Points Baseline Studies, Sanzule-Bakanta. Air Quality Technical Report – Dry season (ESL Consulting, 2014) (REF. 1).

Wet Season

The summary results of the noise levels recorded during the field survey of October 2014 are presented in Table B.7.

In October 2014, variations in noise levels within the vicinity of the company were found in a range of 52.30 dBA to 73.30 dBA with a 24-hour mean of 58.39 dBA, 63.70 dBA, and 61.31 dBA for the eni Concession, Sanzule town and the Ayigbe town respectively. Highest noise levels were recorded at Ayigbe town probably originating from domestic activities.

Consistent with the previous assessment for dry season, highest noise level was recorded at Ayigbe Town probably originating from domestic activities.

All the recorded averages (24-hour, day-time and night-time) well exceeded the EPA guideline and the IFC limits for residential areas. Also, all the recorded 24-hour averages were numerically higher than the values obtained during the March, 2014 study.

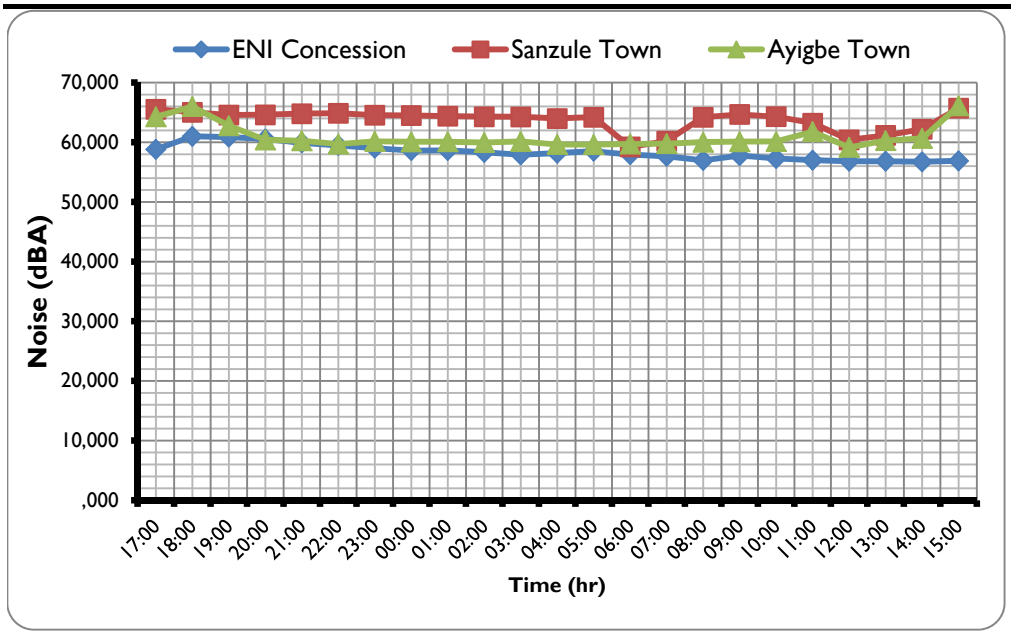
The hourly noise variation is presented in Figure B.27. Generally, the results indicate that the background noise levels at the locations were marginally high possibly due to domestic/human activities during the day. The main contribution to the noise levels at Ayigbe and Sanzule came from fishing activities (beach seine), which together with vehicle movements, occasiona music and sea waves breaking at the beach were the main noise sources observed in the vicinity of the settlements.

Table B.7 Summary Statistics of Ambient Noise Results - Field Survey October 2014 (Wet Season)

Monitored Location	**Measured Sound Pressure Level [dBA]**							
	Average (Leq)	**Lmin**	**Lmax**	**Day Time**	**Night Time**	**LA_5**	**LA_{10}**	**LA_{50}**
Sanzule Town	63.70	52.30	69.30	65.90	64.53	59.2	60.3	64.4
Ayigbe Town	61.31	57.50	73.30	62.02	60.80	58.7	59.3	62.2
eni Concession	58.39	56.40	67.00	57.21	59.21	56.6	56.7	58.2
EPA guideline	*55*			*55*	*48*			
IFC guideline				*55*	*45*			

Source: eni Ghana Offshore Cape Three Points Baseline Studies, Sanzule-Bakanta. Air Quality Technical Report – Wet season (ESL Consulting, 2014) (REF. 2).

Figure B.27 Variations in Hourly Noise Levels in the Monitored Locations during the Field Survey of October 2014 (Wet Season)



Source: eni Ghana Offshore Cape Three Points Baseline Studies, Sanzule-Bakanta. Air Quality Technical Report – Wet season (ESL Consulting, 2014) (REF. 2).

B.2 ONSHORE GEOPHYSICAL AND CHEMICAL COMPONENT

B.2.1 Freshwater Resources

The physico-chemical sampling results for surface water are presented in the following tables.

Table B.8 Wet season physico-chemical characteristics of water samples

Surface (fresh) water		A. Temp	W. Temp	pH	Cond.	TDS	Salinity	DO	COD	BOD_5	TSS	Turbidity
		°C	°C		µS/cm	mg/L	‰	mg/L	mg/L	mg/L	mg/L	NTU
SW-AMA-UPP	**Surface**	35.56	25.94	6.58	36	23	0.01	3.31	<5	177	3.00	0.76
	Mid		26.7	6.56	36	23	0.01	2.72				
	Bottom		26.58	6.56	33	22	0.01	1.88				
SW-AMA-MID1	**Surface**	34.32	26.12	6.90	467	295	0.22	5.84	<5	183	9.00	8.95
	Mid		26.12	6.83	710	450	0.32	5.66				
	Bottom		26.03	6.80	3240	2115	1.80	4.07				
SW-AMA-MID2	**Surface**	31.18	26.02	6.94	3558	2349	1.88	5.97	<5	354	37.00	45.20
	Mid		27.58	6.88	39710	25830	24.96	7.66				
	Bottom		27.33	6.81	40050	26040	25.42	7.20				
SW-AMA-LOW	**Surface**	33.2	27.79	7.14	44610	27580	26.66	7.90	<.5	189	32.00	37.20
	Mid		27.81	7.14	42840	27800	26.81	8.14				
	Bottom		27.83	7.1	48855	30170	30.06	8.46				
SW-AMA-PIP		35.66	29.23	7.2	75	49	0.03	2.99	<5	64	10	56

Table B.9 Dry season physico-chemical characteristics of water samples

Location		pH	Temp (A)	Temp (W)	Conductivity	Salinity	Turbidity	TSS	TDS	DO	BOD_5	COD
Surface Water			**°C**	**°C**	**µS/cm**	**0/00**	**NTU**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**
AMA Upstream	S	6.8	29.1	28.97	3651	1.63	5.46	24	2197	1.32	95	425
	M	6.52	NV	28.7	11952	6.31	NV	NV	7256	0.23	NV	NV
	B	6.53	NV	27.72	11955	6.31	NV	NV	7256	0.82	NV	NV
AMA Midstream 1	S	6.55	30.11	30.03	18082	9.58	0.82	1	10700	2.08	90.6	6400
	M	6.58	NV	29.81	20570	11.1	NV	NV	12250	1.91	NV	NV
	B	6.59	NV	29.87	21642	11.75	NV	NV	12890	2.5	NV	NV
AMA Midstream 2	S	6.7	29.13	31.04	26981	14.57	4.94	79	15720	1.91	82.4	5200
	M	6.69	NV	29.31	27022	15.14	NV	NV	16230	5.38	NV	NV
	B	6.66	NV	29.17	26433	14.88	NV	NV	15980	1.83	NV	NV
AMA Downstream	S	6.61	31.66	30.43	25119	13.58	1.915	33	14770	5.26	78	3500
	M	6.69	NV	30.21	25491	13.81	NV	NV	15080	4.9	NV	NV
	B	6.68	NV	29.98	18796	10.78	NV	NV	12160	4.92	NV	NV

Table B.10 Wet season concentrations of nutrients in water samples

Surface (fresh) water	Phosphates	Nitrate	Silicate
	mg/L	mg/L	mg/L
SW-AMA-UPP	4.00	2.50	12.90
SW-AMA-MID1	0.18	1.60	13.40
SW-AMA-MID2	0.14	1.20	21.90
SW-AMA-LOW	0.06	2.20	19.40
SW-AMA-PIP	0.23	1.56	13.7

Table B.11 Dry season concentrations of nutrients in water samples

Surface (fresh) water	Phosphate	Nitrate	Silicates
	mg/L	mg/L	mg/L
AMA Upstream	0.21	5.8	0.54
AMA Midstream 1	0.29	13.4	2.8
AMA Midstream 2	0.21	5.6	0.86
AMA Downstream	0.17	13.65	1.4

Table B.12 Wet season concentrations of oil & grease and Total Petroleum Hydrocarbons

Surface (fresh) water	Oil & Grease	TPH
	ppm	ppm
SW-AMA-UPP	<2	<2
SW-AMA-MID1	<2	<2
SW-AMA-MID2	<2	<2
SW-AMA-LOWER	<2	<2
SW-AMA-PIPELINE	<2	<2

Table B.13 Dry season concentrations of oil & grease and Total Petroleum Hydrocarbons

Surface (fresh) water	Oil & Grease	TPH
	ppm	ppm
AMA Upstream	1	0
AMA Midstream 1	2	0
AMA Midstream 2	0	0
AMA Downstream	1	0

Table B.14 Dry season concentrations of Faecal Coliform and Total Coliform

Surface Water	Total Coliform (cfu/100ml)	Faecal Coliform (cfu/100ml)
DOL 1 (Ground water)	0	0
ENI 1 (Ground water)	3	0
AYI 1 (Ground water)	1023	2
WHO GUIDELINE	**0**	**0**
GHANA STANDARD	**0**	**0**

B.2.2 Groundwater

The physico-chemical sampling results for groundwater are presented in the following tables.

Table B.15 Wet season concentrations of nutrients in water samples

Groundwater	Nitrate mg/L	T. Phosphorus mg/L	Silicate mg/L
GW-1A	3.99	0.04	8.50
GW-1B	7.59	0.04	7.50
GW-2A	11.59	0.05	6.50
GW-2B	11.79	0.03	6.50
GW-3A	10.19	0.07	8.00
GW-3B	8.99	0.07	8.5
GW-ANOR (A)	7.79	0.04	6.50
GW-ANOR (B)	6.99	0.03	8.00
GW-BAKU (A)	3.49	0.03	9.50
GW-BAKU (B)	3.99	0.05	8.50
GW-EIK (A)	16.99	0.04	17.50
GW-EIK (B)	10.59	0.04	16
GW-BKT (A)	14.99	0.7	9.5
GW-BKT (B)	8.99	0.7	10.5

Table B.16 Dry season concentrations of nutrients in water samples

Location	Phosphate	Nitrate	Silicates
Groundwater	mg/L	mg/L	mg/L
DOL1	0.18	7.4	NA
ENI1	0.22	9.5	NA
AYI1	0.49	45	NA

Table B.17 Wet season concentrations of oil & grease and Total Petroleum Hydrocarbons

Groundwater	Oil & Grease	TPH
	ppm	ppm
GW-1A	<2	<2
GW-1B	<2	<2
GW-2A	<2	<2
GW-2B	<2	<2
GW-3A	<2	<2
GW-3B	<2	<2
GW-ANOR (A)	<2	<2
GW-ANOR (B)	<2	<2
GW-BAKU (A)	<2	<2
GW-BAKU (B)	<2	<2
GW-EIK (A)	<2	<2
GW-EIK (B)	<2	<2
GW-BKT (A)	<2	<2
GW-BKT (B)	<2	<2

Table B.18 Dry season concentrations of oil & grease and TPH's

Location	O&G	TPH
Ground Water	**ppm**	**ppm**
DOL1	0	0
ENI1	0	0
AYI1	0	0

Table B.19 Dry season concentrations of Faecal Coliform and Total Coliform

Groundwater	Total Coliform (cfu/100ml)	Faecal Coliform (cfu/100ml)
DOL 1 (Ground water)	0	0
ENI 1 (Ground water)	3	0
AYI 1 (Ground water)	1023	2
WHO GUIDELINE	**0**	**0**
GHANA STANDARD	**0**	**0**

Table B.20 Wet season physico-chemical characteristics of water samples

Groundwater	A. Temp	W. Temp	pH	Cond.	TDS	Salinity	DO	COD	BOD_5	TSS	Turbidity
	°C	°C		µS/cm	mg/L	‰	mg/L	mg/L	mg/L	mg/L	NTU
GW-1A	35.56	28.29	6.35	60	40	0.02	5.84	<5	54	0.00	0.52
GW-1B		28.36	6.20	50	30	0.02	6.07	<5	50	0.00	0.59
GW-2A	35.43	27.59	5.19	146	90	0.06	3.93	<5	61	3.25	0.33
GW-2B		27.54	5.33	146	90	0.06	4.80	<5	76.7	4.00	0.40
GW-3A	34.78	27.89	8.21	726	450	0.33	3.12	<5	93.6	4.33	0.88
GW-3B		27.43	8.19	728	452	0.34	3.87	<5	86.5	1	0.51
GW-ANOR (A)	34.28	28.04	7.00	284	180	0.13	5.35	<5	102	1.00	0.79
GW-ANOR (B)		27.88	7.08	283	180	0.13	5.24	<5	24	0.00	0.72
GW-BAKU (A)	34.66	27.72	5.41	87	60	0.04	3.74	<5	128.8	1.00	0.32
GW-BAKU (B)		27.74	5.41	88	50	0.04	3.77	<5	129.2	0.33	0.42
GW-EIK (A)	33.58	27.17	7.45	378	240	0.17	5.07	<5	22	13.25	13.16
GW-EIK (B)		26.94	7.36	381	239	0.17	3.86	<5	62	51.75	13.53
GW-BKT (A)	34.68	29.83	7.82	349	208	0.15	4.62	<5	47	3	0.53
GW-BKT (B)		30.49	7.81	352	207	0.15	5.03	<5	69.8	1	2.96

Table B.21 Dry season physico-chemical characteristics of water samples

Ground Water	pH	Temp (A)	Temp (W)	Conductivity	Salinity	Turbidity	TSS	TDS	DO	BOD_5	COD
		°C	°C	µS/cm	0/00	NTU	mg/L	mg/L	mg/L	mg/L	
DOL1	5.47	28.65	29.39	32	0.01	0.89	25	49.6	3.96	87.8	
ENI1	5.76	31.39	30.68	64	0.03	0.86	1	66.6	4.02	75.2	
AYI1	7.26	30.45	29.12	1924	0.89	1.1	33	2035	3.87	94.6	

B.3 FLORA AND FAUNA

B.3.1 Flora

Table B.22 Flora sampling locations and description (wet sSeason) – concession Area

SAMPLE 1	SAMPLE 2	SAMPLE 3
Coconut plantation with secondary thicket	Coconut farm with secondary thicket	Swamp forest / Raphia hookeri
Lat 4°58.034	Cassava farm / groundnut	Lat 04°57.932
Long 002°26.538	Lat 4°57.982	Long 002°26.864
Triclisia patens	Long 002°26.887	*Carapa procera*
Elaeis guineensis	*Baphia nitida*	*Raphia hookeri*
Dracaena arborea	*Waltheria indica*	*Anthocleista djalonensis*
Psydrax subcordata	*Voacanga africana*	*Lygodium microphyllum*
Hypselodelphys violaceae	*Rauvolfia vomitoria*	*Cleistopholis patens*
Acridocarpus smeathmanii	*Triumfetta cordifolia*	*Cyrtosperma senegalensis*
Cnestis ferruginea	*Baphia pubescens*	*Cola sp.*
Tetracera alnifolia	*Mangifera indica*	*Psychotria sp.*
Carapa procera	*Blighia sapida*	*Crinum ornatum*
Baphia nitida	*Dissotis rotundifolia*	
Pycnocoma macrophylla	*Macaranga barteri*	
Trichilia prieureana	*Scleria verrucosa*	
Sterculia tragacantha	*Selaginella myosorus*	
Spondias mombin	*Cnestis ferruginea*	
Funtumia africana	*Acridocarpus smeathmanii*	
Funtumia elastica	*Cassytha filiformis*	
Newbouldia laevis	*Flagellaria guineensis*	
Seleginella myosorus	*Albizia ferruginea*	

SAMPLE 1	**SAMPLE 2**	**SAMPLE 3**
Smilax kraussiana	*Croton lobatus*	
Flagellaria guineensis	*Solenostemon mannii*	
Griffonia simplicifolia		
Acacia kamerunensis		
Baissea multiflora		
Agelea trifolia		
Albizia adianthifolia		

SAMPLE 4	**SAMPLE 5**
Strand vegetation	Lat 4°57.522
Coconut plantation	Long 002°26.884
Lat 04°57.482	*Eclipta prostrata*
long 002°26.891	*Asystasia calycina*
Remirea maritima	*Aframomum sp.*
Asystasia calycina	*Cyrtosperma senegalensis*
Ipomoea pes-caprae	*Raphia hookeri*
Passiflora foetida	*Ficus sp.*
Stachytarpheta indica	*Elaeis guineensis*
Triumfetta rhomboidea	*Phyllanthus muellerianus*
Desmodium adscendens	*Pneumatopteris afer*
Solenostemon monostachyus	*Fuirena umbellata*
Diodia vaginalis	*Desmodium adscendens*

Table B.23 Wet season floristic composition and frequency distribution of species in AoI

SPECIES LIST	FAMILY	LIFE FORM	ECOLOGICAL GUILD	STAR RATING	IUCN STATUS
Acacia kamerunensis	Mimosaceae	Climber	NPLD	Green	NA
Acridocarpus smeathmanii	Malpighiaceae	Climber	NE	Green	NA
Aframomum sp.	Zingiberaceae	Herb	NF/WP	NE	NA
Agelea trifolia	Connaraceae	Herb	NE	NE	NA
Albizia adianthifolia	Mimosaceae	Tree	NPLD	Green	LC
Albizia ferruginea	Mimosaceae	Tree	NPLD	Scarlet	V
Alchornea cordifolia	Euphorbiaceae	Tree	Pioneer	Green	NA
Anthocleista djalonensis	Loganiaceae	Tree	Pioneer	Green	NA
Asystasia calycina	Acanthaceae	Shrub	Pioneer	Green	NA
Baissea multiflora	Apocynaceae	Climber	NPLD	Green	NA
Bambusa vulgaris	Gramineae	Tree	Swamp	Green	NA
Baphia nitida	Papilionaceae	Tree	SB	Green	LC
Baphia pubescens	Papilionaceae	Tree	Pioneer	Green	NA
Blighia sapida	Sapindaceae	Tree	NPLD	Green	NA
Carapa procera	Meliaceae	Tree	SB	Green	NA
Cassytha filiformis	Lauraceae	Climber	NE	NE	NA
Chromolaena odorata	Compositae	Shrub	NE	NE	NA
Cleistopholis patens	Annonaceae	Tree	Pioneer	Green	NA
Cnestis ferruginea	Connaraceae	Climber	Pioneer	Green	NA
Cocos nucifera	Palmae	Tree	NF/SP	NE	NA
Cola sp.	Sterculiaceae	Tree	NF/SP	NE	NA
Combretum racemosum	Combretaceae	Climber	Pioneer	Green	NA
Crinum ornatum	Amaryllidaceae	Herb	Swamp	Green	NA
Croton lobatus	Euphorbiaceae	Shrub	NF/WP	NE	NA
Cyrtosperma senegalensis	Araceae	Herb	NE	Green	NA
Desmodium adscendens	Papilionaceae	Shrub	NE	Green	LC
Dichapetallum madagascariensis	Dichapetalaceae	Tree	SB	Green	NA
Diodia vaginalis	Rubiaceae	Herb	Pioneer	NE	NA
Diospyros monbutensis	Ebenaceae	Tree	SB	Green	NA
Dissotis rotundifolia	Melastomataceae	Shrub	Pioneer	Green	NA

SPECIES LIST	FAMILY	LIFE FORM	ECOLOGICAL GUILD	STAR RATING	IUCN STATUS
Dracaena arborea	Agavaceae	Tree	Pioneer	Green	NA
Eclipta prostrata	Compositae	Shrub	NF/WP	NE	DD
Elaeis guineensis	Palmae	Tree	Pioneer	Pink	NA
Ficus sp.	Moraceae	Tree	Pioneer	Green	NA
Flagellaria guineensis	Flagellariaceae	Climber	Pioneer	Green	NA
Fuirena umbellata	Cyperaceae	Herb	NF/WP	NE	LC
Funtumia africana	Apocynaceae	Tree	NPLD	Green	NA
Funtumia elastica	Apocynaceae	Tree	NPLD	Pink	NA
Griffonia simplicifolia	Caesalpiniaceae	Climber	NPLD	Green	NA
Hallea stipulosa	Rubiaceae	Tree	Swamp	Red	V
Harungana madagascariensis	Guttiferae	Tree	Pioneer	Green	NA
Hyparrhenia mutica	Gramineae	Herb	NE	NE	NA
Hypselodelphys violaceae	Marantaceae	Climber	Pioneer	Green	NA
Ipomoea involucrata	Convolvulaceae	Climber	NF/WP	NE	NA
Ipomoea pes-caprae	Convolvulaceae	Climber	NF/WP	NE	NA
Remirea maritima	Cyperaceae	Herb	NF/WP	NE	NA
Laccosperma opacum	Palmae	Climber	NPLD	Pink	NA
Lonchocarpus sericeus	Papilionaceae	Tree	NE	NE	NA
Lygodium microphyllum	Pteridaceae	Climber	NE	Green	LC
Macaranga barteri	Euphorbiaceae	Tree	Pioneer	Green	NA
Mangifera indica	Anacardiaceae	Tree	NF/SP	NE	DD
Morinda morindoides	Rubiaceae	Climber	NPLD	Green	NA
Nephrolepis biserrata	Pteridaceae	Herb	NE	Green	NA
Newbouldia laevis	Bignoniaceae	Tree	Pioneer	Green	NA
Oldenlendia corymbosa	Rubiaceae	Shrub	NF/WP	NE	NA
Paspalum conjugatum	Gramineae	Herb	NF/WP	NE	LC
Passiflora foetida	Passifloraceae	Climber	NF/WP	NE	NA
Phyllanthus muellerianus	Euphorbiaceae	Climber	Pioneer	Green	NA
Pneumatopteris afer	Pteridaceae	Herb	NE	Green	NA
Psychotria sp.	Rubiaceae	Shrub	NF/WP	NE	NA
Psydrax subcordata	Rubiaceae	Tree	Pioneer	Green	NA
Pterocarpus santalinoides	Papilionaceae	Tree	Swamp	Green	LC

