# Site Specific Plan
# Begada Village
# May 2009

## Context of the Land Use Situation

Since construction began in 2000, the Chad Cameroon Oil Export Project (the Project) has compensated nearly 12,900 individual land users for almost 7,100 Hectares (Ha) of land in 375 villages along the entire length of the Project from Kome, Chad to Kribi, Cameroon.

Compensation in the Oil Field Development Area (OFDA) has been paid for nearly 3,500 Ha of land involving about 4,000 individual land users. The Project has utilized 3.5% of the 100,000 ha of land in the OFDA. When all of the land taken for construction and not needed for permanent facilities has been returned the percentage still in use by the Project will be just over 1.5% of the total OFDA area.

All land users and villages have been compensated according to the Environmental Management Plan (EMP) that was approved prior to Project construction. The Project's compliance with the EMP compensation requirements has been documented in the Project Update reports and by the World Bank's External Compliance Monitoring Group (ECMG