SPECIES LIST	FAMILY	LIFE FORM	ECOLOGICAL GUILD	STAR RATING	IUCN STATUS
Pycnanthus angolensis	Myristicaceae	Tree	NPLD	Pink	NA
Pycnocoma macrophylla	Euphorbiaceae	Shrub	SB	Green	NA
Raphia hookeri	Palmae	Tree	Pioneer	NE	NA
Rauvolfia vomitoria	Apocynaceae	Tree	Pioneer	Green	NA
Richardia brasiliensis	Rubiaceae	Herb	NE	NE	NA
Scleria verrucosa	Cyperaceae	Herb	Pioneer	Green	NA
Selaginella myosorus	Pteridaceae	Herb	NE	Green	NA
Smilax kraussiana	Smilacaceae	Climber	Pioneer	Green	NA
Solanum verbascifolium	Solanaceae	Tree	Pioneer	Green	NA
Solenostemon monostachyus	Lamiaceae	Shrub	NF/WP	NE	NA
Spathodea campanulata	Bignoniaceae	Tree	Pioneer	Green	NA
Spondias mombin	Anacardiaceae	Tree	NE	Green	NA
Sporobolus pyramidalis	Gramineae	Herb	NF/WP	NE	NA
Sporobolus virginicus	Gramineae	Herb	NF/WP	NE	NA
Stachytarpheta indica	Verbenaceae	Shrub	NF/WP	NE	NA
Sterculia tragacantha	Sterculiaceae	Tree	Pioneer	Green	NA
Syzygium guineense	Myrtaceae	Tree	NE	Blue	NA
Tetracera alnifolia	Dilleniaceae	Climber	NE	Green	NA
Trichilia prieureana	Meliaceae	Tree	NPLD	Green	NA
Triclisia patens	Menispermaceae	Climber	NE	Green	NA
Triumfetta cordifolia	Tiliaceae	Tree	NF/SP	NE	NA
Triumfetta rhomboidea	Tiliaceae	Shrub	NE	NE	NA
Voacanga africana	Apocynaceae	Tree	Pioneer	Green	NA
Waltheria indica	Sterculiaceae	Shrub	NF/WP	NE	NA

Table B.24 Continued: floristic composition and frequency distribution of species AoI (wet season)

SPECIES LIST	P 1	P 2	P 3	P 4	P 5	S 1	S 2	S 3	S 4	S 5
Acacia kamerunensis	0	0	0	0	0	1	0	0	0	0
Acridocarpus smeathmanii	0	0	0	1	0	1	1	0	0	0
Aframomum sp.	0	0	0	0	0	0	0	0	0	1
Agelea trifolia	0	0	0	0	0	1	0	0	0	0
Albizia adianthifolia	0	0	0	0	0	1	0	0	0	0
Albizia ferruginea	0	0	1	0	0	0	1	0	0	0
Alchornea cordifolia	1	1	1	1	1	0	0	0	0	0
Anthocleista djalonensis	1	0	1	0	0	0	0	1	0	0
Asystasia calycina	0	0	0	0	1	0	0	0	1	1
Baissea multiflora	0	0	0	0	0	1	0	0	0	0
Bambusa vulgaris	0	0	1	0	0	0	0	0	0	0
Baphia nitida	0	1	0	1	1	1	1	0	0	0
Baphia pubescens	0	1	0	1	0	0	1	0	0	0
Blighia sapida	0	0	0	0	0	0	1	0	0	0
Carapa procera	0	0	1	0	0	1	0	1	0	0
Cassytha filiformis	0	0	0	0	0	0	1	0	0	0
Chromolaena odorata	0	0	0	0	0	0	0	1	0	0
Cleistopholis patens	1	0	0	0	0	0	0	1	0	0
Cnestis ferruginea	0	0	0	0	0	1	1	0	0	0
Cocos nucifera	0	0	0	0	1	0	0	0	0	0
Cola sp.	0	0	0	0	0	0	0	1	0	0
Combretum racemosum	0	0	0	0	1	0	0	0	0	0
Crinum ornatum	0	0	0	0	0	0	0	1	0	0
Croton lobatus	0	0	0	0	0	0	1	0	0	0
Cyrtosperma senegalensis	0	0	1	0	0	0	0	1	0	1
Desmodium adscendens	0	0	0	0	0	0	0	0	1	1
Dichapetallum madagascariensis	0	1	0	0	0	0	0	0	0	0
Diodia vaginalis	0	0	0	0	0	0	0	0	1	0
Diospyros monbutensis	0	1	0	0	0	0	0	0	0	0
Dissotis rotundifolia	0	0	0	0	1	0	1	0	0	0
Dracaena arborea	0	0	0	0	0	1	0	0	0	0

SPECIES LIST	P 1	P 2	P 3	P 4	P 5	S 1	S 2	S 3	S 4	S 5
Eclipta prostrata	0	0	0	0	0	0	0	0	0	1
Elaeis guineensis	0	1	1	0	1	1	0	0	0	1
Ficus sp.	0	0	0	0	0	0	0	0	0	1
Flagellaria guineensis	0	0	0	0	0	1	1	0	0	0
Fuirena umbellata	1	0	0	1	0	0	0	0	0	1
Funtumia africana	0	0	0	0	0	1	0	0	0	0
Funtumia elastica	0	0	0	0	0	1	0	0	0	0
Griffonia simplicifolia	0	0	0	0	0	1	0	0	0	0
Hallea stipulosa	1	0	0	0	0	0	0	0	0	0
Harungana madagascariensis	0	1	0	0	0	0	0	0	0	0
Hyparrhenia mutica	0	1	0	0	1	0	0	0	0	0
Hypselodelphys violaceae	0	0	0	0	0	1	0	0	0	0
Ipomoea involucrata	0	0	1	0	1	0	0	0	0	0
Ipomoea pes-caprae	0	0	0	1	0	0	0	0	0	0
Remirea maritima	0	0	0	0	0	0	0	0	1	0
Laccosperma opacum	0	1	1	0	0	0	0	0	0	0
Lonchocarpus sericeus	0	0	0	1	0	0	0	0	0	0
Lygodium microphyllum	0	0	0	0	0	0	0	1	0	0
Macaranga barteri	0	0	0	0	0	0	1	0	0	0
Mangifera indica	0	0	0	0	1	0	1	0	0	0
Morinda morindoides	0	1	0	0	0	0	0	0	0	0
Nephrolepis biserrata	0	1	0	0	1	0	0	0	0	0
Newbouldia laevis	0	0	0	0	0	1	0	0	0	0
Oldenlendia corymbosa	0	0	0	0	1	0	0	0	0	0
Paspalum conjugatum	0	0	0	1	0	0	0	0	0	0
Passiflora foetida	0	0	0	0	0	0	0	0	1	0
Phyllanthus muellerianus	0	0	0	0	0	0	0	0	0	1
Pneumatopteris afer	0	0	0	0	0	0	0	0	0	1
Psychotria sp.	1	0	0	0	0	0	0	1	0	0
Psydrax subcordata	0	0	0	0	0	1	0	0	0	0
Pterocarpus santalinoides	0	0	1	0	0	0	0	0	0	0
Pycnanthus angolensis	1	0	0	0	0	0	0	0	0	0
Pycnocoma macrophylla	0	0	0	0	0	1	0	0	0	0

SPECIES LIST	P 1	P 2	P 3	P 4	P 5	S 1	S 2	S 3	S 4	S 5
Raphia hookeri	1	0	0	0	0	1	0	0	0	1
Rauvolfia vomitoria	0	0	1	0	0	0	1	0	0	0
Richardia brasiliensis	0	0	0	0	1	0	0	0	0	0
Scleria verrucosa	0	1	0	0	0	0	1	0	0	0
Selaginella myosorus	0	1	0	0	1	0	1	0	0	0
Smilax kraussiana	0	0	0	0	0	1	0	0	0	0
Solanum verbascifolium	0	0	0	1	0	0	0	0	0	0
Solenostemon monostachyus	0	1	0	0	0	0	1	0	0	0
Spathodea campanulata	0	0	0	0	1	0	0	0	0	0
Spondias mombin	0	0	0	0	0	1	0	0	0	0
Sporobolus pyramidalis	0	1	0	0	0	0	0	0	0	0
Sporobolus virginicus	0	0	0	1	0	0	0	0	0	0
Stachytarpheta indica	0	0	0	0	0	0	0	0	1	0
Sterculia tragacantha	0	0	0	0	0	1	0	0	0	0
Syzygium guineense	0	1	0	1	0	0	0	0	0	0
Tetracera alnifolia	0	0	0	0	0	1	0	0	0	0
Trichilia prieureana	0	0	0	0	0	1	0	0	0	0
Triclisia patens	0	0	0	0	0	1	0	0	0	0
Triumfetta cordifolia	0	0	0	0	0	0	1	0	0	0
Triumfetta rhomboidea	0	0	0	0	1	0	0	0	1	0
Voacanga africana	0	0	0	0	0	0	1	0	0	0
Waltheria indica	0	0	0	0	1	0	1	0	0	0
	8	16	11	11	17	25	19	9	7	11

Note: P1-5 and S1-5 refer to the sampling locations

Table B.25 Sample plots location and description (dry and wet season)

SAMPLE CODES	LOCATION (Long / Lat)	DESCRIPTION
S 1	N 04°58'09.05" W 002°27'11.9"	Secondary Thicket

SAMPLE CODES	LOCATION (Long / Lat)	DESCRIPTION
S 2	N 04°58'07.9" W 002°27'08.3"	Undergrowth of Coconut plantation
S 3	N 04°57'58.6" W 002°26'53.0"	Farmland (Cleared area in coconut plantation with pineapple and rubber cultivated)
S 4	N 04°57'56.2" W 002°26'51.2"	Fresh water swamp with raphia
S 5	N 04°58'01.0" W 002°26'32.6"	Secondary Thicket (Abandoned coconut plantation)
S 6	N 04°57'49.5" W 002°27'06.2"	Swamp forest
S 7	N 04°57'51.1" W 002°26'57.2"	Oil palm / Coconut plantation (cleared area) / Thicket clump
S 8	N 04°57'50.7" W 002°26'28.2"	Abandoned coconut plantation / Secondary forest

Table B.26 Location and description of transect plots (10 x 10 m) (dry and wet season)

TRANSECT CODES	LOCATION (Long / Lat)	DESCRIPTION
T 1	N 04°57'29.3" W 022°26'54.4"	Strand
T 2	N 04°57'30.3" W 002°26'54.3"	Coconut
T 3	N 04°57'31.1" W 002°26'54.3"	Coconut

TRANSECT CODES	LOCATION (Long / Lat)	DESCRIPTION
T 4	N 04°57'31.6" W 002°26'54.2"	Swamp
T 5	N 04°57'32.4" W 002°26'54.1"	Thicket
T 6	N 04°57'33.1" W 002°26'54.1"	Swamp forest / Thicket

Table B.27 Checklist of vascular plant species recorded at the study area (wet season)

Species list	Family	Life form	Ecological Guild	Star Rating	IUCN Threatened Status	S 1	S 2	S 3	S 4	S 5	S 6	S 7	S 8	T 1	T 2	T 3	T4	T 5	T6
Abrusprecatorious	Papilionaceae	Climber	Pioneer	Green	NA	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Acridocarpusalternifolius	Malpighiaceae	Climber	NPLD	Green	NA	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Acridocarpussmeathmaniii	Malpighiaceae	Climber	NE	Green	NA	0	0	1	0	1	0	0	1	0	0	0	0	0	0
Adenialobata	Passifloraceae	Climber	Pioneer	Green	NA	1	1	0	0	0	1	0	0	0	0	0	0	0	0
Aframomumelliotii	Zingiberaceae	Herb	NF/WP	NE	NA	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Ageleanitida	Connaraceae	Climber	NE	NE	NA	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Albiziaadianthifolia	Mimosaceae	Tree	NPLD	Green	LC	1	0	1	0	0	0	0	0	0	0	0	0	0	0
Albiziaferruginea	Mimosaceae	Tree	NPLD	Scarlet	V	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Albiziazygia	Mimosaceae	Tree	NPLD	Green	NA	1	1	0	0	1	0	0	0	0	0	0	0	0	0
Alchorneacordifolia	Euphorbiaceae	Tree	Pioneer	Green	NA	1	1	1	1	1	1	0	1	0	0	0	1	0	1
Alstoniaboonei	Apocynaceae	Tree	Pioneer	Green	NA	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Alternantherasessilis	Amaranthaceae	Shrub	NF/WP	NE	LC	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Anchomanesdifformis	Araceae	Herb	Pioneer	Green	NA	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Anthocleistanobilis	Loganiaceae	Tree	Pioneer	Green	NA	1	1	0	1	1	1	0	0	0	0	0	0	0	0
Aspilia Africana	Compositae	Climber	NF/WP	NE	NA	1	0	0	0	0	0	1	0	0	0	0	0	0	0
Asystasiacalycina	Acanthaceae	Shrub	Pioneer	Green	NA	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Baphianitida	Papilionaceae	Tree	SB	Green	LC	1	1	1	0	1	0	1	0	0	0	0	0	0	1

Species list	**Family**	**Life form**	**Ecological Guild**	**Star Rating**	**IUCN Threatened Status**	**S 1**	**S 2**	**S 3**	**S 4**	**S 5**	**S 6**	**S 7**	**S 8**	**T 1**	**T 2**	**T 3**	**T4**	**T 5**	**T6**
Baphiapubescens	Papilionaceae	Tree	Pioneer	Green	NA	1	1	1	0	1	0	1	1	0	0	0	0	0	0
Blighiasapida	Sapindaceae	Tree	NPLD	Green	NA	1	0	1	0	0	0	0	0	0	0	0	0	0	0
Blighiawelwitschii	Sapindaceae	Tree	NPLD	Green	NA	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Bombaxbuonopozense	Bombacaceae	Tree	Pioneer	Green	NA	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Borreriascabra	Rubiaceae	Shrub	Pioneer	Green	NA	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Brideliaferruginea	Euphorbiaceae	Tree	NF/SP	NE	NA	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Brideliamicrantha	Euphorbiaceae	Tree	Pioneer	Green	NA	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Buchholziacoriacea	Capparaceae	Tree	SB	Green	NA	0	0	0	1	0	1	0	0	0	0	0	0	0	0
Byrsocarpuscoccineus	Connaraceae	Shrub	Pioneer	Green	NA	1	0	1	0	1	0	1	0	0	0	0	0	0	0
Canariumschweinfurthii	Burseraceae	Tree	Pioneer	Pink	NA	0	1	0	0	1	0	0	0	0	0	0	0	0	0
Carpolobialutea	Polygalaceae	Shrub	SB	Green	NA	0	1	0	0	1	0	0	0	0	0	0	0	0	0
Cassythafiliformis	Lauraceae	Climber	NE	NE	NA	0	0	1	0	0	0	1	0	0	0	0	0	0	0
Ceibapentandra	Bombacaceae	Tree	Pioneer	Green	NA	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Chromolaenaodarata	Compositae	Shrub	Pioneer	Green	NA	1	1	1	0	1	0	1	1	0	0	0	0	0	0
Cleistopholis patens	Annonaceae	Tree	Pioneer	Green	NA	0	1	0	1	0	1	0	0	0	0	0	0	0	0
Cnestisferruginea	Connaraceae	Climber	Pioneer	NE	NA	1	1	1	0	1	0	0	1	0	0	0	0	0	0
Coffeaafzelii	Rubiaceae	Climber	SB	Blue	NA	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Coffeamacrochlamys	Rubiaceae	Shrub	NE	Gold	V	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Cola millenii	Sterculiaceae	Tree	NPLD	Green	NA	0	1	0	0	0	0	0	0	0	0	0	0	0	0

Species list	**Family**	**Life form**	**Ecological Guild**	**Star Rating**	**IUCN Threatened Status**	**S 1**	**S 2**	**S 3**	**S 4**	**S 5**	**S 6**	**S 7**	**S 8**	**T 1**	**T 2**	**T 3**	**T4**	**T 5**	**T6**
Combretumracemosum	Combretaceae	Climber	Pioneer	Green	NA	1	1	1	0	0	0	1	1	0	0	0	0	0	0
Commelinaafricana	Commelinaceae	Herb	Pioneer	Green	LC	0	0	1	0	0	0	0	0	1	0	1	0	0	0
Commelinaerecta	Commelinaceae	Herb	Pioneer	Green	LC	1	0	0	0	0	0	0	0	1	1	0	0	0	0
Crinum jagus	Amaryllidaceae	Herb	Swamp	Blue	NA	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Crotalaria retusa	Papilionaceae	Shrub	NF/WP	NE	NA	0	0	0	0	0	0	0	0	1	1	0	0	0	0
Croton lobatus	Euphorbiaceae	Shrub	NF/WP	NE	NA	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Cyperusrotundus	Cyperaceae	Herb	NF/WP	NE	LC	1	0	0	0	0	0	0	0	0	1	0	0	0	0
Cyrtospermasenegalense	Araceae	Herb	NE	Green	LC	0	0	0	1	0	1	0	0	0	0	0	1	1	1
Dalbergiahostilis	Papilionaceae	Climber	NPLD	Green	NA	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Dalbergiasaxatilis	Papilionaceae	Climber	NE	Green	NA	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Deinbolliapinnata	Sapindaceae	Tree	NPLD	Green	NA	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Desmodiumadscendens	Papilionaceae	Shrub	NE	Green	LC	0	1	0	0	0	0	0	0	1	0	1	0	0	1
Desmodiumgangeticum	Papilionaceae	Shrub	NF/WP	NE	NA	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Dichapetallumangolense	Dichapetalaceae	Climber	NPLD	Green	NA	0	0	1	0	0	0	1	1	0	0	0	0	0	0
Dichapetalumpallidum	Dichapetalaceae	Climber	SB	Green	NA	0	0	0	1	1	0	0	0	0	0	0	0	0	0
Dioclearеflexa	Papilionaceae	Climber	Pioneer	Green	NA	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Diospyrosmonbuttensis	Ebenaceae	Tree	SB	Green	NA	1	0	0	0	0	0	0	1	0	0	0	0	0	0
Dissotisgrandiflora	Melastomataceae	Herb	Pioneer	NE	NA	0	0	0	0	0	1	1	0	0	0	0	0	0	0
Dissotisrotundifolia	Melastomataceae	Shrub	Pioneer	Green	NA	0	0	1	0	1	0	0	0	0	0	0	0	0	0

Species list	**Family**	**Life form**	**Ecological Guild**	**Star Rating**	**IUCN Threatened Status**	**S 1**	**S 2**	**S 3**	**S 4**	**S 5**	**S 6**	**S 7**	**S 8**	**T 1**	**T 2**	**T 3**	**T4**	**T 5**	**T6**
Dracaena arborea	Agavaceae	Tree	Pioneer	Green	NA	1	0	1	0	1	0	0	1	0	0	0	0	0	0
Ecliptaprostrata	Compositae	Shrub	NF/WP	NE	NA	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Elaeisguineensis	Palmae	Tree	Pioneer	Pink	NA	1	1	1	0	1	0	0	1	0	0	0	0	0	0
Ficus sp.	Moraceae	Tree	Pioneer	Green	NA	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Flacourtiaflavescens	Flacourtiaceae	Tree	Pioneer	Green	NA	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Flagellariaguineensis	Flagallariaceae	Climber	Pioneer	Green	NA	0	1	1	0	1	0	1	1	0	0	0	0	0	0
Funtumiaafricana	Apocynaceae	Tree	Pioneer	Green	NA	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Glyphaeabrevis	Tiliaceae	Tree	SB	Green	NA	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Griffoniasimplicifolia	Caesalpiniaceae	Climber	NPLD	Green	NA	1	1	1		1	0	0	0	0	0	0	0	0	0
Halleastipulosa	Rubiaceae	Tree	Swamp	Red	V	0	0	0	1	0	1	0	0	0	0	0	0	0	0
Harunganamadagascariensis	Guttiferae	Tree	Pioneer	Green	NA	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Heisteriaparvifolia	Olacaceae	Tree	SB	Green	NA	1	1	1	1	1	0	0	1	0	0	0	0	0	0
Holarrhena floribunda	Apocynaceae	Tree	Pioneer	Green	NA	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Homaliumletestui	Flacourtiaceae	Tree	NPLD	Green	NA	0	0	0	0	0	1	0	1	0	0	0	0	0	0
Hoslundiaopposita	Labiatae	Shrub	NF/WP	NE	NA	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Hugoniarufipilis	Linaceae	Climber	NPLD	Blue	NA	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Ipomoea asarifolia	Convolvulaceae	Climber	NF/WP	NE	NA	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Ipomoea mauritana	Convolvulaceae	Climber	NF/WP	NE	NA	0	1	0	0	0	1	0	0	0	0	1	0	0	0
Ipomoea pes-caprae	Convolvulaceae	Climber	NE	NE	NA	0	0	0	0	0	0	0	0	1	1	0	0	0	0

Species list	**Family**	**Life form**	**Ecological Guild**	**Star Rating**	**IUCN Threatened Status**	**S 1**	**S 2**	**S 3**	**S 4**	**S 5**	**S 6**	**S 7**	**S 8**	**T 1**	**T 2**	**T 3**	**T4**	**T 5**	**T6**
Ipomoea surattensis	Convolvulaceae	Climber	NF/WP	NE	NA	0	0	1	0	0	0	0	0	0	0	0	1	0	0
Kyllingapumila	Cyperaceae	Herb	NF/WP	NE	NA	0	0	0	0	0	0	0	0	1	1	0	0	0	0
Landolphiadulcis	Apocynaceae	Climber	NPLD	Green	NA	1	0	1	0	0	0	0	0	0	0	0	0	0	0
Lanneaacida	Anacardiaceae	Tree	NF/SP	NE	NA	1	0	1	0	1	0	1	1	0	0	0	0	0	0
Lanneawelwitschii	Anacardiaceae	Tree	Pioneer	Green	NA	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Lygodiummicrophyllum	Fern	Herb	NE	Green	LC	0	1	0	1	0	1	0	0	0	0	0	0	0	0
Macarangahurifolia	Euphorbiaceae	Tree	Pioneer	Green	NA	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Macarangabarteri	Euphorbiaceae	Tree	Pioneer	Green	NA	0	1	0	0	1	0	0	1	0	0	0	0	0	0
Mallotusoppositifolius	Euphorbiaceae	Tree	SB	Green	NA	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Mangiferaindica	Anacardiaceae	Tree	NF/SP	NE	DD	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Manihotesculenta	Euphorbiaceae	Shrub	NE	NE	NA	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Manniophytonfulvum	Euphorbiaceae	Climber	NPLD	Green	NA	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Manoteslongiflora	Connaraceae	Climber	NE	Green	NA	0	0	1	0	0	0	0	1	0	0	0	0	0	0
Margaritariadiscoidea	Euphorbiaceae	Tree	Pioneer	Green	NA	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Mariscuslongibracteatus	Cyperaceae	Herb	NF/WP	NE	NA	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Mezoneuronbenthamianum	Caesalpiniaceae	Climber	Pioneer	Green	NA	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Microdesmispuberula	Pandaceae	Tree	SB	Green	NA	0	1	0	0	1	0	0	0	0	0	0	0	0	0
Millettiabarteri	Papilionaceae	Climber	Swamp	Green	NA	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Millettiazechiana	Papilionaceae	Tree	Pioneer	Green	LC	1	0	0	0	0	0	0	0	0	0	0	0	0	0

Species list	**Family**	**Life form**	**Ecological Guild**	**Star Rating**	**IUCN Threatened Status**	**S 1**	**S 2**	**S 3**	**S 4**	**S 5**	**S 6**	**S 7**	**S 8**	**T 1**	**T 2**	**T 3**	**T4**	**T 5**	**T6**
Monodoratenuifolia	Annonaceae	Tree	Pioneer	Green	NA	1	0	0	0	1	0	0	0	0	0	0	1	1	1
Morindalucida	Rubiaceae	Tree	Pioneer	Green	NA	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Morindamorindoides	Rubiaceae	Climber	NPLD	Green	NA	1	0	1	0	0	0	0	0	0	0	0	0	0	0
Mussaendaerythrophylla	Rubiaceae	Climber	Pioneer	Green	NA	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Nephrolepisbiserrata	Fern	Herb	NE	Green	NA	1	1	1	0	0	1	0	0	0	0	0	0	0	0
Newbouldialaevis	Bignoniaceae	Tree	Pioneer	Green	NA	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Oplismenusburmanii	Gramineae	Herb	NF/WP	NE	NA	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Ourateasulcata	Ochnaceae	Shrub	SB	Green	NA	0	0	0	0	1	0	0	1	0	0	0	0	0	0
Pandanus candelabrum	Pandaceae	Tree	Swamp	Blue	NA	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Parkiabicolor	Mimosaceae	Tree	NPLD	Green	LC	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Paullina pinnata	Sapindaceae	Climber	Pioneer	Green	NA	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Pentaclethramacrophylla	Mimosaceae	Tree	NPLD	Green	NA	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Pentodonpentandrus	Rubiaceae	Shrub	NF/WP	NE	LC	0	0	0	0	0	1	0	0	0	0	1	0	0	0
Perotisindica	Gramineae	Herb	Pioneer	NE	NA	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Phyllanthusniruroides	Euphorbiaceae	Herb	NE	NE	NA	0	1	0	0	0	1	0	0	0	0	1	1	1	1
Pneumatopterisafer	Fern	Herb	NE	Green	NA	0	0	0	1	0	0	0	0	0	0	0	1	0	1
Premnaquadrifolia	Verbanaceae	Climber	Pioneer	Blue	NA	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Psychotriayapoensis	Rubiaceae	Shrub	NE	NE	NA	0	0	0	1	0	1	0	0	0	0	0	0	0	0
Pycnanthusangolensis	Myristicaceae	Tree	NPLD	Pink	NA	1	1	0	0	0	0	0	0	0	0	0	0	0	0

Species list	**Family**	**Life form**	**Ecological Guild**	**Star Rating**	**IUCN Threatened Status**	**S 1**	**S 2**	**S 3**	**S 4**	**S 5**	**S 6**	**S 7**	**S 8**	**T 1**	**T 2**	**T 3**	**T4**	**T 5**	**T6**
Rafiahookeri	Palmae	Tree	Swamp	Green	NA	0	0	0	1	0	1	0	0	0	0	0	0	1	1
Rauvolfiacumminsii	Apocynaceae	Shrub	SB	Blue	NA	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Rauvolfiavomitoria	Apocynaceae	Tree	Pioneer	Green	NA	1	1	1	0	1	0	0	1	0	1	1	0	0	0
Sansevierialiberica	Agavaceae	Herb	NE	Blue	NA	0	0	0	0	0	0	0	0	1	0	1	0	0	0
Scleriaboivinii	Cyperaceae	Herb	Pioneer	Green	NA	1	0	1	1	1	1	1	1	0	0	0	0	0	0
Scleriaverticellata	Cyperaceae	Herb	Pioneer	Green	NA	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Selaginellamyosorus	Fern	Herb	NE	Green	NA	1	1	1	0	1	0	1	1	0	0	0	0	0	0
Setariabarbata	Gramineae	Herb	NF/WP	NE	NA	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Sidalinifolia	Malvaceae	Herb	NE	NE	NA	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Smeathmanniapubescens	Passifloraceae	Tree	SB	Green	NA	1	1	1	1	1	1	1	1	0	0	0	0	0	0
Smilax kraussiana	Smilacaceae	Climber	Pioneer	Green	NA	1	1	1	1	1	0	0	1	0	0	0	0	0	0
Solenangisscandens	Orchidaceae	Herb	NE	Green	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Solenostemonmonostachyus	Labiatae	Shrub	NF/WP	NE	NA	1	0	0	0	0	0	0	0	0	1	0	0	0	0
Spermacoceverticillata	Rubiaceae	Shrub	NE	NE	NA	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Sporoboluspyramidalis	Gramineae	Herb	NF/WP	NE	NA	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Stachytaphetaindica	Verbanaceae	Shrub	NF/WP	NE	NA	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Sterculiaoblonga	Sterculiaceae	Tree	NPLD	Green	NA	1	1	1	0	1	0	0	1	0	0	0	0	0	0
Sterculiatragacantha	Sterculiaceae	Tree	Pioneer	Green	NA	1	1	1	0	0	0	1	1	0	0	0	0	0	0
Symphoniaglobulifera	Guttiferae	Tree	Swamp	Green	NA	0	0	0	0	0	1	0	0	0	0	0	0	0	0

Species list	**Family**	**Life form**	**Ecological Guild**	**Star Rating**	**IUCN Threatened Status**	**S 1**	**S 2**	**S 3**	**S 4**	**S 5**	**S 6**	**S 7**	**S 8**	**T 1**	**T 2**	**T 3**	**T4**	**T 5**	**T6**
Syzygiumguineense var. littorale	Myrtaceae	Tree	NE	Blue	NA	1	0	1	0	1	0	0	0	1	1	1	0	0	1
Tabanaemontanacrassa	Apocynaceae	Tree	SB	Green	NA	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Talinumtriangulare	Portulaceae	Shrub	NF/WP	NE	NA	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Tetraceraalnifolia	Dilleniaceae	Climber	NE	Green	NA	1	1	0	0	1	1	0	0	0	0	0	0	0	0
Tetraceradinklagii	Dilleniaceae	Climber	NE	Blue	NA	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Tristemmahirtum	Melastomataceae	Shrub	NF/WP	NE	NA	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Triumfettacordifolia	Tiliaceae	Shrub	NF/WP	NE	NA	1	0	1	0	0	0	0	0	0	0	0	0	0	0
Triumfettarhomboidea	Tiliaceae	Shrub	NE	NE	NA	0	0	0	0	0	1	0	0	0	1	0	0	0	0
Uapacatogoensis	Euphorbiaceae	Tree	NF/WP	NE	NA	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Uvariaafzelii	Annonaceae	Climber	NPLD	Green	NA	1	0	1	0	1	0	0	0	0	0	0	0	0	0
Uvariachamae	Annonaceae	Climber	NE	Blue	NA	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Vitexdoniana	Verbanaceae	Tree	NF/SP	NE	NA	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Voacangaafricana	Apocynaceae	Tree	Pioneer	Green	NA	1	0	1	0	0	0	0	0	0	0	0	0	0	0
Waltheriaindica	Sterculiaceae	Shrub	NF/WP	NE	NA	1	0	1	0	0	0	1	1	0	0	0	0	0	0
Xylopiarubescens	Annonaceae	Tree	Swamp	Gold	NA	0	1	0	0	1	1	0	0	0	0	0	0	0	0
Xylopiastaudtii	Annonaceae	Tree	SB	Green	NA	1	0	0	1	0	0	0	1	0	0	0	0	0	0
Zanthoxylumzanthoxyloides	Rutaceae	Tree	NF/SP	NE	NA	0	1	0	0	0	0	0	0	0	1	0	0	0	0
						66	54	43	21	38	24	18	30	9	12	10	8	5	10

Table B.28 Checklist of vascular plant species recorded at the study area (dry season)

Species list	Family	Life form	Ecological Guild	Star Rating	IUCN Threatened Status	S 1	S 2	S 3	S 4	S 5	S 6	S 7	S 8	T 1	T 2	T 3	T4	T 5	T6
Abrusprecatorious	Papilionaceae	Climber	Pioneer	Green	NA	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Acridocarpusalternifolius	Malpighiaceae	Climber	NPLD	Green	NA	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Acridocarpussmeathmaniii	Malpighiaceae	Climber	NE	Green	NA	0	0	1	0	1	0	0	1	0	0	0	0	0	0
Adenialobata	Passifloraceae	Climber	Pioneer	Green	NA	1	1	0	0	0	1	0	0	0	0	0	0	0	0
Aframomumelliotii	Zingiberaceae	Herb	NF/WP	NE	NA	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Ageleanitida	Connaraceae	Climber	NE	NE	NA	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Albiziaadianthifolia	Mimosaceae	Tree	NPLD	Green	LC	1	0	1	0	0	0	0	0	0	0	0	0	0	0
Albiziaferruginea	Mimosaceae	Tree	NPLD	Scarlet	V	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Albiziazygia	Mimosaceae	Tree	NPLD	Green	NA	1	1	0	0	1	0	0	0	0	0	0	0	0	0
Alchorneacordifolia	Euphorbiaceae	Tree	Pioneer	Green	NA	1	1	1	1	1	1	0	1	0	0	0	1	0	1
Alstoniaboonei	Apocynaceae	Tree	Pioneer	Green	NA	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Alternantherasessilis	Amaranthaceae	Shrub	NF/WP	NE	LC	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Anchomanesdifformis	Araceae	Herb	Pioneer	Green	NA	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Anthocleistanobilis	Loganiaceae	Tree	Pioneer	Green	NA	1	1	0	1	1	1	0	0	0	0	0	0	0	0

Species list	**Family**	**Life form**	**Ecological Guild**	**Star Rating**	**IUCN Threatened Status**	**S 1**	**S 2**	**S 3**	**S 4**	**S 5**	**S 6**	**S 7**	**S 8**	**T 1**	**T 2**	**T 3**	**T4**	**T 5**	**T6**
Aspilia Africana	Compositae	Climber	NF/WP	NE	NA	1	0	0	0	0	0	1	0	0	0	0	0	0	0
Asystasiacalycina	Acanthaceae	Shrub	Pioneer	Green	NA	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Baphianitida	Papilionaceae	Tree	SB	Green	LC	1	1	1	0	1	0	1	0	0	0	0	0	0	1
Baphiapubescens	Papilionaceae	Tree	Pioneer	Green	NA	1	1	1	0	1	0	1	1	0	0	0	0	0	0
Blighiasapida	Sapindaceae	Tree	NPLD	Green	NA	1	0	1	0	0	0	0	0	0	0	0	0	0	0
Blighiawelwitschii	Sapindaceae	Tree	NPLD	Green	NA	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Bombaxbuonopozense	Bombacaceae	Tree	Pioneer	Green	NA	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Borreriascabra	Rubiaceae	Shrub	Pioneer	Green	NA	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Brideliaferruginea	Euphorbiaceae	Tree	NF/SP	NE	NA	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Brideliamicrantha	Euphorbiaceae	Tree	Pioneer	Green	NA	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Buchholziacoriacea	Capparaceae	Tree	SB	Green	NA	0	0	0	1	0	1	0	0	0	0	0	0	0	0
Byrsocarpuscoccineus	Connaraceae	Shrub	Pioneer	Green	NA	1	0	1	0	1	0	1	0	0	0	0	0	0	0
Canariumschweinfurthii	Burseraceae	Tree	Pioneer	Pink	NA	0	1	0	0	1	0	0	0	0	0	0	0	0	0
Carpolobialutea	Polygalaceae	Shrub	SB	Green	NA	0	1	0	0	1	0	0	0	0	0	0	0	0	0
Cassythafiliformis	Lauraceae	Climber	NE	NE	NA	0	0	1	0	0	0	1	0	0	0	0	0	0	0

Species list	**Family**	**Life form**	**Ecological Guild**	**Star Rating**	**IUCN Threatened Status**	**S 1**	**S 2**	**S 3**	**S 4**	**S 5**	**S 6**	**S 7**	**S 8**	**T 1**	**T 2**	**T 3**	**T4**	**T 5**	**T6**
Ceibapentandra	Bombacaceae	Tree	Pioneer	Green	NA	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Chromolaenaodarata	Compositae	Shrub	Pioneer	Green	NA	1	1	1	0	1	0	1	1	0	0	0	0	0	0
Cleistopholis patens	Annonaceae	Tree	Pioneer	Green	NA	0	1	0	1	0	1	0	0	0	0	0	0	0	0
Cnestisferruginea	Connaraceae	Climber	Pioneer	NE	NA	1	1	1	0	1	0	0	1	0	0	0	0	0	0
Coffeaafzelii	Rubiaceae	Climber	SB	Blue	NA	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Coffeamacrochlamys	Rubiaceae	Shrub	NE	Gold	V	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Cola millenii	Sterculiaceae	Tree	NPLD	Green	NA	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Combretumracemosum	Combretaceae	Climber	Pioneer	Green	NA	1	1	1	0	0	0	1	1	0	0	0	0	0	0
Commelinaafricana	Commelinaceae	Herb	Pioneer	Green	LC	0	0	1	0	0	0	0	0	1	0	1	0	0	0
Commelinaerecta	Commelinaceae	Herb	Pioneer	Green	LC	1	0	0	0	0	0	0	0	1	1	0	0	0	0
Crinum jagus	Amaryllidaceae	Herb	Swamp	Blue	NA	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Crotalaria retusa	Papilionaceae	Shrub	NF/WP	NE	NA	0	0	0	0	0	0	0	0	1	1	0	0	0	0
Croton lobatus	Euphorbiaceae	Shrub	NF/WP	NE	NA	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Cyperusrotundus	Cyperaceae	Herb	NF/WP	NE	LC	1	0	0	0	0	0	0	0	0	1	0	0	0	0
Cyrtospermasenegalense	Araceae	Herb	NE	Green	LC	0	0	0	1	0	1	0	0	0	0	0	1	1	1

Species list	**Family**	**Life form**	**Ecological Guild**	**Star Rating**	**IUCN Threatened Status**	**S 1**	**S 2**	**S 3**	**S 4**	**S 5**	**S 6**	**S 7**	**S 8**	**T 1**	**T 2**	**T 3**	**T4**	**T 5**	**T6**
Dalbergiahostilis	Papilionaceae	Climber	NPLD	Green	NA	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Dalbergiasaxatilis	Papilionaceae	Climber	NE	Green	NA	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Deinbolliapinnata	Sapindaceae	Tree	NPLD	Green	NA	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Desmodiumadscendens	Papilionaceae	Shrub	NE	Green	LC	0	1	0	0	0	0	0	0	1	0	1	0	0	1
Desmodiumgangeticum	Papilionaceae	Shrub	NF/WP	NE	NA	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Dichapetallumangolense	Dichapetalaceae	Climber	NPLD	Green	NA	0	0	1	0	0	0	1	1	0	0	0	0	0	0
Dichapetalumpallidum	Dichapetalaceae	Climber	SB	Green	NA	0	0	0	1	1	0	0	0	0	0	0	0	0	0
Dioclearefl exa	Papilionaceae	Climber	Pioneer	Green	NA	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Diospyrosmonbuttensis	Ebenaceae	Tree	SB	Green	NA	1	0	0	0	0	0	0	1	0	0	0	0	0	0
Dissotisgrandiflora	Melastomataceae	Herb	Pioneer	NE	NA	0	0	0	0	0	1	1	0	0	0	0	0	0	0
Dissotisrotundifolia	Melastomataceae	Shrub	Pioneer	Green	NA	0	0	1	0	1	0	0	0	0	0	0	0	0	0
Dracaena arborea	Agavaceae	Tree	Pioneer	Green	NA	1	0	1	0	1	0	0	1	0	0	0	0	0	0
Ecliptaprostrata	Compositae	Shrub	NF/WP	NE	NA	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Elaeisguineensis	Palmae	Tree	Pioneer	Pink	NA	1	1	1	0	1	0	0	1	0	0	0	0	0	0
Ficus sp.	Moraceae	Tree	Pioneer	Green	NA	1	1	0	0	0	0	0	0	0	0	0	0	0	0

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Flacourtiaflavescens	Flacourtiaceae	Tree	Pioneer	Green	NA	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Flagellariaguineensis	Flagallariaceae	Climber	Pioneer	Green	NA	0	1	1	0	1	0	1	1	0	0	0	0	0	0
Funtumiaafricana	Apocynaceae	Tree	Pioneer	Green	NA	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Glyphaeabrevis	Tiliaceae	Tree	SB	Green	NA	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Griffoniasimplicifolia	Caesalpiniaceae	Climber	NPLD	Green	NA	1	1	1		1	0	0	0	0	0	0	0	0	0
Halleastipulosa	Rubiaceae	Tree	Swamp	Red	V	0	0	0	1	0	1	0	0	0	0	0	0	0	0
Harunganamadagascariensis	Guttiferae	Tree	Pioneer	Green	NA	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Heisteriaparvifolia	Olacaceae	Tree	SB	Green	NA	1	1	1	1	1	0	0	1	0	0	0	0	0	0
Holarrhena floribunda	Apocynaceae	Tree	Pioneer	Green	NA	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Homaliumletestui	Flacourtiaceae	Tree	NPLD	Green	NA	0	0	0	0	0	1	0	1	0	0	0	0	0	0
Hoslundiaopposita	Labiatae	Shrub	NF/WP	NE	NA	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Hugoniarufipilis	Linaceae	Climber	NPLD	Blue	NA	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Ipomoea asarifolia	Convolvulaceae	Climber	NF/WP	NE	NA	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Ipomoea mauritana	Convolvulaceae	Climber	NF/WP	NE	NA	0	1	0	0	0	1	0	0	0	0	1	0	0	0
Ipomoea pes-caprae	Convolvulaceae	Climber	NE	NE	NA	0	0	0	0	0	0	0	0	1	1	0	0	0	0

Species list	**Family**	**Life form**	**Ecological Guild**	**Star Rating**	**IUCN Threatened Status**	**S 1**	**S 2**	**S 3**	**S 4**	**S 5**	**S 6**	**S 7**	**S 8**	**T 1**	**T 2**	**T 3**	**T4**	**T 5**	**T6**
Ipomoea surattensis	Convolvulaceae	Climber	NF/WP	NE	NA	0	0	1	0	0	0	0	0	0	0	0	1	0	0
Kyllingapumila	Cyperaceae	Herb	NF/WP	NE	NA	0	0	0	0	0	0	0	0	1	1	0	0	0	0
Landolphiadulcis	Apocynaceae	Climber	NPLD	Green	NA	1	0	1	0	0	0	0	0	0	0	0	0	0	0
Lanneaacida	Anacardiaceae	Tree	NF/SP	NE	NA	1	0	1	0	1	0	1	1	0	0	0	0	0	0
Lanneawelwitschii	Anacardiaceae	Tree	Pioneer	Green	NA	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Lygodiummicrophyllum	Fern	Herb	NE	Green	LC	0	1	0	1	0	1	0	0	0	0	0	0	0	0
Macarangahurifolia	Euphorbiaceae	Tree	Pioneer	Green	NA	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Macarangabarteri	Euphorbiaceae	Tree	Pioneer	Green	NA	0	1	0	0	1	0	0	1	0	0	0	0	0	0
Mallotusoppositifolius	Euphorbiaceae	Tree	SB	Green	NA	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Mangiferaindica	Anacardiaceae	Tree	NF/SP	NE	DD	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Manihotesculenta	Euphorbiaceae	Shrub	NE	NE	NA	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Manniophytonfulvum	Euphorbiaceae	Climber	NPLD	Green	NA	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Manoteslongiflora	Connaraceae	Climber	NE	Green	NA	0	0	1	0	0	0	0	1	0	0	0	0	0	0
Margaritariadiscoidea	Euphorbiaceae	Tree	Pioneer	Green	NA	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Mariscuslongibracteatus	Cyperaceae	Herb	NF/WP	NE	NA	1	0	0	0	0	0	0	0	0	0	0	0	0	0

Species list	**Family**	**Life form**	**Ecological Guild**	**Star Rating**	**IUCN Threatened Status**	**S 1**	**S 2**	**S 3**	**S 4**	**S 5**	**S 6**	**S 7**	**S 8**	**T 1**	**T 2**	**T 3**	**T4**	**T 5**	**T6**
Mezoneuronbenthamianum	Caesalpiniaceae	Climber	Pioneer	Green	NA	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Microdesmispuberula	Pandaceae	Tree	SB	Green	NA	0	1	0	0	1	0	0	0	0	0	0	0	0	0
Millettiabarteri	Papilionaceae	Climber	Swamp	Green	NA	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Millettiazechiana	Papilionaceae	Tree	Pioneer	Green	LC	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Monodoratenuifolia	Annonaceae	Tree	Pioneer	Green	NA	1	0	0	0	1	0	0	0	0	0	0	1	1	1
Morindalucida	Rubiaceae	Tree	Pioneer	Green	NA	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Morindamorindoides	Rubiaceae	Climber	NPLD	Green	NA	1	0	1	0	0	0	0	0	0	0	0	0	0	0
Mussaendaerythrophylla	Rubiaceae	Climber	Pioneer	Green	NA	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Nephrolepisbiserrata	Fern	Herb	NE	Green	NA	1	1	1	0	0	1	0	0	0	0	0	0	0	0
Newbouldialaevis	Bignoniaceae	Tree	Pioneer	Green	NA	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Oplismenusburmanii	Gramineae	Herb	NF/WP	NE	NA	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Ourateasulcata	Ochnaceae	Shrub	SB	Green	NA	0	0	0	0	1	0	0	1	0	0	0	0	0	0
Pandanus candelabrum	Pandaceae	Tree	Swamp	Blue	NA	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Parkiabicolor	Mimosaceae	Tree	NPLD	Green	LC	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Paullina pinnata	Sapindaceae	Climber	Pioneer	Green	NA	0	1	0	0	0	0	0	0	0	0	0	0	0	0

Species list	**Family**	**Life form**	**Ecological Guild**	**Star Rating**	**IUCN Threatened Status**	**S 1**	**S 2**	**S 3**	**S 4**	**S 5**	**S 6**	**S 7**	**S 8**	**T 1**	**T 2**	**T 3**	**T4**	**T 5**	**T6**
Pentaclethramacrophylla	Mimosaceae	Tree	NPLD	Green	NA	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Pentodonpentandrus	Rubiaceae	Shrub	NF/WP	NE	LC	0	0	0	0	0	1	0	0	0	0	1	0	0	0
Perotisindica	Gramineae	Herb	Pioneer	NE	NA	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Phyllanthusniruroides	Euphorbiaceae	Herb	NE	NE	NA	0	1	0	0	0	1	0	0	0	0	1	1	1	1
Pneumatopterisafer	Fern	Herb	NE	Green	NA	0	0	0	1	0	0	0	0	0	0	0	1	0	1
Premnaquadrifolia	Verbanaceae	Climber	Pioneer	Blue	NA	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Psychotriayapoensis	Rubiaceae	Shrub	NE	NE	NA	0	0	0	1	0	1	0	0	0	0	0	0	0	0
Pycnanthusangolensis	Myristicaceae	Tree	NPLD	Pink	NA	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Rafiahookeri	Palmae	Tree	Swamp	Green	NA	0	0	0	1	0	1	0	0	0	0	0	0	1	1
Rauvolfiacumminsii	Apocynaceae	Shrub	SB	Blue	NA	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Rauvolfiavomitoria	Apocynaceae	Tree	Pioneer	Green	NA	1	1	1	0	1	0	0	1	0	1	1	0	0	0
Sansevierialiberica	Agavaceae	Herb	NE	Blue	NA	0	0	0	0	0	0	0	0	1	0	1	0	0	0
Scleriaboivinii	Cyperaceae	Herb	Pioneer	Green	NA	1	0	1	1	1	1	1	1	0	0	0	0	0	0
Scleriaverticellata	Cyperaceae	Herb	Pioneer	Green	NA	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Selaginellamyosorus	Fern	Herb	NE	Green	NA	1	1	1	0	1	0	1	1	0	0	0	0	0	0

Species list	**Family**	**Life form**	**Ecological Guild**	**Star Rating**	**IUCN Threatened Status**	**S 1**	**S 2**	**S 3**	**S 4**	**S 5**	**S 6**	**S 7**	**S 8**	**T 1**	**T 2**	**T 3**	**T4**	**T 5**	**T6**
Setariabarbata	Gramineae	Herb	NF/WP	NE	NA	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Sidalinifolia	Malvaceae	Herb	NE	NE	NA	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Smeathmanniapubescens	Passifloraceae	Tree	SB	Green	NA	1	1	1	1	1	1	1	1	0	0	0	0	0	0
Smilax kraussiana	Smilacaceae	Climber	Pioneer	Green	NA	1	1	1	1	1	0	0	1	0	0	0	0	0	0
Solenangisscandens	Orchidaceae	Herb	NE	Green	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Solenostemonmonostachyus	Labiatae	Shrub	NF/WP	NE	NA	1	0	0	0	0	0	0	0	0	1	0	0	0	0
Spermacoceverticillata	Rubiaceae	Shrub	NE	NE	NA	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Sporoboluspyramidalis	Gramineae	Herb	NF/WP	NE	NA	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Stachytaphetaindica	Verbanaceae	Shrub	NF/WP	NE	NA	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Sterculiaoblonga	Sterculiaceae	Tree	NPLD	Green	NA	1	1	1	0	1	0	0	1	0	0	0	0	0	0
Sterculiatragacantha	Sterculiaceae	Tree	Pioneer	Green	NA	1	1	1	0	0	0	1	1	0	0	0	0	0	0
Symphoniaglobulifera	Guttiferae	Tree	Swamp	Green	NA	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Syzygiumguineense var. littorale	Myrtaceae	Tree	NE	Blue	NA	1	0	1	0	1	0	0	0	1	1	1	0	0	1
Tabanaemontanacrassa	Apocynaceae	Tree	SB	Green	NA	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Talinumtriangulare	Portulaceae	Shrub	NF/WP	NE	NA	0	0	0	0	0	0	0	0	0	0	1	0	0	0

Species list	**Family**	**Life form**	**Ecological Guild**	**Star Rating**	**IUCN Threatened Status**	**S 1**	**S 2**	**S 3**	**S 4**	**S 5**	**S 6**	**S 7**	**S 8**	**T 1**	**T 2**	**T 3**	**T4**	**T 5**	**T6**
Tetraceraalnifolia	Dilleniaceae	Climber	NE	Green	NA	1	1	0	0	1	1	0	0	0	0	0	0	0	0
Tetraceradinklagii	Dilleniaceae	Climber	NE	Blue	NA	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Tristemmahirtum	Melastomataceae	Shrub	NF/WP	NE	NA	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Triumfettacordifolia	Tiliaceae	Shrub	NF/WP	NE	NA	1	0	1	0	0	0	0	0	0	0	0	0	0	0
Triumfettarhomboidea	Tiliaceae	Shrub	NE	NE	NA	0	0	0	0	0	1	0	0	0	1	0	0	0	0
Uapacatogoensis	Euphorbiaceae	Tree	NF/WP	NE	NA	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Uvariaafzelii	Annonaceae	Climber	NPLD	Green	NA	1	0	1	0	1	0	0	0	0	0	0	0	0	0
Uvariachamae	Annonaceae	Climber	NE	Blue	NA	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Vitexdoniana	Verbanaceae	Tree	NF/SP	NE	NA	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Voacangaafricana	Apocynaceae	Tree	Pioneer	Green	NA	1	0	1	0	0	0	0	0	0	0	0	0	0	0
Waltheriaindica	Sterculiaceae	Shrub	NF/WP	NE	NA	1	0	1	0	0	0	1	1	0	0	0	0	0	0
Xylopiarubescens	Annonaceae	Tree	Swamp	Gold	NA	0	1	0	0	1	1	0	0	0	0	0	0	0	0
Xylopiastaudtii	Annonaceae	Tree	SB	Green	NA	1	0	0	1	0	0	0	1	0	0	0	0	0	0
Zanthoxylumzanthoxyloides	Rutaceae	Tree	NF/SP	NE	NA	0	1	0	0	0	0	0	0	0	1	0	0	0	0
						66	54	43	21	38	24	18	30	9	12	10	8	5	10

B.3.2 Fauna

Table B.29 Wildlife species observed in AoI (dry season)

COMMON NAME	SCIENTIFIC NAME	NUMBERS RECORDED	IUCN STATUS	NATIONAL PROTECTION STATUS
Mammals, Squirrels and Rats				
Rope Squirrel	*Funisciurus pyrropus*	1	LC	Schedule III
Giant Gambian Rat**	*Cricetomys gambianus*	1	LC	Schedule III
Cane Rat / Grasscutter**	*Thryonomys swinderianus*	6	LC	Schedule III
Giant Forest Squirrel**	*Protoxerus stageri*	2	LC	Schedule III
Reptiles				
Black snake (Juvenile)	*Unidentified*	1	Unknown	Unknown
Birds				
Black Kite	*Milvus migrans parasites*	13	LC	Schedule I
Pied Crow	*Corvus albus*	7	LC	
African Pied Hornbill	*Tockus fasciatus*	4	LC	
Hooded Vulture	*Necrosyrtes monachus*	2	EN	
Shining Blue kingfisher	*Alcedo quadribrachys*	3	LC	
Red-Billed Dwarf Hornbill	*Tockus camurus*	5	LC	
Fire-Bellied Woodpecker	*Dendropicos pyrrhogaster*	2	LC	
Black Headed Oriole	*Oriolus brachyrhynchus*	1	LC	
Vieillot's Black Weaver **	*Ploceus nigerrimus*	120	LC	Schedule II

COMMON NAME	SCIENTIFIC NAME	NUMBERS RECORDED	IUCN STATUS	NATIONAL PROTECTION STATUS
Village Weaver**	*Ploceus cucullatus*	500	LC	Schedule II
Yellow-Mantled Weaver**	*Ploceus tricolor*	150	LC	Schedule II
Senegal Coucal	*Centropus grillii*	2	LC	Schedule I
Whimbrel	*Numenius phaeopus*	1	LC	
Western Reef Heron	*Egretta gularis*	2	LC	
Cattle egret	*Bubulcus ibis*	5	LC	

** Numbers estimated for observed population; *(LC= Least Concern; EN= Endangered)*

Table B.30 Small mammal capture checklist (wet season)

Species	Common Name	No. of Captures	% Occurrence
Mus musculoides	Pygmy Mouse	4	**50.0**
Praomys tullbergi	Soft-furred Mouse	3	**37.5**
Mastomys erythroleucus	Multimammate Mouse	1	**12.5**
Total Captures		**8**	**100**
No. of Species		**3**	

Table B.31 Other small mammals (rodents) recorded using oher methods (wet season)

Species	Common Name	Recording Method	Conservation Significance	
			Global (IUCN)	Ghana
Cricetomys gambianus	Giant Pouched Rat	DO/Int	LC	S2
Euxerus erythropus	Striped Ground Squirrel	DO/Int	LC	S2
Atherurus africanus	Brush- tailed Porcupine	DO/Int	LC	S2
Anomalurus beecrofti	Beecroft's Flying Squirrel	DO/Int		S1
Epixerus ebii	Red-headed Forest Squirrel	DO/Int		S1

Table B.32 Checklist of large mammals recorded in the Western region

Common Name	Scientific Name	Conservation Significance	
		IUCN	National
PHOLIDOTA			
Manidae			
Giant pangolin	*Smutsia gigantean*	NT	S1
Long-tailed pangolin	*Manis tetradactyla*	LC	SI
Tree pangolin	*Phataginus tricuspis*	NT	SI
PRIMATES			
Galagonidae			
Senegal bushbaby (galago)	*Galago senegalensis*	LC	S1
Loridae			
Bosman's potto	*Perodicticus potto*	LC	S1
Cercopithecidae			
Mona monkey	*Cercopithecus mona*		S2

Common Name	Scientific Name	Conservation Significance	
		IUCN	**National**
Spot-nosed monkey	*Cercopithecus petaurista*	LC	S2
Black-and-white colobus monkey	*Colobus polykomos*		S1
CARNIVORA			
Herpestidae			
Slender mongoose	*Herpestes sanguineus*	LC	S2
Marsh mongoose	*Atilax paludinosus*	LC	S2
Common cuisimanse	*Crossarchus obscurus*	LC	S2
Viverridae			
African civet	*Civettictis civetta*	LC	S2
African palm civet	*Nandinia binotata*	LC	S2
Common genet	*Genetta genetta*	LC	S2
Blotched genet	*Genetta tigrina*	LC	S2
ARTIODACTYLA			
Tragulidae			
Water Chevrotain	*Hyemoschus aquaticus*	LC	S2
Bovidae			
Royal Antelope	*Neotragus pygmaeus*	LC	S2
Maxwell's duiker	*Philantomba maxwellii*	LC	S2
Black duiker	*Cephalophus niger*	LC	S2
Bushbuck	*Tragelaphus scriptus*	LC	S2
HYRACOIDEA			
Tree Hyrax	*Dendrohyrax dorsalis*	NT	S2

IUCN = IUCN Conservation Status, **LC** = Least Concern, NT = Vulnerable,
National = National Protection Status: **First Schedule** = SI, **Second Schedule** = S2

Table B.33 Checklist of herpetofaunal species recorded and their conservation significance

Species	Common Name	Conservation Significance	
		IUCN	National
HERPETOFAUNA	**Reptiles/Amphibians**		
AMPHIBIA			
Phrynobatrachidae			
Phrynobatrachus latifrons	Ahl's River Frog	LC	
Bufonidae			
Amietophrynus maculates	Flat-backed Toad	LC	
Dicroglossidae			
Hoplobatrachus occipitalis	Crowned Bullfrog	LC	
Arthroleptidae			
Arthroleptis poecilonotus	West African Screeching Frog	LC	
Ptychadenidae			
Ptychadena bibroni	Broad-banded Grass Frog	LC	
Reptilia			
Chelonia	**Tortoises/Turtles/Terrapins**		
Pelomedusidae			
Pelomedusa subrufa	Marsh Terrapin		
Pelusios gabonensis	Gaboon Terrapin		S2
Squamata: *Lacertilia*	**Lizards**		
Agamidae			
Agama agama	Agama Lizard	LC	

Species	Common Name	Conservation Significance	
		IUCN	National
Scincidae			
Panaspis togoensis	Red-tailed Skink	LC	
Trachylepis perotettii	Orange-flanked Skink	LC	
Trachylepis affinis	Senegal Mabuya	LC	
Gekkonidae			
Hemidactylus brookii	Brook's House Gecko	LC	
Chamaeleonidae			
Chamaeleo gracilis	Graceful Chameleon		S2
Varanidae			
Varanus niloticus	Nile Monitor	LC	S1
Squamata: *Serpentes*	**Snakes**		
Boidae			
Python regius	Royal Python		
Python sebae	African Python	LC	S2
Colubridae			
Thelothornis kirtlandii	Twig Snake	LC	S5
Philothamnus semivariegatus	Green Tree Snake	LC	S5
Psammophis phillipsi	Olive Sand Snake	LC	S5
Boiga blandingii	Brown Tree Snake		
Grayia smythii	Water Snake		
Dasypeltis scabra	Egg-eating Snake		
Thelothornis kirtlandii	Twig Snake		
Elapidae			
Dendroaspis viridis	Green Mamba	LC	S5
Naja melanoleuca	Black Cobra	LC	S5
Viperidae			
Causus maculates	Night Adder	LC	S5
Bitis gabonica	Gaboon Viper		
Bitis nasicornis	Rhinoceros Viper		

Species	Common Name	Conservation Significance	
		IUCN	National
Number of Species	**19**		

IUCN = IUCN Conservation Status, **LC** = Least Concern, NT = Vulnerable,
National = National Protection Status: **First Schedule** = SI, **Second Schedule** = S2

Table B.34 Checklist of avifaunal species recorded and their conservation significance (wet season)

Family	Common Name	Scientific Name	IUCN Status
Accipitridae	Yellow Bill Kite	*Milvus migrans parasites*	
	Hooded Vulture	*Necrosyrtes monachus*	EN
	African Goshawk	*Accipiter tachiro*	LC
Alcedinidae	Woodland Kingfisher	*Halcyon senegalensis*	LC
	Malachite Kingfisher	*Alcedo cristata*	
	Blue Breasted Kingfisher	*Halcyon malimbica*	LC
Apopidae	African Palm Swift	*Cypsiurus parvus*	LC
	Common Swift	*Apus apus*	LC
Ardeidae	Grey Heron	*Ardea cinerea*	LC
	Black Headed Heron	*Ardea melanocephala*	LC
	Intermediate Egret	*Egretta intermedia*	
Bucerotidae	African Pied Hornbill	*Torkus fasciatus*	
	White crested Hornbill	*Tropicranus albicristatus*	
Cisticolidae	Grey Backed Camaroptera	*Camaroptera brachyuran*	
	Twany-Flanked Prinia	*Prinia subflava*	LC
	Whistling Cisticola	*Cisticola lateralis*	LC
	Red Faced Cisticola	*Cisticola erythrops*	LC

Family	Common Name	Scientific Name	IUCN Status
Columbidae	Tambourine Dove	*Turtur tympanistria*	LC
	Laughing Dove	*Streptopelia senegalensis*	LC
	Red Eyed Dove	*Streptopelia semitorquata*	LC
	African Green Pigeon	*Treron calvus*	LC
Corvidae	Pied Crow	*Corvus albus*	LC
Cuculidae	Senegal Coucal	*Centropus senegalensis*	LC
	Klass's cuckoo	*Chrysococcyx klass*	
Estrildidae	Bronze Mannikin	*Spermestes cucullatus*	
	Orange Cheeked Waxbill	*Estrilda melpoda*	LC
	Bar Breasted Firefinch	*Lagonosticta rufopicta*	LC
	Blue Billed Firefinch	*Lagonosticta rubricata*	LC
	Western Bluebill	*Spermophaga haematina*	LC
Malaconotidae	Yellow Crowned Gonolek	*Laniarius barbarous*	
Meropidae	Rosy Bee-Eater	*Merops malimbicus*	LC
	White Throated Bee-Eater	*Merops albicollis*	LC
	Little Bee-Eater	*Merops pusillus*	LC
Motacillidae	African Pied Wagtail	*Motacilla aguimp*	LC
Musophagidae	Western Grey Plantain Eater	*Crenifer piscator*	
Nectariniidae	Green Headed Sunbird	*Cyanomitra verticalis*	
	Olive Sunbird	*Cyanomitra olivacea*	
	Copper Sunbird	*Cinnyris cupreus*	
Passeridae	Northern Grey Headed Sparrow	*Passer griseus*	LC
Picidae	Gabon Wood Pecker	*Dendropicos gabonensis*	LC
Platysteiridae	Common Wattle Eye	*Platysterira cyanea*	
Ploceidae	Village Weaver	*Ploceus cucullatus*	LC
	Black necked Weaver	*Ploceus nigricollis*	LC

Family	Common Name	Scientific Name	IUCN Status
	Northern Red Bishop	*Euplectus franciscanus*	
Pycnonotidae	Little Greenbul	*Andropadus virens*	LC
	Yellow Whiskered Greenbul	*Andropadus latirostris*	LC
	Grey Headed Bristlebill	*Bleda canicapillus*	LC
	Common Bulbul	*Pycnonotus barbatus*	LC
Scolopacidae	Little Stint	*Calidris minuta*	LC
Sturnidae	Splendid Glossy Starling	*Lamprotornis splendidus*	LC
Sylviidae	Green Hylia	*Hylia prasina*	LC
Turdidae	African Thrush	*Tardus pelios*	

EN- Endangered; LC- Least Concern; Empty cells- Data deficient

Table B.35 Relative Abundance of 10 Most Dominant Bird Species Recorded (wet season report)

Common names	Scientific name	Species Encounter	Relative Abundance %
Common Swift	*Apus apus*	63	19.0
Village Weaver	*Ploceus cucullatus*	53	16.0
African Palm Swift	*Cypsiurus parvus*	34	10.3
Orange Cheeked Waxbill	*Estrilda melpoda*	26	7.9
Red Eyed Dove	*Streptopelia semitorquata*	20	6.0
Little Bee-Eater	*Merops pusillus*	19	5.7
Pied Crow	*Corvus albus*	17	5.1
Common Bulbul	*Pycnonotus barbatus*	16	4.8
Yellow Bill Kite	*Milvus migrans parasites*	15	4.5

Table B.36 Species of Value for Local Livelihood and Economy (wet season report)

COMMON NAME	SCIENTIFIC NAME	VALUE FOR LOCAL LIVELIHOOD AND ECONOMY
Mammals		
Giant Forest Squirrel*	*Protoxerus stangeri*	Selling price: GH₵ 10.00
Rope Squirrel	*Funisciurus pyrropus*	Selling price: GH☐ 10.00
Long tailed pangolin	*Uromanis tetradactyla*	Selling price: GH☐ 15.00
Royal Antelope	*Neotragus pygmaeus*	Selling price: GH☐ 25.00
Maxwell's Duiker	*Cephalophus maxwelli*	Selling price: GH☐ 80.00
Ogilby's Duiker	*Cephalophus ogilbyi*	Selling price: GH☐ 80.00
Black Duiker	*Cephalophus niger*	Selling price: GH☐ 80.00
Bushbuck	*Tragelaphus scriptus*	Selling price: GH☐ 300.00
Afrian Bush-Tailed Porcupine	*Atherurus africanan*	Rarely sold for money but is usually hunted for food. It is however not a preferred meat source by most people.
Giant Gambian Rat*	*Cricetomys gambianus*	Selling price: GH☐ 12.00
Cane Rat / Grasscutter*	*Thryonomys swinderianus*	Selling price: GH☐ 100.00
African Civet	*Viverra civetta*	Selling price: GH☐ 100.00
Egyptian Mongoose	*Herpestes ichneumon*	Selling price: GH☐ 25.00
Tree Dassie	*Dendrohyrax arboreus*	Selling price: GH☐30.00
Black-and-White Colobus	*Colobus vellerosus*	Selling price: GH☐ 40.00
Olive Colobus	*Colobus (Procolobus) verus*	Selling price: GH☐ 40.00
Potto	*Perodicticus potto*	Selling price: GH☐ 80.00

COMMON NAME	SCIENTIFIC NAME	VALUE FOR LOCAL LIVELIHOOD AND ECONOMY
Red River Hog	*Potamochoerus porcus pictus*	Selling price: GH☐ 120.00
Reptiles		
Nile Monitor	*Varanus niloticus ornatus*	Selling price: GH☐ 20.00
African Python	*Python sebae*	Selling price: GH☐ 30.00
Black cobra	*Naja melanoleuca*	Not eaten or sold. Not a target for hunting.
Dwarf Crocodile	*Osteolaemus tetraspis*	Selling price: GH☐ 20.00
Nile Crocodile	*Crocodylus niloticus*	Selling price: GH☐ 50.00
Bell's Hinged Tortoise	*Kinixys belliana nogueyi*	Selling price: GH☐ 5.00
Home's Hinged Tortoise	*Kinixys homeana*	Selling price: GH☐ 5.00
West-African Mud Turtle	*Pelusios castaneus*	Selling price: GH☐ 2.00
Birds		
Black Kite	*Milvus migrans parasites*	Mainly as a sources of food.
Pied Crow	*Corvus albus*	Mainly as a sources of food.
African Pied Hornbill	*Tockus fasciatus*	Mainly as a sources of food.
Hooded Vulture	*Neophron nonachus*	None
Shining Blue kingfisher	*Alcedo quadrabrachys*	Mainly as a sources of food.
Red-Billed Dwarf Hornbill	*Tockus camurus*	Mainly as a sources of food.
Fire-Billed Woodpecker	*Mesopicos pyrrhogaster*	None
Black Headed Oriole	*Oriolus brachyrhynchus*	

COMMON NAME	SCIENTIFIC NAME	VALUE FOR LOCAL LIVELIHOOD AND ECONOMY
Vieillot's Black Weaver	*Centropus grillii*	None
Vieillot's Black Weaver	*Ploceus nigerrimus*	None
Village Weaver	*Ploceus cucullatus*	None
Yellow-Mantled Weaver	*Ploceus tricolor*	None
Whimbrel	*Numenius phaeopus*	May be used as a source of food. But not usually hunted.
Western Reef Heron	*Egretta gularis*	May be used as a source of food. But not usually hunted.
Cattle egret	*Bubulcus ibis*	None

Appendix B.2

B.4 SOCIAL

Table B.37 Characteristics of the Ngalikpole Community

Characteristic	Description
History	Ngalikpole is believed to be one of the oldest communities in the Ellembelle District. The community was established around the 1400's by a woman named Kyeremadi. The people settled here to undertake fishing, farming and making sponge from tree barks as a packaging material for export. A third successor to the stool was called Ngale Ezoma Kpole, who was a herbalist. She prepared herbal medicine for women and helped many women to conceive and bear children. Over time, women who wanted to conceive came to the community for the herbal preparation. They would say they were going to Ngale Ezoma Kpole for herbal medicine. Hence, the community came to be known as Ngalikpole
Landscape/location	The topography of Ngalikpole is flat and sandy, with a long stretch of sandy beach. It is bordered in the west by Ngalichi in the, east by Eikwe, and in the north by Akpandue, A.B. Bokazo and Aloakpole.
Demographics	The community could not give an estimate of the total population size but reported an estimated total of 100 households. Residents are mainly from the Nzema, Ahanta, Fante and Ewe ethnic groups. The community consists of approximately 60 percent male and 40 percent females. The community has a young population, with an estimated 53 percent of the population being 18 years or younger. The economically active population (i.e. 18 to 59 years) makes up approximately 35 percent of the population.
Livelihood and Occupation	The economy of the area is largely based on fishing. Over 70 percent of the population are engaged in fishing activities, though some are also engaged in farming. Farmers have smallholdings due to scarcity of land. The slash and burn method is a common practice of land preparation in the community. The major cash crops grown are coconut and oil palm. Food crops such as cassava and maize are grown extensively both for subsistence and for cash. Petty trading, baking, poultry farming and piggery are the other forms of livelihood activities undertaken by the community.
Education and Skills	Overall, education levels in the community are considered to be low. It was reported that about a quarter of the adult population could not read or write. About 80 percent of the adult inhabitants of the community are unskilled.

Characteristic	Description
Social Infrastructure	Apart from a small kindergarten, the town does not have a primary school or JHS. Children attend school either at Ngalichi or Eikwe. Most of the houses are constructed of concrete walls and corrugated aluminium roofing. The community has no health post or clinic. One traditional birth attendant assists women to deliver their baby during an emergency. The town has one VIP toilet facility. Most inhabitants resort to open defecation. There are two waste disposal sites for the community. A borehole serves as the main source of potable water for the entire community. Motorbikes, taxis and mini-buses are the main means of transportation for the community.

Table B.38 Characteristics of the Ngalichi Community

Characteristics	Description
History	It is believed that the earliest settlers migrated from Shama and settled at Kprusi in the Ahanta West District before finally migrating to the present day Ngalichi.
Landscape/ location	Ngalichi is largely a rural community. The topography of the community is generally flat with a long stretch of open sandy beach. Bekuand Ngalikpole bound it on the west and east respectively. Akpandu and A.B. Bokazo communities lie to the north of Ngalichi.
Demographics	The population of the community is estimated to be 1100, which is made up of both Nzemas, and few Fantes. There are approximately 180 houses and an average household size of 6.1. The native Nzemas are both fishermen and farmers whilst the few Fantes are solely fishermen residing along the beach. The population increases during the major fishing season when migrant fishermen arrive from other inland communities.
Livelihood and occupation	Livelihood activities include fishing, fish mongering, farming, and informal trading. Farming is not lucrative in the area because their land is as fertile in comparison to surrounding communities. In addition, a small number of community members are formally employed with the Ghana Education Service
Education and skills	Educational standards as well as the literacy rate were reported to be low.
Social Infrastructure	The community has a basic KG school with teachers' accommodation. Majority of the teaching staff in the school are untrained. The housing units in this town are predominantly constructed from mud and thatch roofed. Ngalichi has no health post. Medical care is accessed mainly form Eikwe Hospital. The community has no toilet facility. There is one functioning borehole and three hand-dug wells. The community has created a dumping site, although dumping solid waste in open spaces is very common in the community. The major cause of the unsanitary conditions in the community is lack of toilet and waste disposal facilities.

Table B.39 Characteristics of the Beku Community

Characteristic	Description
History	Beku is one of the oldest communities in the Ellembelle district. It is believed that that the original inhabitants migrated from Effiduase in the Ashanti to Beku in the 17th century. According to the Chief, when one of the two women who originally settled died, the sole survivor lamented that " bako ye ya" (meaning it is painful to be alone) hence the name Beku. People in Beku were originally salt producing people and had direct trade relations with the Europeans. Moreover, due to its natural harbour, the community served as the main route to Tarkwa and Prestea where mining and timber business were carried out.
Landscape/ location	Beku is located on a flat open sandy beach. The community is bound to the west by Anonki, to the East by Ngalechi and to the north by Menzezor and Aloakpole.
Demographics	There are three main ethnic groups in the community, namely Nzemas, Fantes and Ewes. The community has estimated its population at around 1,170 with the native Nzemas representing over 80% of the population. The Nzemas are both farmers and fishermen while the Fantes and the Ewes are predominantly fishermen. There are estimated to be approximately 120 houses in the community (which suggests a high average household size if the population estimate is accurate).
Livelihood and occupation	Fishing (70%), farming (20%) and petty trading (8%) are the prominent livelihood activities undertaken in the community. Crops cultivated by farmers include coconuts, oil palm, pineapple, cassava, maize, and vegetables. Teaching and nursing were cited as options for formal employment taken by some community members. People reported to spending their income mainly on food, education and health. It was reported by some informants that women earn more than men (however this is not openly admitted among men). During the lean fishing season youth leave the village in search of work in Takoradi, Tarkwa and other large surrounding towns.
Education and Skills	There is a generally low education level in the community which is attributed to poverty and lack of funding for schools. A large percentage of pupils tend to drop out of school to fish as they enter the Junior secondary school. There is no difference between boys and girls in terms of enrolment and the majority of pupils begin school at the correct age.
Social Infrastructure	The village does not have a public school and has one private kindergarten. The community shares both Primary and Junior High with Ngalichi community, which is a kilometre away. Houses are mainly built with mud and raffia and roofed with thatch. There are no health facilities, toilets or potable water facilities in the community.
Cultural Heritage	Ngoane Azale and Korazo crocodile ponds lie on the western and eastern edges of the community. According to the locals, these ponds are gods and serve as habitat for crocodiles.

Table B.40 Characteristics of Anochi Community

Characteristic	Description
History	According to oral narrations, the earlier settlers migrated from Wassa Akropong. They were led by Anoekyi who later became the chief of the village. They were salt miners who had direct trade relations with European traders at Atuabo and Ahonlezo now Asamdasuazo. A second group who migrated from Kumasi in the Ashanti Region later joined them in the area, farming the land and later attempting to claim the Anochi land as theirs. A dispute ensued and after a decision from the Awulae in Atuabo (in the 1950s) the descendants of the original salt miners were granted title. A descendant of the original woman who came to the area was declared Chief and his name was Anochi.
Landscape/ Location	Anochi is a small coastal community with a relatively flat land surface with no significant hills. Atuabo borders the community on the west, with Beku to the east and Mezozo to the north. The coastal strip is characterized by open sandy beach of about 120 meters. The western and eastern edges of the community are covered with coconut plantations
Demographics	The town has about 182 houses and an estimated population of 1100 people with larger proportion of females. It is also noted that there numerous single headed households in the village. There predominantly Nzemas and Ahantas people in the community, although are also Fantis and Ewes residing in the community.
Livelihood and occupation	Fishing, farming, petty trading, charcoal production and baking are the main economic activities undertaken. Crops include coconut, oil palm, groundnut and maize. In general the community has low-income levels. On key reason for this is the lack of access to markets for their crops and informal trading goods. Since the Ghana Gas project has been constructed there has been a reported reduction in farming as the project encroached on some of their farmlands. About 60% are estimated to be in fishing, 30% in farming and 10% in other services. Fishermen operate in Jawe Walfe and as far abroad as Cote d'Ivoire. There is limited formal employment, although some community members are employed with the Ghana Education Service (although they are not necessarily professionals). The inhabitants of Anochi spend the greater part of their income on food and children's school fees.
Education and Skills	There are generally low levels of educational attainment, usually terminating at the Junior high school level or at best senior high school.
Social Infrastructure	There are generally low levels of educational attainment, usually terminating at the Junior high school level or at best senior high school.

Table B.41 Characteristics of Asemde-Sauzo

Characteristic	Description
History	Asemda-Suazo was named after the Nana Asemda who first settled there and initially named Bosomle-Bo or "home of the gods". The place later served as a place of refuge for people from Atuabo and Anochi during times of war, and was referred to as Atuabo-Ahonlenzo or "the heart of Atuabo.
Demographics	The community has estimated its population at 639 made up of approximately 35 houses giving a very high average household size
Livelihood and occupation	The main land use is farming making up 80% of the village area. Buildings make 15 % and the least 5 % for other uses. The majority of households are engaged in production of local gin known as akpeteshie. The two other main economic activities are fishing and farming followed by livestock rearing. Types of crops cultivated include; maize, cassava, okra, and pineapple. In addition, the women indicated that they sell a large proportion of crops. Teachers and workers at Ghana Gas are the main formal employees in the community. The men indicated that out-migration was more significant than in-migration. This is a result of the limited employment opportunities as many people leave in search of work. Moreover, a large percentage of the youth have left for the city in search of work.
Education and Skills	The majority of families indicated that they do send their children to school. There is junior school enrolment at the basic level; however pupils tend to drop out as they enter the Junior high school.
Social Infrastructure	The community has two functioning boreholes and 2 wells which they use as their water source. The village does not have a public toilet facility or designated place for refuse disposal. Only three houses have private toilet facilities. There is no health centre in the community and villagers must travel to Eikwe for medical care. Electricity is used for lighting while fuel wood and charcoal are the main sources of fuel for cooking. According to the inhabitants; the narrow cul-de-sac roads leading to the village tend to be swampy and virtually impassable by a vehicle during heavy downpours.



LEGEND

EXISTING FACILITIES

- GHANA NATIONAL GAS COMPANY CENTRAL PROCESSING FACILITY (GNGC CPF)
- GNGC SALES GAS PIPELINE
- JUBILEE OFFSHORE PIPELINE

PROJECT COMPONENTS

- CONCESSION AREA
- ONSHORE RECEIVING FACILITY (ORF)
- PLANNED ONSHORE PIPELINE
- PLANNED OFFSHORE PIPELINE
- DIRECT AREA OF INFLUENCE
- COMMUNITY WITHIN DIRECT AREA OF INFLUENCE
- NEIGHBOURING COMMUNITY
- COMMUNITY OUTSIDE DIRECT AREA OF INFLUENCE
- DISTRICT BOUNDARY

Coordinate System: WGS 1984 UTM Zone 30N
Proiezione: Transverse Mercator
Datum: WGS 1984



Environmental Resources Management

Project	ESHIA for the OCTP Phase II Development Project Ghana
Annex:	C — Social & Healthl Areas of Influence
Scale: 1:65,000	Project Number: 0272709
Revision: 01	Date: Mar 2015
Client: eni Ghana	
Size: A3	Layout: -
Drawn by: MAR	PjM: -
File: 01_SocialAoI_A3	

PROJECTION: WGS 1984 UTM Zone 30N

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Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community
Content may not reflect National Geographic's current map policy. Sources: National Geographic, Esri, DeLorme, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

AKOTO
AWIASO
JIAKPOLE
BAMIANKAW
MYEJINA
AKACHIAMA
MAMBUEN
ALAPOKE
APENTUO
TANTAN
AMISHIBIEBOKASO
AROBASO
ALUMKAZO
BEYIN
KABOKU
ASEMDA-SUAZO
ATUABO
ANOCHI
BEKU
NGALICHI
NGALIKPOLE
KRISAN
NKOKRABA
EIKWE
SANZULE
BAKANTA
MPEIN
NYENSI

J O M O R O

E L L E M B E L L E

SANKOFA 2A ST
GYE NYAME 1
SANKOFA D
SANKOFA EAST C
SANKOFA EAST D

LEGEND

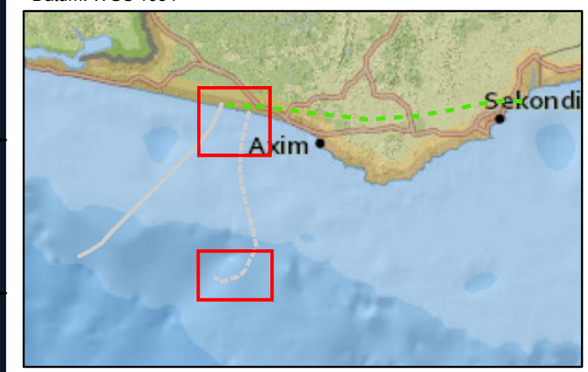
EXISTING FACILITIES

- GHANA NATIONAL GAS COMPANY CENTRAL PROCESSING FACILITY (GNGC CPF)
- GNGC SALES GAS PIPELINE
- JUBILEE OFFSHORE PIPELINE

PROJECT COMPONENTS

- PROJECT COMPONENTS
- ONSHORE RECEIVING FACILITY (ORF)
- FLOATING PRODUCTION STORAGE AND OFFLOADING (FPSO) VESSEL
- WELL LOCATION
- OPTIONAL ONSHORE PIPELINE
- PLANNED OFFSHORE PIPELINE
- AREA OF INTEREST FOR SURFACE WATER, SEDIMENT QUALITY, PROTECTED AREAS AND AVIFAUNA
- AREA OF INTEREST FOR OTHER BIOPHYSICAL ASPECTS
- SETTLEMENT
- DISTRICT BOUNDARY

Coordinate System: WGS 1984 UTM Zone 30N
Proiezione: Transverse Mercator
Datum: WGS 1984



Environmental Resources Management

Project
ESHIA for the OCTP Phase II Development Project
Ghana

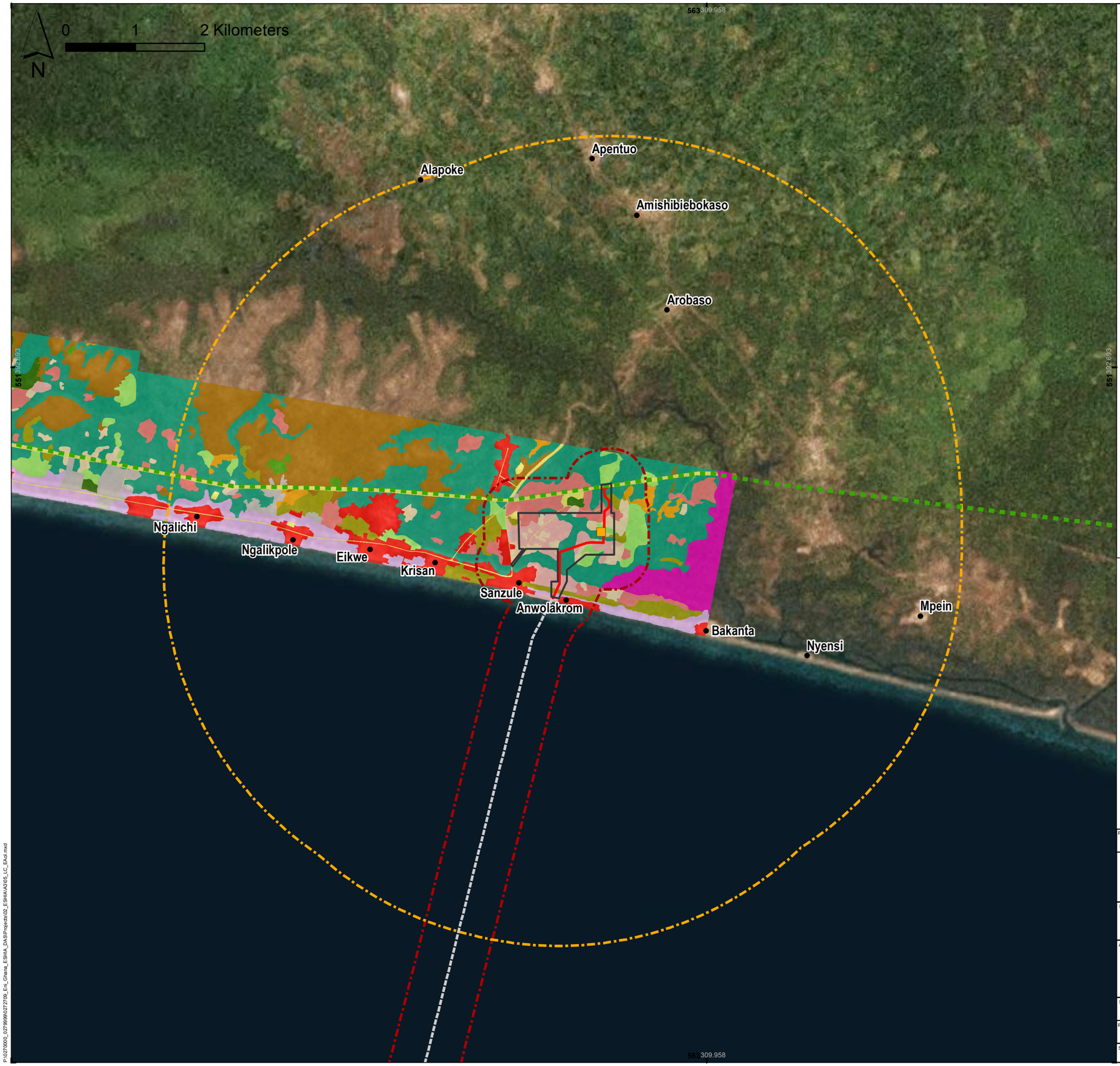
Annex: C
Environmental Areas of Influence

Scale	Project Number	Client
1:80,000	0272709	eni Ghana
Revision: 02	Date: Mar 2015	
Size: A3 / Layout: -	Drawn by: MAR / PjM: -	File: 02_EnvironAois

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Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community
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PROJECTION: WGS 1984 UTM Zone 30N



LEGEND

EXISTING FACILITY

- GNGC SALES GAS PIPELINE

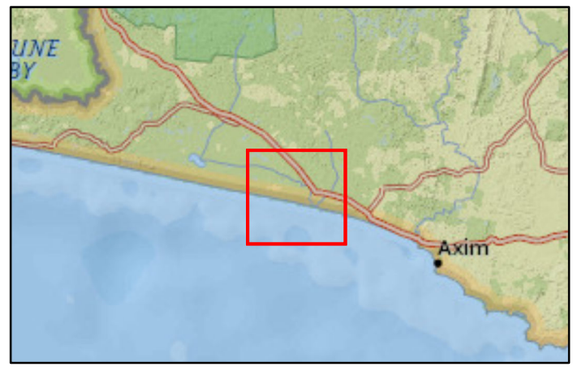
PROJECT COMPONENTS

- ONSHORE RECEIVING FACILITY (ORF)
- CONCESSION AREA
- PLANNED ONSHORE PIPELINE
- PLANNED OFFSHORE PIPELINE
- AOI FOR SURFACE WATER, SEDIMENT QUALITY, PROTECTED AREAS AND AVIFAUNA
- AREA OF INTEREST FOR OTHER BIOPHYSICAL ASPECTS

VEGETATION MAP

- BARE SOIL
- BUILT GROUND
- COASTAL COCONUT PALM PLANTATIONS
- DEFORESTED AREA
- DEGRADED COCONUT PALM PLANTATIONS
- DEGRADED VEGETATION
- INLAND COCONUT PALM PLANTATIONS
- MIXED FOREST AND COCONUTS PALM PLANTATIONS
- MIXED VEGETATION, FOREST, PALMS AND GRASSLAND
- SAVANNA PATCH WITH GRASS AND SEDGES
- SAVANNA WITH PATCH OF FOREST AND PALMS
- SMALL PATCH OF FOREST
- SWAMP AND MANGROVE FOREST
- WET EVERGREEN FOREST
- WET EVERGREEN FOREST WITH PALMS
- SETTLEMENT WITHIN AREA OF INFLUENCE

Coordinate System: WGS 1984 UTM Zone 30N
Proiezione: Transverse Mercator
Datum: WGS 1984



Revision	Date	Description	Checked by
00	xx-xx-xxxx	xx-xx-xxxx	Xxx

Environmental Resources Management

Project: ESHIA for the OCTP Phase II Development Project
Ghana

Annex: C — Habitat Map

Scale	Project Number	Client
1:55,000	0272709	eni Ghana
Revision	**Date**	
03	Mar 2015	

Size	Layout	Drawn by	PjM	File
A3	-	MAR	-	05_LC_EAoI

PROJECTION: WGS 1984 UTM Zone 30N

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Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community
Content may not reflect National Geographic's current map policy. Sources: National Geographic, Esri, DeLorme, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

ATUABO

850

60% 30%

2 12 2

EIKWE

206

70% 30%

from the standpipes

KRISAN

>110

4 - broken 1

1

BAKANTA

>100

2

6

SANZULE

136

60% 27%

1 2 1

1

House hold
Fishing
Farming
Kindergarten
Primary school
Junior high school
National vocational training institute
Hospital
CHPS compound
Traditional birth attendant
Private toilet
Community toilet
Well
Water
Borehole
Waste
Cemetery
Site shrine

ATUABO
1700

EIKWE
1360

KRISAN
1350

SANZULE
1600

eni Concession

BAKANTA
900

Environmental Resources Management

Project: ESHIA for the OCTP Phase II Development Project
Ghana

Annex: C

Social & Health Infographic Map

Scale	Project Number	Client
-	0272709	eni Ghana
Revision: 04	Date: Mar 2015	
Size: A3 / Layout: -	Drawn by: AF / PM: -	File: 03_Infographic_social

Annex D
Terms of Reference of the EIS

ABSTRACT

This Annex includes the Termes of References for the EIS report, as defined within the Scoping Report submitted to EPA in December 2014.

March 2015	03	Interim Draft Issued for disclosure	ERM	HSE & CI Manager Juan Deffis HSE Project Manager Giuseppe Nicotra	Development Project Manager Ezio Miguel Lago
Date	**Revision**	**Revision Description**	**Prepared**	**Checked**	**Approved**

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Summary of Revisions

Date	Revision	Revision Description	Prepared	Checked	Approved
27-02-2015	02	Issued for submission to Authorities	ERM	HSE & CI Manager Juan Deffis HSE Project Manager Giuseppe Nicotra	Development Project Manager Ezio Miguel Lago
23-02-2015	01	Issued for comments	ERM	eni SEQS/SAL	G. Nicotra
26-01-2015	00	-	Cristina O.	Henry C.	Daniele S.

D. TERMS OF REFERENCE FOR EIS

D.1.1 INTRODUCTION

This chapter provides the proposed Terms of Reference for the EIS and is structured as follows.

- Steps that will be carried out to complete the EIS process;
- Baseline studies;
- Stakeholder engagement;
- Structure of the EIS Report (or ESHIA); and
- Schedule for the EIS process.

D.1.2 STEPS TO COMPLETE THE EIS PROCESS

Following submission of the Scoping Report to EPA, the EIS team will undertake the following tasks.

- The Project description will be updated and finalised as further details become available from the Project's technical team. The EIS team will work with the technical team to confirm parameters for the modelling studies and impact assessment;
- Baseline data collection and specialist studies (including modelling studies) will be completed and reported in an environmental social baseline and health chapter as part of the EIS Report (see Section D.1.3 below);
- Impact assessment will be undertaken to determine significance ratings according to predefined impact assessment methodology. The proposed impact assessment methodology is attached in Annex E;
- Mitigation and monitoring measures will be developed and an Environmental, Social and Health Management Plan (ESHMP) will be prepared as part of the EIS;
- Stakeholder engagement will continue throughout the EIS process (see Section 0 below); and
- The EIS Report will be submitted for regulator review and public comment.

D.1.3 PROPOSED BASELINE STUDIES

During the EIS, available public, scientific and statistic information will be collated and reviewed and studies will be undertaken to provide additional information on the current environmental socio-economic and health baseline conditions against which the identified potential impacts will be assessed. In addition to further desktop research, specialist studies will also be undertaken to assess key issues identified during coping. Specialists with qualifications in the particular resource area and knowledgeable of the local conditions will contribute to gather additional and specific information. The scope of these specialist studies are described in Table D**.0.1**.

D.1.3.1 Environmental Baseline

Determination of the existing environmental conditions will cover both the wet and the dry seasons to accurately characterize the Project setting (Table D**.0.1**). Dry season field

surveys were undertaken in March and April 2014. The wet season field surveys were carried out in November-December 2014. Supplemental field surveys will be conducted if required.

D.1.3.2 Socio-economic and Health Baseline

Socio-economic and health baseline information will be collected using a range of methods, including review of secondary data and supplemented with primary data collection through key informant and focus group interviews within the communities located within the selected direct area of influence (see Chapter 4 of the Report): Sanzule, Bakanta, Krisan, Eikwe, Ngalekpole, Ngaliki, Beku, Anochi, Asemdasuazo and Atuabo. Selected key informants in the Extended Area of Influence will also be interviewed.

Baseline surveys will be used to ground-truth available secondary data and characterise the communities, as well as to contextualise the socio-economic, socio-cultural, political and health environment as well as overall quality of life. The data collection process will focus on gathering information based around several data categories as outlined in Table D.0.1.

The data collection work will focus on providing a description of the socio-economic status and health condition of potentially affected communities and stakeholders. Findings of the consultation process will also inform the assessment of socio-economic, cultural and health impacts.

Table D.0.1 Overview of Scope of Baseline Studies

Resource	Potential Area of Influence	Approach	Parameters
Environmental Baseline Studies			
Terrestrial Soils and Geology	Soils in the immediate area of the proposed sites (Project footprint)	A specialist will undertake study of: • soil 5ocali-chemical characteristics; • regional geology; • existing soil contamination; • soil capability for agricultural use • land use (present and historic). Investigation will include observations, test pits (for soil profiling), and laboratory analysis of three to four surface soil samples on and around the Project site for each season. An additional four samples (30 cm deep – 0-15 cm and 15-30 cm depths) were taken along the pipeline ROW during the wet season.	For field and laboratory testing of soil samples: • grain size • total organic carbon • hydrocarbons (TPH and PAHs) • oil and grease • heavy metals
Freshwater Sediments	Freshwater sediment characteristics and benthic community composition	A specialist will describe the 5ocali-chemical characteristics of the freshwater sediments. Investigation will include sampling at a minimum of four locations along the Amansuri River where also water quality sampling will take place (see below) for both seasons. Two additional samples were taken during the wet season within seasonally inundated areas along the pipeline ROW, as identified. This will include also an investigation of macro invertebrate community.	For field and laboratory testing of freshwater sediment samples: • grain size • total organic carbon • hydrocarbons (TPH and PAHs) • oil and grease • heavy metals • macrobenthos
Surface water	Surface water bodies within the zone of influence (mainly Amansuri River)	A specialists will carry out a study to: • determine surface water conditions; • determine quality of surface • identify public and private surface water use sources	For field and laboratory testing of surface water samples: • temperature, pH, salinity and turbidity • biological oxygen demand (BOD) • chemical oxygen demand (COD) • dissolved and suspended solids

Resource	Potential Area of Influence	Approach	Parameters
		in the potential area of influence. Investigation will include observations as well as laboratory and field analysis of samples from three to four sampling points at Amansuri River. Sample locations will be selected to represent the surface water bodies identified, including different locations in the Amansuri river (upstream midstream, and downstream on the river mouth).	• total petroleum hydrocarbons (TPH) and polycyclic aromatic hydrocarbons (PAHs) • oil and grease • heavy metals • microbiology • nutrients • chlorophyll a • phytoplankton and zooplankton
Geohydrology	Groundwater within the zone of hydrological influence, both shallow and deep	A specialist will carry out a study to: • determine groundwater characteristics and conditions; • determine quality of groundwater with respect to use for process water and potable water; and • identify public and private water use sources (eg boreholes, shallow wells) in the potential area of influence. Investigation will include analysis of three samples from existing community boreholes or shallow wells in Sanzule community and one sample in Bakanta and available desktop and secondary information.	For field and laboratory testing of groundwater samples: • temperature, pH, salinity and dissolved oxygen • BOD • turbidity and conductivity • dissolved and suspended solids • hydrocarbons • heavy metals • microbiology • nutrients
Terrestrial Ecology	Terrestrial species within the footprint of the Project as well as in the defined area of influence (including ORF site and pipeline RoW).	An ecologist will conduct a survey of the terrestrial environment to: • describe the existing vegetation and habitat types • identify plants and wildlife	Based on desktop study and field survey comprising 20 m radius sweeps for flora and random blocks along selected transects for mammals and birds): • habitat type (including classifccation in line with IFC PS 6 categories)s • plant types and distribution • animal types and distribution • sensitive habitats • threatened or protected species

Resource	Potential Area of Influence	Approach	Parameters
Marine and Intertidal Ecology	Marine species that potentially occur in the Project area	An ecologist will conduct a survey of the intertidal and nearshore environment to: • describe the existing habitats • identify plant, algae and wildlife • identify turtle nesting locations • ghost crabs abundance For the marine environment, fauna will be identified using desktop information and interviews with local people knowledgeable of the marine environment (eg fishermen).	Based on desktop study and field survey: • habitats • marine vegetation types and distribution • animal types and distribution • sensitive habitats • threatened or endangered species • beach profile
Marine Water Quality	Near shore environment Offshore area	A specialist will describe the 7ocali-chemical characteristics of the marine water at the proposed Project site (pipeline landfall area) based on water quality sampling at one location close to the beach. Water quality data from the offshore part of the project (well locations and subsea facilities) was already gathered during the Phase I of the project by means of an oceanographic campaign.	The nearshore water quality laboratory sampling will include: • temperature, pH, salinity and dissolved oxygen • BOD • turbidity and conductivity • total suspended solids, total dissolved solids • TPH • oil and grease • heavy metals • microbiology • nutrients (nitrates, orthophosphates and silicates) • phytoplankton and zooplankton • chlorophyll a
Marine Sediment	Marine sediment characteristics and benthic composition of both offshore and nearshore areas of the project area of	A specialist will describe the 7ocali-chemical characteristics of the marine sediment at the proposed Project sites, based on existing available data from OCTP Phase I (Along subsea facilities) and from direct sampling on the intertidal area.	Based on data available from Phase I of OCTP development Project, for offshore Western Ghana along the project footprint. Sampling will be done within the intertidal area in Sanzule

Resource	Potential Area of Influence	Approach	Parameters
	influence.		beach to determine the sediment size distribution and other physical and chemical characteristics as follows: • grain size • total organic carbon • TPH and PAH • oil and grease • heavy metals • macrobenthos
Noise	Existing background noise levels at sensitive receptors	A specialist will conduct a study of ambient noise levels. The study will identify locations of sensitive receptors. Study will include collection of background noise levels at three locations around the Project site (Sanzule, Ayigbe and proposed ORF area during both dry and wet seasons). Additional samples during the wet season were taken along the pipeline ROW (one season). All noise sampling is to be conducted over a 24 h period so as to include day and the night time measurements.	To determine existing background noise levels, acoustical measurements will be collected using a Type I or Type II integrating sound level meter on both day and night time.
Air Quality	Air quality near the proposed ORF site and along the pipeline route	A specialist will conduct a study to determine the status of local air quality using existing monitoring data and by conducting 24 h measurements during dry and wet seasons on the ORF site (3 sampling points) and on one season along the pipeline route (4 sampling points). The study will include confirmation of regional wind patterns as well as any localised patterns. Investigation will include analysis of three sampling points around the Project site (Sanzule, Ayigbe and proposed ORF area). Additional samples during the wet season were taken along the pipeline ROW (one season). All air quality sampling is to be conducted over a 24 h period.	Based on desktop study and field survey including sampling and analysis. The following parameters will be described: • meteorological parameters • suspended particulate matter (TSP and PM10) • carbon dioxide (CO_2) • sulphur dioxide (SO_2) • nitrogen dioxide (NO_2) • volatile organic carbons

Resource	Potential Area of Influence	Approach	Parameters
Fisheries	Understanding local fishing activities, species, fishing areas and livelihoods of nearshore beach seine fisheries at Sanzule and Bakanta	The fishing areas, patterns and species will be identified using desktop information and interviews with fishermen in the directly affected communities (Sanzule and Bakanta).	• species fished • catches • catch per unit effort (CPUE)
Social and Health Baseline Studies			
Administrative Structure	10 potentially impacted Communities within the Direct Area of Influence (1) Selected locations (e.g. towns, regional administrations, district assemblies) within the Extended Area of Influence	A specialist will conduct a study to determine the administrative and government structures at a national, regional, district level, as well traditional administrative structures within local communities within the potential area of influence. The study will include both desktop research and primary data collection (community surveys, focus group discussions, and key informant interviews) in the potentially impacted communities and wider area of influence.	• formal and traditional administrative structures • traditional authorities
Land Tenure and Land use	10 potentially impacted Communities within the Direct Area of Influence Selected locations (e.g. towns, regional administrations, district assemblies) within the Extended Area of Influence	A specialist will conduct a study to determine the land tenure and land use within the area of influence. The study will include both desktop research and primary data collection (community surveys, focus group discussions, and key informant interviews) in the potentially impacted communities.	• land use • land and sea tenure • traditional land title • settlement patterns and mapping

(1) 10 communities were surveyed during the baselie data gatehering based on Area of Influence defined ihn relation to the location of both ORF and possible optional pipeline. Optional pipeline is no longer a consideration meaning only 5 communitiesare now described in detail in the baseline.

Resource	Potential Area of Influence	Approach	Parameters
Historical, Cultural and Macroeconomic Context	10 potentially impacted Communities within the Direct Area of Influence Selected locations (e.g. towns, regional administrations, district assemblies) within the Extended Area of Influence	A specialist team will conduct a study to determine the historical, cultural and macroeconomic context within the area of influence. The study will include both desktop research and primary data collection (community surveys, focus group discussions, and key informant interviews) in the potentially impacted communities and wider area of influence.	• history of the potentially impacted villages project area of influence • festivals and cultural practices • sites and customs of cultural, religious and historical significance (including especially cemeteries) • recreational facilities • marine and terrestrial cultural heritage • macro-economy of Ghana , Western Region and Ellembelle District
Demographic Profile and Migration patterns	10 potentially impacted Communities within the Direct Area of Influence Selected locations (e.g. towns, regional administrations, district assemblies) within the Extended Area of Influence	A specialist will conduct a study to determine the demographic profile of the area of influence. The study will include both desktop research and primary data collection (community surveys, focus group discussions, and key informant interviews) in the potentially impacted communities and wider area of influence.	• population and population growth • urban and rural population trends • age and gender distribution • ethnicity, language and religion • migration patterns
Gender issues Vulnerable Groups	10 potentially impacted Communities within the Direct Area of Influence Selected locations (e.g. towns, regional administrations, district assemblies) within the Extended Area of Influence	A specialist will conduct a study to determine the gender profile of the area of influence and identify and understand charactersitics of potentially vulnerable groups. The study will include both desktop research and primary data collection (community surveys, focus group discussions, and key informant interviews) in the potentially impacted communities and wider area of influence.	• regulatory context pertaining to protection of rights of women, elderly, children and people living with disabilities • child and forced labour incidence and trends • baseline characteristics contributing to vulnerability in specific groups e.g. o Subsistence farmers, fishers and migrant fishing communities o Elderly o Children o People living with disabilities
Education	10 potentially impacted Communities within the Direct Area of Influence	A specialist will conduct a study to determine education levels and service provision in the area of influence.	• education indicators including attainment, enrolment, literacy, teacher pupil ratio, drop-out rates and patterns • education facilities and services (public and private

Resource	Potential Area of Influence	Approach	Parameters
	Selected locations (e.g. towns, regional administrations, district assemblies) within the Extended Area of Influence	The study will include both desktop research and primary data collection (community surveys, focus group discussions, and key informant interviews) in the potentially impacted communities and wider area of influence.	schools and vocational training centres/tertiary institutions) • conditions of facilities, availability of equipment, supplies, teaching staff and skills training.
Economic Activity and Livelihoods including fisheries	10 potentially impacted Communities within the Direct Area of Influence Selected locations (e.g. towns, regional administrations, district assemblies) within the Extended Area of Influence	A specialist will conduct a study to determine economic activity and livelihoods in the area of influence. The study will include both desktop research and primary data collection (community surveys, focus group discussions, and key informant interviews) in the potentially impacted communities and wider area of influence. The fishing areas, patterns and species will be identified using desktop information and interviews with fishermen in the directly affected communities	• means of livelihood, economic base • income distribution • occupations and employment • alternative economic activities to fishing including Farming, Oil and Gas, Informal Economy, Mining and Minerals, Tourism • fishing livelihoods and economic importance of the offshore/ aquatic ecosystem • species fished • fishing grounds • patterns and trends in fish catch • seasonal fishing activities
Utilities and Social Infrastructure	10 potentially impacted Communities within the Direct Area of Influence Selected locations (e.g. towns, regional administrations, district assemblies) within the Extended Area of Influence	A specialist will conduct a study to determine utilities and social Infrastructure in the potential area of influence. The study will include both desktop research and primary data collection (community surveys, focus group discussions, and key informant interviews) in the potentially impacted communities and wider area of influence.	• road infrastructure and transport • telecommunications • water and sanitation • energy • waste disposal
Marine Infrastructure	10 potentially impacted Communities within the Direct Area of Influence Selected locations (e.g. towns, regional	A specialist will conduct a study to determine marine infrastructure in the area of influence. The study will include both desktop research and primary data collection (community surveys, focus group discussions, and key informant interviews) in the	• ports and harbours • pipelines and cables • shipping and navigation • oil and gas

Resource	Potential Area of Influence	Approach	Parameters
	administrations, district assemblies) within the Extended Area of Influence	potentially impacted communities and wider area of influence.	
Public Safety and Security	10 potentially impacted Communities within the Direct Area of Influence Selected locations (e.g. towns, regional administrations, district assemblies) within the Extended Area of Influence	A specialist will conduct a study to determine safety and security in the area of influence. This will include both the onshore and offshore areas. The study will include both desktop research and primary data collection (community surveys, focus group discussions, and key informant interviews) in the potentially impacted communities and wider area of influence.	• political stability • road safety • maritime safety • crime, policing
Worker Health, Safety and Security	Project workers at the onshore and offshore locations.	A specialist will conduct a study to determine worker health safety and security. The study will include both desktop research and will be based on studies and plans provided by the Project's technical team.	• worker occupational health and safety • worker and asset security (from crime, vandalism, piracy)
Health Baseline	10 potentially impacted Communities within the Direct Area of Influence Selected locations (e.g. towns, regional administrations, district assemblies) within the Extended Area of Influence	A specialist will conduct a study to determine health status and health facilities, capacity and conditions in the area of influence. The study will include both desktop research and primary data collection (community surveys, focus group discussions, and key informant interviews) in the potentially impacted communities and wider area of influence.	• health institutional framework • health policy and programmes • national health accounts • the health care system • health infrastructure, services and resources • maternal and child health • life style behaviours • morbidity and mortality
Cumulative Impacts	Cumulative impacts of this project on the Direct Area of Influence. Cumulative impacts with other projects along the	The Project is being developed in a coastal region already affected by a number of existing projects as well as a number of planned projects. The cumulative effect of the Project will be evaluated considering the following which are known to be in development or that could reasonably be expected to be developed:	The following categories of cumulative impacts will be addressed in the EIS: • livelihoods and fishing; • biodiversity; • environmental quality; • coastal processes; and

Resource	Potential Area of Influence	Approach	Parameters
	coastline from Atuabo to Sanzule.	• Eni Ghana Oil Development (phase 1); • Jubilee Field Development (in operation since 2014); • TEN Development (proposed, EIS under evaluation); • GNGC Gas Plant at Atuabo and Pipeline (phase 1 in operation, phase 2 under construction). • Lornho Oil Service Port at Atuabo (proposed, EIS under evaluation).	socio-economic effects; • community health

D.1.3.3 Baseline Reporting

Following completion of the baseline studies, the EIS team will report the findings in the EIS Report. This will provide a description of the existing environmental social and health conditions in the main EIS Report supported by more detailed information in annexes as required. The aim of the baseline reporting will be to provide sufficient information to undertake the following:

- Identify the key environmental social and health conditions in areas potentially affected by the Project and highlight those that may be vulnerable to aspects of the Project;
- Describe their characteristics (nature, condition, quality, extent, etc) now and in the future in the absence of the Project; and
- Provide sufficient data to inform judgments about the importance, value and sensitivity/ vulnerability or resources and receptors to allow the prediction and evaluation of potential impacts.

D.1.3.4 Quantitative Specialist Studies

Quantitative studies will be undertaken to support the prediction of risks and impacts. These studies will include the following.

- Air Quality: atmospheric emissions modelling to show the changes in air quality as a results of the emissions from the operation of the ORF; and
- Noise: using modelled noise emissions resulting from the construction and operation of the onshore pipeline and the ORF to understand the noise impacts on the local communities and natural environment;
- Oil Spills: the dispersion of oil from an accidental release of oil from the FPSO will be modelled to determine the fate of the oil in the environment, especially the locations where the oil might reach the coastline.

D.1.3.5 Fisheries Impact Assessment

Section 93 of the Fisheries Act stipulates that if a proponent plans to undertake an activity which is likely to have a substantial impact on the fisheries resources, the Fisheries Commission should be informed of such an activity prior to commencement and a Fisheries Impact Assessment (FIA) be prepared and submitted to the Commission. The Commission may require information from the proponent on the likely impact of the activity on the fishery resources and possible means of preventing or xivocalizedxiv adverse impacts.

As such, the Fisheries Commission has been consulted as a key stakeholder in the EIS and potential impacts on fisheries resources will be assessed as part of the OCTP Phase 2 NAG development EIS. In addition, a fish catch study has been undertaken in two seasons (April and October 2014) and two locations (Sanzule and Bakanta). See Chapter 7 for details.

A FIA will be produced integrating the two development phases of the project. The fisheries study will provide a more xivocalized baseline on fish ecology and fisheries activities against which potential fisheries impacts can be assessed. Potential impacts that will be assessed are outlined in Chapter 10, and the ESHMP in Chapter 12 will describe eni Ghana's commitment to develop a Fishermen Management Plan and a Fisheries Monitoring Program. The FIA will be summarized in a standalone report. The results will also be included in the EIS Report.

D.1.4 IMPACT ASSESSMENT METHODOLOGY

Potential impacts generated by the Project activities on the various environmental, social and health components will be identified, as described below and in line with the preliminary assessment carried out at this stage of the EIS process in the Section 8.3 of this Report. This Section will be also defined the methodology/approach of mitigation measures of the identified potential impacts. The assessment approach generally involves matching the various activities of the proposed Project with the components of the existing biophysical and anthropic environment.

D.1.4.1 Potential Impacts Identification and Characterization

The environmental, social and health impacts potentially generated by the Project will be identified via the elaboration of impact pathways. An impact pathway is substantially a process tool which allows for the identification of the main impacts on the surrounding physical environment and the host communities' society, economy and health, induced during the execution of the project, from the initial phase, through to Operation and Production, and ultimately Decommissioning.

The process begins with an impact identification matrix, which involves the listing of the main project activities carried out during the various project phase on one side and on the other the baseline biophysical and anthropic profile components (i.e. environmental, socio-economic and health components) so as to highlight the relationships between project activities and potential direct impacts.

Characterization refers to the types of impact generated by the Project; i.e. any project can generate a wide range of potential impacts, some of which will be direct, whilst others will be more complex and difficult to identify (see **Table D.0.2**).

Table D.0.2 Types of impact

Direct (or primary)	Impacts that result from a direct interaction between a planned project activity and the receiving natural or human environment.
Indirect	Impacts that follow on from the primary interactions between the project and its natural and human environment as a result of subsequent interactions.
Cumulative	Impacts that act together with other impacts (including those from concurrent or planned future third party activities) to affect the same resources and/or receptors as the project.
Perceived	Changes that may be unconnected to, but blamed on, the project. These are usually identified and assessed through stakeholder engagement and consultation.

Once the direct impacts are established, the next step is to complete the impact pathway by determining the indirect impacts of these direct changes to the environmental, social and health components, as well as any subsequent cumulative and perceived impacts.

Potential impacts identified in the Scoping phase, as reported in Section 8 of the present Report, will be characterized in detail during the EIS development and then evaluated as described in the following Paragraph.

D.1.4.2 Impacts Evaluation

Once identified, the significance of the potential impacts will be assessed in order to determine requirements for impact mitigation (or enhancement of benefits) and management measures to be implemented during the Project. The description of the impact assessment methodology is reported in Annex E. Impacts identified will be ranked accordingly and a consistent

terminology will be adopted in order to allow the establishment of a detailed EIS Action Plan (including mitigation, management and monitoring measures).

D.1.4.3 Impact Mitigation

A set of mitigation measures will be identified for each environmental, social and health component and for each project phase, in order to avoid or minimize as much as reasonably practicable negative impacts, while enhancing those that are positive, based on the impact evaluation conducted in the previous stage of the EIS development (Paragraph 9.4.2). The identification of appropriate mitigation measures will be done following the hierarchy criteria illustrated in the Table below:

Table D.0.3 Mitigation Hierarchy Criteria

MITIGATION HIERARCHY CRITERIA	ACTION
Avoid at source (*Minimisation*)	Re-design the project in order to remove the potential impact due to the project's feature (e.g. re-routing a pipeline, relocating facilities, etc.).
Reduce on site (*End-of-pipe*)	Design control systems to minimize impacts (e.g. wastewater treatment, NOx reduction technology).
Reduce off site	Implement off-site measures in order to reduce those impacts that cannot be eliminated with end-of-pipe treatments (e.g. soundproof equipment at a nearby residences, visual screening by planting of hedges).
Restore	Repair any residual, unavoidable damage to natural and human environment by restoration activities or appropriate interventions.
Offset	Compensate for residual, unavoidable impacts if other mitigation measures are not feasible, cost-effective, or already fully implemented (e.g. for BES in a like-for-like biological offset attaining ecological no net loss).
Net positive outcomes	Make a positive contribution to Biodiversity conservation and/or improvement of Ecosystem Services and communities' development.

D.1.4.4 Monitoring Plan

A Monitoring Plan will be carried out to ensure that all mitigation measures included in the EIS will be implemented throughout the lifecycle of the Project and to evaluate their effectiveness, providing specific information on the characteristics and functioning of environmental and social variables in space and time. It will be aligned with the requirements established under Ghanian Legislation and International Standards (IFC, Equator Principles).

The Environmental Monitoring Plan will address all the Project activities that have been identified to have potentially significant impacts on the environment, during both normal operations and upset conditions.

Monitoring frequency shall be such as to guarantee the provision of representative data for the parameter being monitored. The list of parameters to be monitored per relative Project phase (drilling, operations, etc.) will be identified on the basis of the outcomes of the environmental impact assessment.

Monitoring data shall be analyzed and reviewed at regular intervals and compared with the operating standards so that any necessary corrective actions can be taken. Moreover, as per required by Ghanaian law, monthly monitoring results shall be submitted to the EPA using the

EPA reporting format for the oil and gas sector or other internationally recognized reporting format.

The Monitoring Plan shall also foresee the relevant provisions for an environmental authority to conduct routine inspections, investigations, audits, etc. of the project facilities.

D.1.4.5 Environmental, Social and Health Management Plan

The ESHMP will clearly specify guidelines for ensuring conformance of project implementation with procedure, practices and recommendations outlined in the EIS reports. It should be implemented throughout the lifecycle of the project to guarantee that impacts are properly managed. As a minimum it shall include guidelines for:

- Ensuring conformance of detailed engineering design with design concept;
- The OCTP Development project implementation program;
- Achieving the objectives and commitment of the OCTP Development project;
- Responsibilities and accountability throughout project implementation;
- Procedures for dealing with changes and modification of project;
- Corrective action which will be employed should the need arise;
- Inspection, auditing and monitoring of all phases of the project; and
- Decommissioning and abandonment of the project.

D.1.4.6 Quality Assurance/Quality Control

eni GHANA's QA/QC protocol will be strictly adhered to, knowing that data acquired is critical to the preparation of meaningful and acceptance EIS report.

D.1.4.7 Decommissioning and Remediation Plan

An appropriate plan for the restoration of the environment after decommissioning/ abandonment of the OCTP Development project shall be provided in Chapter 11.

The plan will also focus on the social and economic effects of project closure. The EIS will include an exit strategy addressing how social and economic benefits, deriving from the project, can be sustainable. In case they are not sustainable, the strategy will address also how the impact of losing the socio-economic benefits will be mitigated.

D.1.5 STAKEHOLDER ENGAGEMENT

D.1.5.1 Objectives of Consultations

The objectives of consultation with stakeholders are to:

- Promptly identify issues/concerns to avoid conflict in the future.
- Gain consensus on potential impacts identified and to proffer mitigative measures before the project gets underway.
- Avoid any misunderstanding about the project development and for stakeholders to be jointly and severally acquainted with the project.
- Ensure that any apprehension and fears expressed by stakeholders about the project, nature, scale and impact of the operation have been addressed.
- Collate all comments and recommendations of all stakeholders for incorporation into the EIS report as appropriate.

- Consult with host communities and minutes of such consultation incorporated into the EIS report.
- Consolidate information into the stakeholder register.

Participation will be undertaken for consultations with community leaders, youth and women groups, and other stakeholders for the purpose of consolidating baseline data as well as information on potentially affected communities' concerns regarding the project.

D.1.5.2 Stakeholder Identification and Analysis

The range of relevant stakeholders shall be identified, i.e. those individuals, groups or communities who are directly or indirectly affected by the project, as well as those who may have interests in the project and/or the ability to influence its outcome, either positively or negatively. Stakeholder identification shall be consolidated in this phase, given the completion of the screening and scoping phase.

On the basis of initial stakeholder consultation results (i.e. from screening and scoping), stakeholders must now be assessed into the stakeholder register as per the eni Upstream Stakeholder Engagement Operating Instructions.

In the stakeholder register, the Stakeholder Assessment Matrix has to be completed with:

- the level of stakeholders' power on the Project (Low-Medium-High);
- stakeholders' disposition/attitude towards the project (Positive – Negative – Neutral).

In the stakeholder register, the Stakeholder Risk Matrix must also be completed with:

- the degree of the impact
- the probability of its occurrence

eni's Stakeholder Engagement department will provide the eni Upstream Stakeholder Engagement Operating Instruction and the stakeholder register format to be completed.

D.1.5.3 Stakeholder Engagement Activities

Having completed scoping consultation, as described in Chapter 6, further consultation will be undertaken as follows:

- Disclosure of the Scoping Report;
- Engagement during Baseline Studies; and
- Disclosure of the EIS Report and Public Hearings.

The following sections describe these consultation activities.

D.1.5.4 Disclosure of the Scoping Report

This Scoping Report will be submitted to the EPA for review.

The Scoping Report will be disclosed by EPA to Ministries and by eni Ghana to other stakeholders subsequent to the EPA's approval. An advertisement announcing the release of the Scoping Report for comment will be published. Copies of the Scoping Report will also be placed at central locations for public review. Copies of the Scoping Report will likely be placed at the following locations (subject to EPA advice):

- EPA library, Accra;
- Sekondi Public Library;
- Ellembelle District Assembly offices, Western Region; and
- With Paramount Chief at Atuabo.

Upon approval of the Scoping Report the EPA will issue a letter to inform the Project that the process can proceed to the EIS phase. The letter will also include any comments on the Scoping Report and proposed Terms of Reference for the EIS.

D.1.5.5 Engagement during Baseline Studies

Further, local level scoping engagement activities will be undertaken during the socio-economic and health baseline studies. These interactions will involve focus group discussions and key informant interviews at the 10 communities located within the Direct Area of Influence, and selected key informants across 6 districts in the Extended Area of Influence.

Focus group discussions will be undertaken with women's groups, leaders and men, and fishermen groups. A structured social and health questionnaire will be used. Key informant interviews will engage representative individuals for health, education, and tourism.

The aim of these consultations will be data collection for the socio-economic and health baseline, and stakeholder views and concerns will continue to be gathered during these engagements.

D.1.5.6 Disclosure of the EIS Report and Public Hearings

Disclosure of the Draft EIS Report/ EIS will provide detailed information about the proposed Project activities, an assessment of the potential impacts and the planned mitigation and monitoring measures. The EIS Report/ EIS will be issued to EPA and advertised. Copies of the EIS Report/ EIS will be made available at a number of locations for public review and comment. The EIS Report/ EIS will include a non-technical summary which will present the EIS findings in a non-technical format. Eni Ghana will support the distribution process as required and directed by the EPA.

Given the nature and scale of the proposals it is expected that Public Hearings will be held. These will be organised by the EPA and attended by eni Ghana and members of the EIS team as required. EPA may grant provisional approval for commencement of the Project following review and the Public Hearing.

The comments received on the EIS Report/ EIS from EPA will be addressed and a Final EIS Report/ EIS will be submitted to EPA.

D.1.6 OUTLINE STRUCTURE OF THE EIS REPORT/ EIS

An outline of the proposed contents of the main volume of the EIS Report is provided in Annex F. The proposed contents follow previous EPA guidance on EIS Report/ EIS structure. The content may altered slightly during the evolution of the Project or based on the findings of on-going consultation, however it is anticipated that the contents of the EIS Report/ EIS will align broadly within the suggested framework.

D.1.7 POTENTIAL SCHEDULE FOR THE EIS PROCESS

A provisional schedule for the EIS is provided in Table D.0.4.

Table D.0.4 EIS Schedule

Milestone	Approximate date
Register Phase 2 Development Project EIS with EPA	November 2014
Perform baseline data collection	November - December 2014

Milestone	Approximate date
Submit Scoping Report /TOR to EPA	December 2014
Receive acceptance of TOR from EPA	December 2014
Officially commence EIS as per accepted TOR	December 2014
Submission of Final Draft EIS to Authorities	February 2015
Submission of Final EIS to Authorities	February-March 2015
Receive Environmental Permit for Project	March 2015

Annex E
Issues Trail from Scoping Consultation

ABSTRACT

This Annex includes main issues and comments raised during the Scoping consultation. Each issue and comment is taken into account and answered within the present EIS.

Date	Revision	Revision Description	Prepared	Checked	Approved
March 2015	03	Interim Draft Issued for disclosure	ERM	HSE & CI Manager Juan Deffis HSE Project Manager Giuseppe Nicotra	Development Project Manager Ezio Miguel Lago

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Summary of Revisions

Date	Revision	Revision Description	Prepared	Checked	Approved
27-02-2015	02	Issued for submission to Authorities	ERM	HSE & CI Manager Juan Deffis HSE Project Manager Giuseppe Nicotra	Development Project Manager Ezio Miguel Lago
23-02-2015	01	Issued for comments	ERM	eni SEQS/SAL	G. Nicotra
26-01-2015	00	-	Cristina O.	Henry C.	Daniele S.

Date	Stakeholder Group	Stakeholder	Issue	Comments	Response
02-Dec-14	Wildlife Division of Forestry Commission	Mr. Nana Kofi Adu-Nsiah	Accidents	Disposal of chemicals, oil, and hazardous waste into the sea has the potential to cause marine pollution.	Risks and impacts associated with hazardous materials storage and handling will be evaluated in the ESHIA.
17-Dec-14	Western Regional Fisheries Commission (WRFC)	Mr. Alex Sarbah	Accidents	There is a concern about the effects of leakage of gas and the likely impact on the health of fish, fishermen and the communities.	The ESHIA will evaluate the risk of gas leakage and potential effects on the environment.
08-dic-14	Sekondi-Takoradi Metropolitan Assembly	Mr. Henry Owusu	Accidents	Plans must be put in place to mitigate a potential oil spill.	The ESHIA will evaluate risks of accidents and potential impacts. The Project will develop an emergency response plan to include accidental spills.
08-dic-14	Nzema East Municipal Assembly	Mr. Dominc Boadu-Ayebato Mr. Isaac Kwakye Mr. Kwabena Kesseh Mr. John Tetteh Doku Mr. Emmanuel Azuma Mr. Kingsley Ofori Mr. Eric Yeboah	Accidents	Unforseen events that could cause environmental damage.	The ESHIA will evaluate risks of accidents and potential impacts. The Project will develop an emergency response plan.
08-dic-14	Chief Fisherman of Upper Axim (Ahanta West DA)	Mr. Nana Etwe Azane Mr. C.K.Attah Mr. Kofi Yankey Uncle Kwabena Mason Uncle Ebukobo	Accidents	Concern over accidental damage to gas pipeline and possible gas leakage.	The ESHIA will evaluate risks of accidents and potential impacts. The Project will develop an emergency response plan.

Date	Stakeholder Group	Stakeholder	Issue	Comments	Response
08-dic-14	Chief Fisherman of Upper Axim (Ahanta West DA)	Mr. Nana Etwe Azane Mr. C.K.Attah Mr. Kofi Yankey Uncle Kwabena Mason Uncle Ebukobo	Accidents	Fishermen are concern about impacts of unplanned events (accidents).	The ESHIA will evaluate risks of accidents and potential impacts. The Project will develop an emergency response plan.
08-Dec-14	EPA (Western Region)	Mr. Shine Fiagome Mr. Hakim Seidu	Aircraft Safety, Biodiversity	The location of the helipad should consider the proximity to waste disposal site due to the interactions of the helicopters with avian fauna which are attracted to the disposal site (for aircraft safety reasons and to reduce impacts on birds).	The ESHIA will evaluate potential impacts of aircraft movements on avian fauna, especially with respect to waste sites.
02-Dec-14	Wildlife Division of Forestry Commission	Mr. Cletus Nateg	Biodiversity	How will the Project impact marine life, especially whales, and what mitigation measures will be put in place?	Risks and impacts to marine biodiversity, including whales, will be evaluated in the ESHIA.
02-Dec-14	Wildlife Division of Forestry Commission	Mr. Nana Kofi Adu-Nsiah	Biodiversity	Hunting by workers has the potential to impacts onshore biodiversity.	This will be evaluated in the ESHIA.
03-Dec-14	Petroleum Commission	Mr. Alfred Ayah	Biodiversity	The EPA is currently updating coastal sensitivity maps and these should be referenced to have the most current information.	This will be evaluated in the ESHIA.
08-Dec-14	EPA (Western Region)	Mr. Shine Fiagome Mr. Hakim Seidu	Biodiversity	A biodiversity offset program should be considered if the Project impacts sensitive biodiversity resources.	The ESHIA will evaluate the impacts to biodiversity. Offset will be considered as part of the mitigation strategy where applicable. Given the limited footprint of the Project and the low sensitivity of the habitat, the need for offsets would be unlikely.

Date	Stakeholder Group	Stakeholder	Issue	Comments	Response
04-Dec-14	Ghana National Petroleum Corporation (GNPC)	Mr. Seth Foli	Biodiversity, Air Quality	The following impacts should be considered: - Impacts on birds and on the communities from use of helicopters - Impacts to air quality from the operation of the onshore facility - Various social impacts - Potential for introdution of alien invasive species during onshore pipeline clearing and restoration	This will be evaluated in the ESHIA.
02-Dec-14	Ministry of Energy & Petroleum	Prof. Thomas Akabzaa	Capacity Building	The Project should consider capacity building for the ministries.	The impact assessment will evaluate the capacity of the relvant authorities to provide oversight and monitoring. Capacity building may be suggested depending on the outcome.
02-Dec-14	Wildlife Division of Forestry Commission	Mr. Nana Kofi Adu-Nsiah	Community Health	There could be health impaqcts associated with the algal bloom	This will be evaluated in the ESHIA.
03-dic-14	Ellembelle District Assembly	Mr. Ted Teffey	Community Health	Communities' health may not be able to be properly monitored as there was not enough health baseline information available on the communities in Ellembelle.	Community health information will be gathered as part of the ESHIA to support the evaluation of impacts.
02-Dec-14	Fisheries Commission	Mr.Samuel Quartey	Community Investment	The Project should support research in fisheries.	This suggestion was directed to the Project developer for consideration.
05-Dec-14	Friends of the Nation	Mr. Kwesi Randolph Johnson	Community Investment	The quality of the social investment by oil companies has thusfar been low. The Project developer should consider district medium-term development plans in designing social investment.	Government development plans will be considered in the development of mitigation and management measures for the ESHIA.

Date	Stakeholder Group	Stakeholder	Issue	Comments	Response
10-dic-14	Shama District Assembly	Mr. Hon. Kojo K. Appiah Mr. Kassim Sampson	Community Investment	The district is deprived of any of the social interventions or packages given by the operating oil and gas companies.	This concern has been passed to the Project developer.
09-dic-14	Fishermen of Essiama	Mr. Nana Kofi Bekoe Mr. Kwesi Kanas Mr. Emmanuel Asamah Mr. Kwamuku Accra Boy Mr. Prah Mr. Francis Mr. George Baly Mr. Emmanuel Kwofie Mr. Paa Kwesi Mr. Darkwa Stephen Mr. Yaw Hammond Mr. Samuel Bekoe Mr. Mohammed Muzo	Community Investment	Often community investment programs do not benefit the fisherman.	This concern has been passed to the Project developer.
04-Dec-14	Ricerca e Cooperazione	Dr. Gianna da Re	Compensation	Adequate compensation needs to be given to land owners and farmers whose land will be used for the development.	The assessment will evaluate impacts related to land take and physical and economic displacement. The Project will follow laws and regulations related to land acquisition and land taken. The Project is preparing a Resettlement Action Plan to address compensation and livelihood restoration.

Date	Stakeholder Group	Stakeholder	Issue	Comments	Response
05-Dec-14	Friends of the Nation	Mr. Kwesi Randolph Johnson	Compensation	Displaced land owners and land users need to compensated.	The assessment will evaluate impacts related to land take and physical and economic displacement. The Project is preparing a Resettlement Action Plan to address compensation and livelihood restoration.
02-Dec-14	EPA	Mr. Ebenezer Appah-Sampong	Cultural Heritage	Project design should avoid and preserve the royal cemetery located within the land being acquired for the Project. Museums and Monuments Board (MMB) should be consulted in matters related to cemetaries.	Information gathered during the ESHIA will input into the design for the onshore pipeline route. The MMB is being consulted.
17-Dec-14	Ghana Museums and Monuments Board (GMMB), Central and Western Regional Office, Cape Coast	Mr. Mark Amenyo-Xa Mr. Ebenezer Collins Bordoh Mr. Essel Blankson	Cultural Heritage	There are no documented sensitive cultural resources (slave forts or castles) in the area. It will be important to understand whether there are any artefacts of archaeological value within the project footprint area.	The ESHIA will include a study of cultural resources and provide mitigations and management The management plan will specify a procedure in the event of finding cultural resource by chance.
17-Dec-14	Ghana Museums and Monuments Board (GMMB), Central and Western Regional Office, Cape Coast	Mr. Mark Amenyo-Xa Mr. Ebenezer Collins Bordoh Mr. Essel Blankson	Cultural Heritage	There should be a buffer zone around sensitive areas of customary and heritage significance (eg, the Royal Cemetery). 100 m is suggested although there is no legislation with requirements for the size of the buffer zone. If required, it is common for cemeteries and graves to be moved through negotiation with local communities and local traditional leadership; including performing of traditional ceremonies.	The Project is being designed to avoid area of important cultural heritage as much as possible. The ESHIA will include a study of cultural resources and provide mitigations and management The management plan will specify a procedure in the event of finding cultural resource by chance.
04-Dec-14	Ricerca e Cooperazione	Dr. Gianna da Re	Cultural Heritage	Archaeological and historical sites encountered during construction need to be protected	This will be evaluated in the ESHIA.

Date	Stakeholder Group	Stakeholder	Issue	Comments	Response
02-Dec-14	EPA	Mr. Ebenezer Appah-Sampong	Cumulative Impacts	There are several ongoing projects along the coastline affecting people, especially the fishermen.	Cumulative impacts will be assessed.
02-Dec-14	Fisheries Commission	Mr.Samuel Quartey	Cumulative Impacts	The will be cumulative effects on fishing due to the exclusion zones for the various projects being developed.	This will be evaluated in the ESHIA.
04-Dec-14	Ricerca e Cooperazione	Dr. Gianna da Re	Cumulative Impacts	Cumulative impacts from the several projects currently ongoing in the area could include: - Disturbances to population - Air emissions - Biodiversity disruption	This will be evaluated in the ESHIA.
04-Dec-14	Ghana Ports & Harbour Authority	Mr. James Ben Gaisie	Cumulative Impacts	Cumulative impacts should be assessed given that there are a number of projects being developed in the Western Region.	This will be evaluated in the ESHIA.
05-Dec-14	Friends of the Nation	Mr. Kwesi Randolph Johnson	Cumulative Impacts	The assessment needs to evaluate cumulative impacts.	This will be evaluated in the ESHIA.
05-Dec-14	Friends of the Nation	Mr. Kwesi Randolph Johnson	Employment	In view of the low capacities of the people in the area in relation to the various component s of the project, it is unlikely for many to be employed by the company. It will therefore be important to create the necessary awareness and understanding about the technical nature of the project to manage their expectations.	Information regarding job creation and employment will be provided as part of stakeholder engagement and disclosed in the ESHIA.
10-dic-14	Shama District Assembly	Mr. Hon. Kojo K. Appiah Mr. Kassim Sampson	Employment	Local content must be a priority for oil and gas companies.	The Project will follow the laws and regulations related to employment. The ESHIA will evaluate impacts related to employment.

Date	Stakeholder Group	Stakeholder	Issue	Comments	Response
09-dic-14	Fishermen of Essiama	Mr. Nana Kofi Bekoe Mr. Kwesi Kanas Mr. Emmanuel Asamah Mr. Kwamuku Accra Boy Mr. Prah Mr. Francis Mr. George Baly Mr. Emmanuel Kwofie Mr. Paa Kwesi Mr. Darkwa Stephen Mr. Yaw Hammond Mr. Samuel Bekoe Mr. Mohammed Muzo	Employment	Emphasized the need for local content and youth employment	The Project will follow the laws and regulations related to employment. The ESHIA will evaluate impacts related to employment.
02-Dec-14	Ministry of Energy & Petroleum	Dr. Kwesi Twum-Addo	Fishing	The Project should consider offsets for the loss of livelihood of fishermen such as aquaculture and mariculture.	This will be considered in the ESHIA.
02-Dec-14	Wildlife Division of Forestry Commission	Mr. Andrew Kyei Agyare	Fishing	There is a perception that proliferation of seaweed is effecting fishing.	This will be evaluated in the ESHIA.
02-Dec-14	Wildlife Division of Forestry Commission	Mr. Andrew Kyei Agyare	Fishing	Social impacts, especially the effects on the fishermen, need to be addressed.	This will be evaluated in the ESHIA.
02-Dec-14	Fisheries Commission	Mr. Samuel Quartey	Fishing	A Fisheries Impact Assessment (FIA) is required. The impact assessment should identify what indicators will be used to monitor changes.	A specific FIA will be done. The FIA will specify a monitoring programme and include specific monitoring indicators.

Date	Stakeholder Group	Stakeholder	Issue	Comments	Response
02-Dec-14	Fisheries Commission	Mr. Samuel Quartey	Fishing	The Project should assist fishermen by developing mariculture projects.	The assessment will evaluate impacts on fishing. The possibility of mariculture as a means to restore livilihoods will be considered. The Project is preparing a Resettlement Action Plan to address compensation and livelihood restoration.
05-Dec-14	Friends of the Nation	Mr. Kwesi Randolph Johnson	Fishing	The Project will create further restrictions on fishing. There are reports of human rights violations and abuse of power by government security forces on fishermen near the Jubilee Field FPSO.	This will be evaluated in the ESHIA.
05-Dec-14	Friends of the Nation	Mr. Kwesi Randolph Johnson	Fishing	A Fisheries Impact Assessment (FIA) needs to be conducted.	A specific FIA will be done.
08-Dec-14	EPA (Western Region)	Mr. Shine Fiagome Mr. Hakim Seidu	Fishing	A Fisheries Impact Assessment (FIA) is required for this Project. It was advised for the Fisheries Commission to be consulted for its guidelines on the preparation of a FIA.	A specific FIA will be done. The Fisheries Commission will be consulted.
08-Dec-14	Marine Police	Captain Owusu Berko Mr. Charles Osei	Fishing	The Marine Police expressed concerns regarding repeated claims by fishers that they are neglected in decisions on social investments. The Project should consult fishermen on their needs to establish the basis of any social investment decision.	The ESHIA will evaluate impacts on fishing and Project-related community investments.

Date	Stakeholder Group	Stakeholder	Issue	Comments	Response
09-Dec-14	Western Regional Fisheries Commission (WRFC)	Mr. Alex Sarbah	Fishing	The increased number of FPSOs would bring about the imposition of extra restrictions on the fishing space which fishermen already are having limited access (ie the exclusion zones around the FPSO). Reduction in fishing space is expected to be considered by fishermen to have an impact on the livelihood of fishermen and their dependants.	The ESHIA will evaluate the impacts on fishing from Project related safety exclusion zones. The cumulative impacts of multiple safety exclusion zones will also be evaluated.
09-Dec-14	Western Regional Fisheries Commission (WRFC)	Mr. Alex Sarbah	Fishing	There is a concern in relation to the interaction between security officers and fishermen who ignorantly entered the Exclusion Zones around the currently existing FPSOs and potential conflict. It is suggested that these problems could be avoided if sufficient awareness among fishermen is created regarding the exclusion zones restrictions. The Project is advised to provide geographic charts and carry out sufficient awareness–raising to ensure safe movement of fishermen.	ESHIA stakeholder engagement is being done at the national, regional and local scale. The mitigation measures will include recommendation for communication of safety requirements and safety exclusion zones.
05-dic-14	Jomoro District Assembly	Mr. Salil Ali Mahome Mr. Emmanuel Armo Mr. Abudu Amade Mr. Samuel Tutani	Fishing	Access to fishing grounds of fishermen might be impeded causing decline in livelihood activities and income.	This will be evaluated in the ESHIA.
06-dic-14	Jomoro District Assembly	Mr. Salil Ali Mahome Mr. Emmanuel Armo Mr. Abudu Amade Mr. Samuel Tutani	Fishing	Accidental pipe leakage might disturb the marine ecosystem and impact on fish stocks.	The ESHIA will evaluate risk of accidents and impacts to marine ecology and fish.

Date	Stakeholder Group	Stakeholder	Issue	Comments	Response
05-Dec-14	Fisherman of Shama	Mr. Nana Efirimu Mr. Frank Pegu Mr. Emmanual Tecco Mr. Aworti Aygwenka Yakubo Mr. Kwesi Nkrumah, Kweku Bedu Papa Kofi-Essoun, Papa Kwesi Mr. Magya Kojo	Fishing	Oil and gas activities are causing the proliferation of weeds which are negatively affecting fish stocks.	This will be evaluated in the ESHIA.
05-Dec-14	Fisherman of Shama	Mr. Nana Efirimu Mr. Frank Pegu Mr. Emmanual Tecco Mr. Aworti Aygwenka Yakubo Mr. Kwesi Nkrumah, Kweku Bedu Papa Kofi-Essoun Papa Kwesi Mr. Magya Kojo	Fishing	The installation of the FPSO with its high illumination has drawn all the fish to its immediate surroundings where we are not allowed to fish.	This will be evaluated in the ESHIA.
05-Dec-14	Fisherman of Shama	Mr. Nana Efirimu Mr. Frank Pegu Mr. Emmanual Tecco Mr. Aworti Aygwenka Yakubo Mr. Kwesi Nkrumah, Kweku Bedu Papa Kofi-Essoun Papa Kwesi Mr. Magya Kojo	Fishing	Fisherman will experience the greatest impact of the development in comparison to other groups.	This will be evaluated in the ESHIA.

Date	Stakeholder Group	Stakeholder	Issue	Comments	Response
05-Dec-14	Fisherman of Shama	Mr. Nana Efirimu Mr. Frank Pegu Mr. Emmanual Tecco Mr. Aworti Aygwenka Yakubo Mr. Kwesi Nkrumah Kweku Bedu Papa Kofi-Essoun Papa Kwesi Mr. Magya Kojo	Fishing	Fishermen have experienced abuse from the Ghana Navy when they drifted into exclusion zone accidentally.	This will be evaluated in the ESHIA.
05-Dec-14	Fisherman of Shama	Mr. Nana Efirimu Mr. Frank Pegu Mr. Emmanual Tecco Mr. Aworti Aygwenka Yakubo Mr. Kwesi Nkrumah Kweku Bedu Papa Kofi-Essoun Papa Kwesi Mr. Magya Kojo	Fishing	Fishermen are concerend that the fishing area is being reduced.	This will be evaluated in the ESHIA.
08-dic-14	Sekondi-Takoradi Metropolitan Assembly	Mr. Henry Owusu	Fishing	Fisherman are concerned that dwindling fish stocks were related to oil and gas activities.	This will be evaluated in the ESHIA.
08-dic-14	Sekondi-Takoradi Metropolitan Assembly	Mr. Henry Owusu	Fishing	Fishermen have been harassed by the Ghana Navy when entering the exclusion zone around the FPSO at Jubilee Field.	This will be evaluated in the ESHIA.

Date	Stakeholder Group	Stakeholder	Issue	Comments	Response
08-dic-14	Sekondi-Takoradi Metropolitan Assembly	Mr. Henry Owusu	Fishing	Does the lighting around the FPSO attact fish? Fishermen believe that fish are all being attracted to the FPSO.	This will be evaluated in the ESHIA.
10-dic-14	Shama District Assembly	Mr. Hon. Kojo K. Appiah Mr. Kassim Sampson	Fishing	Capacity building only benefits chief fisherman and not all fisherman.	This concern has been passed to the Project developer.
08-dic-14	Nzema East Municipal Assembly	Mr. Dominc Boadu-Ayebato Mr. Isaac Kwakye Mr. Kwabena Kesseh Mr. John Tetteh Doku Mr. Emmanuel Azuma Mr. Kingsley Ofori Mr. Eric Yeboah	Fishing	The additional light from oil and gas structures are drawing fish into the exclusion zone where they are unable to fish.	This will be evaluated in the ESHIA.
08-dic-14	Nzema East Municipal Assembly	Mr. Dominc Boadu-Ayebato Mr. Isaac Kwakye Mr. Kwabena Kesseh Mr. John Tetteh Doku Mr. Emmanuel Azuma Mr. Kingsley Ofori Mr. Eric Yeboah	Fishing	If fishing livelihoods are impacted they will not have sources of income to provide for thier families (singular livelihood)	This will be evaluated in the ESHIA.

Date	Stakeholder Group	Stakeholder	Issue	Comments	Response
08-dic-14	Chief Fisherman of Upper Axim (Ahanta West DA)	Mr. Nana Etwe Azane Mr. C.K.Attah Mr. Kofi Yankey Uncle Kwabena Mason Uncle Ebukobo	Fishing	The fishermen were concerned that there may be a exclusion zone around the subsea pipeline.	The details related to exclusion zones and restriction of certain activities around the offshore pipeline will be provided in the ESHIA. Eni Ghana will communicate the location of the exclusion zones and restrictions to sea users, including local fishermen and will be included in the Project's mitigation plan.
09-dic-14	Fishermen of Essiama	Mr. Nana Kofi Bekoe Mr. Kwesi Kanas Mr. Emmanuel Asamah Mr. Kwamuku Accra Boy Mr. Prah Mr. Francis Mr. George Baly Mr. Emmanuel Kwofie Mr. Paa Kwesi Mr. Darkwa Stephen Mr. Yaw Hammond Mr. Samuel Bekoe Mr. Mohammed Muzo	Fishing	The fishermen are concerned that the construction of the pipeline will negatively affect fish stocks.	This will be evaluated in the ESHIA.
03-dic-14	Chief Fisherman of Half Assini	Mr. Nana Emma Odwire Mr. Paul Forson	Fishing	The fish catch has declined over the past 10 years	This will be evaluated in the ESHIA.
03-dic-14	Chief Fisherman of Half Assini	Mr. Nana Emma Odwire Mr. Paul Forson	Fishing	Potential adverse effects of the Project can be addressed if a management plan is put in place.	A management plan will be prepared as part of the ESHIA process.

Date	Stakeholder Group	Stakeholder	Issue	Comments	Response
03-dic-14	Chief Fisherman of Half Assini	Mr. Nana Emma Odwire Mr. Paul Forson	Fishing	Fishermen will be the most directly affected by the proposed project because the sea is their source of livelihood.	This will be evaluated in the ESHIA.
09-dic-14	Chief Fisherman of Sekondi	Mr. Nana Essoun	Fishing	The impacts of additional lighting from oil and gas infrastructure on fisheries.	This will be evaluated in the ESHIA.
09-dic-14	Chief Fisherman of Sekondi	Mr. Nana Essoun	Fishing	The Chief Fisherman requested more education on oil and gas activities in order to avoid conflict between fisherman and oil and gas operators.	This request has been passed to the Project developer.
08-dic-14	Nzema East Municipal Assembly	Mr. Dominc Boadu-Ayebato Mr. Isaac Kwakye Mr. Kwabena Kesseh Mr. John Tetteh Doku Mr. Emmanuel Azuma Mr. Kingsley Ofori Mr. Eric Yeboah	Fishing	There has been a reduction in the area that fisherman are able to fish due to restriction from oil and gas activities.	This will be evaluated in the ESHIA.
03-dic-14	Jomoro District Assembly	Mr. Emmanuel Armo Mr. Abudu Amade Mr. Raymond Seaworth.	Infrastructure	Health and education facilities might be overstretched due to influx of workers and their dependents into the project area.	This will be evaluated in the ESHIA.
10-dic-14	Shama District Assembly	Mr. Hon. Kojo K. Appiah Mr. Kassim Sampson	Infrastructure	Additional social infrastructure should be constructed to cope withe influx of people into the area.	Impacts as a result of influx will be evaluated as part of the ESHIA.

Date	Stakeholder Group	Stakeholder	Issue	Comments	Response
08-dic-14	Chief Fisherman of Upper Axim (Ahanta West DA)	Mr. Nana Etwe Azane Mr. C.K.Attah Mr. Kofi Yankey Uncle Kwabena Mason Uncle Ebukobo	Marine Ecology	The construction of subsea pipeline will cause degradation to the marine environment.	This will be evaluated in the ESHIA.
04-Dec-14	Ghana Ports & Harbour Authority	Mr. James Ben Gaisie	Project Design	Will the Project build a temporary jetty at the coast for transport of equipment?	The Project design at this time does not include a jetty at the coastline.
05-dic-14	Ellembelle District Assembly	Mr. Derrick Obeng	Resettlement	The Project may require resettlement and potential loss of land for communities.	The assessment will evaluate impacts related to land take and physical and economic displacement. The Project is preparing a Resettlement Action Plan to address compensation and livelihood restoration.
02-Dec-14	EPA	Mr. Ebenezer Appah-Sampong	Safety	There should be a clear demarcation of the offshore pipeline on nautical charts.	This will be included in the Project's mitigation plan.
02-Dec-14	Ministry of Energy & Petroleum	Dr Kwesi Twum-Addo	Safety	There should be a clear demarcation of the project facilities on nautical charts. The pipeline should be buried to avoid damage.	This will be included in the Project's mitigation plan.
02-Dec-14	Fisheries Commission	Mr.Samuel Quartey	Safety	The Project should considering burial of the offshore pipeline to prevent damage from vessels and anchors. The offshore pipeline locations should be clearly communicated to marine users and mapped on nautical charts.	This will be evaluated in the ESHIA.
04-Dec-14	Ghana National Petroleum Corporation (GNPC)	Mr. Seth Foli	Safety	Will the offshore pipeline be buried?	Alternatives for burial of the offshore pipeline are being developed by the Project's technical team. This will be described and evaluated in the ESHIA.

Date	Stakeholder Group	Stakeholder	Issue	Comments	Response
04-Dec-14	Ghana Ports & Harbour Authority	Mr. James Ben Gaisie	Safety	The Project should considering burial of the offshore pipeline to prevent damage from vessels and anchors. The offshore pipeline locations should be clearly communicated to marine users and mapped on nautical charts.	Alternatives for burial of the offshore pipeline are being developed by the Project's technical team. This will be described and evaluated in the ESHIA. Requirements for documenting the final pipeline route will be specified in the ESHIA.
05-Dec-14	Friends of the Nation	Mr. Kwesi Randolph Johnson	Safety	Will the FPSO be a single hull or double hull design?	The FPSO will have a double hull.
09-Dec-14	Ghana Tourism Authority (GTA), Western Regional Directorate	Mr. Michael Kpinghi	Safety	The Project will need to consider safety of tourists. The Project is advised to pay serious attention to safety communications through the necessary safety and warning signs along the gas pipeline.	The ESHIA will evaluate risk and impacts to public safety.
09-dic-14	Fishermen of Essiama	Mr. Nana Kofi Bekoe Mr. Kwesi Kanas Mr. Emmanuel Asamah Mr. Kwamuku Accra Boy Mr. Prah Mr. Francis Mr. George Baly Mr. Emmanuel Kwofie Mr. Paa Kwesi Mr. Darkwa Stephen Mr. Yaw Hammond Mr. Samuel Bekoe Mr. Mohammed Muzo	Safety	The fishermen are concered about the impeded access to fishing grounds.	The Project will require a safety exclusion zone around offshore facilities. The size of the zone has not been finalised at this time. The impacts will be evaluated in the ESHIA.

Date	Stakeholder Group	Stakeholder	Issue	Comments	Response
03-dic-14	Chief Fisherman of Half Assini	Mr. Nana Emma Odwire Mr. Paul Forson	Safety	Consultation and education should be done ahead of contraction activities to alert fishermen of the dangers involved in getting close to demarcated danger zones	This will be evaluated in the ESHIA. The management plan will include requirements for notifications and communications.
03-dic-14	Chief Fisherman of Half Assini	Mr. Nana Emma Odwire Mr. Paul Forson	Safety	The Project must adhere to high construction standards to avoid pipe burst in future	This will be evaluated in the ESHIA.
08-Dec-14	Marine Police	Captain Owusu Berko Mr. Charles Osei	Security	The Marine Police expressed concerns that fishers have exaggerated misconceptions about the effect of oil and gas operations on fisheries, which exposes oil and gas operators to frequent agitations. The Marine Police indicated that these agitations pose security threats as conflict can turn violent. It was therefore advised for efforts to be made to sensitise and reorient fishermen on the actual impacts of the oil and gas operations as against the perceived impacts.	The ESHIA will evaluate issues of safety and security, including potential conflict between marine security and marine resource users, in particular fishermen.
08-Dec-14	Marine Police	Captain Owusu Berko Mr. Charles Osei	Security	Based on experience with similar projects in the Atuabo area, the Marine Police proposed the establishment of a security base within the onshore project development footprint. According to the Marine Police, their officers stationed at Ainyinase find it very difficult to swiftly respond to security calls due to the long distance. They also indicated that the Marine Police are in need of a vessel for offshore policing.	The ESHIA will evaluate issues of safety and security, including capacity of public law enforcement to implement mitigation requirements.
02-Dec-14	EPA	Mr. Larry Kotoe	Social Impacts	ROW should be surveyed for encroachment.	This will be included in the Project's monitoring plan.

Date	Stakeholder Group	Stakeholder	Issue	Comments	Response
02-Dec-14	Wildlife Division of Forestry Commission	Mr. Nana Kofi Adu-Nsiah	Social Impacts	The increase in population as a result of the influx of workers, including job seekers, may result in social issues.	This will be evaluated in the ESHIA.
02-Dec-14	Wildlife Division of Forestry Commission	Mr. Nana Kofi Adu-Nsiah	Social Impacts	The Project should consider the risks and impacts that would arise if minerals were found during development. This might induce illegal mining (galamsy).	This will be evaluated in the ESHIA.
04-dic-14	Jomoro District Assembly	Mr. Abudu Amade	Social Impacts	Influx of workers into the project area might increase the incidences of social vices and health problems for the host communities.	This will be evaluated in the ESHIA.
02-Dec-14	EPA	Mr. Larry Kotoe	Stakeholder Engagement	It is important that consultations are held at an early stage of the project. The Project should consult with GNGC the owner of the onshore pipeline ROW.	ESHIA stakeholder engagement is being done at the national, regional and local scale. Consultation with GNGC is being arranged.
02-Dec-14	Ministry of Energy & Petroleum	Prof. Thomas Akabzaa	Stakeholder Engagement	The ESHIA process should include comprehensive stakeholder engagement.	ESHIA stakeholder engagement is being done at the national, regional and local scale.
04-Dec-14	Ghana National Petroleum Corporation (GNPC)	Mr. Seth Foli	Stakeholder Engagement	The ESHIA schedule is too short and may not allow for a detailed assessment and enough time for disclosure of the impact assessment report.	The assessment will follow Ghana regulatory requirements including the duration requirements for review and disclosure as specified by the Ghana EPA.
05-Dec-14	Friends of the Nation	Mr. Kwesi Randolph Johnson	Stakeholder Engagement	What consultations will take place as part of the ESHIA process?	The scoping report includes the details of the stakeholder engagement plan.
05-Dec-14	Friends of the Nation	Mr. Kwesi Randolph Johnson	Stakeholder Engagement	Problems may arise if the Project development is rushed.	The assessment will follow Ghana regulatory requirements including the duration requirements for review and disclosure as specified by the Ghana EPA.

Date	Stakeholder Group	Stakeholder	Issue	Comments	Response
08-Dec-14	EPA (Western Region)	Mr. Shine Fiagome Mr. Hakim Seidu	Stakeholder Engagement	Consultations with local communities should be extended to issues of traditional and customary concerns to help gather sufficient information on taboos, sacred sites along with guidance on the traditional protocols.	The scope of the socio-economic studies will include evaluation of impacts to traditions and cultural heritage.
08-Dec-14	EPA (Western Region)	Mr. Shine Fiagome Mr. Hakim Seidu	Stakeholder Engagement	The Environmental Health Department should be consulted if the project will result in the decommissioning of a cemetery. It was suggested that the age of the cemetery should be ascertained as this could have implications on the requirements for the movement or protection of the graves.	The Project will consult with the Environmental Health Department on matters related to cemeteries.
08-Dec-14	Western Regional Coordinating Council (RCC),	Mr. Hon Alfred Ekow Gyan Mr. Hope Howusu, Mr. Edward Nelson	Stakeholder Engagement	Community and district structures should not be ignored in project siting and planning of projects. There should be more collaboration with the authorities at the community and district level throughout the phases of the project. The Project should consider working with RCC to assist in coordinating between these groups.	ESHIA stakeholder engagement is being done at the national, regional and local scale.
09-Dec-14	Western Regional Coordinating Council (RCC),	Mr. Hon Alfred Ekow Gyan Mr. Hope Howusu Mr. Edward Nelson	Stakeholder Engagement	The RCC also expressed concern that companies invest in social interventions which do not meet the needs of the people in the host communities. They urged the proponent to consult the communities to understand their needs.	ESHIA stakeholder engagement is being done at the national, regional and local scale.
04-dic-14	Ellembelle District Assembly	Mr. William Tei-Kpoti	Stakeholder Engagement	Communities may have a problem fully understanding the EIA process and project activities.	This will be considered in developing the ESHIA stakeholder engagement plan.

Date	Stakeholder Group	Stakeholder	Issue	Comments	Response
07-dic-14	Ellembelle District Assembly	Mr. Innocent Haligah	Stakeholder Engagement	There should be greater communication between the Project and the Ellembelle DA	This will be considered in developing the ESHIA stakeholder engagement plan.
08-dic-14	Chief Fisherman of Upper Dixcove (Ahanta West DA)	Mr. Nana Acheampong	Stakeholder Engagement	All suggestions from communities must be taken seriously.	The ESHIA report will document how comments are addressed.
02-Dec-14	Regional Health Director (Western Region)	Dr. Emmanuel Tinkorang	Stakeholder Engagement	The ESHIA Team need permission to engage with health informants at the District Level	Permission was obtained to engage at the District level
02-Dec-14	District Health Director (Ellembelle)	Mrs. Elizabeth Corney	Stakeholder Engagement	The District Health Director needs to be aware of stakeholder engagement in the project area so engagement can be directed to key people for Key Informant Interview	The District Health Director was informed.
09-Dec-14	Ghana Tourism Authority (GTA), Western Regional Directorate	Mr. Michael Kpinghi	Tourism	The coast of the Western Region is highly valued for tourism and has therefore planned to enhance to attractiveness of the various beaches to create jobs and prosperity for people in the coastal communities. The project should to be developed in a manner that does not negatively affect the tourism activities or potential for new tourism developments and activities. The project should avoid destroying any resources of tourism value and work toward enhancing the attractiveness of the place	The ESHIA will evaluate impacts to tourism.
06-dic-14	Ellembelle District Assembly	Mr. Ted Teffey Mr. Kwabena Asiedu-Bediako Mr. Derrick Obeng Mr. William Tei-Kpoti	Tourism	Wetlands, mangroves and extensive wildlife near New Bakanta must be preserved as a potential tourism site.	This will be evaluated in the ESHIA.

Date	Stakeholder Group	Stakeholder	Issue	Comments	Response
08-Dec-14	EPA (Western Region)	Mr. Shine Fiagome Mr. Hakim Seidu	Traffic	Increased traffic and movement of heavy-duty trucks will have an impact on road safety in the area. Dust associated with vehicle movements will also likely affect air quality. The Project should consider sea routes for transport of equipment and goods.	Traffic effects on road safety and ambient air quality will be evaluated in the ESHIA. The Project will evaluate the possibility of transport of equipment and goods via the sea.
02-Dec-14	Fisheries Commission	Mr.Samuel Quartey	Transboundary Impacts	Transboundary impacts should be taken into consideration due to proximity to the border and direction of currents.	This will be evaluated in the ESHIA.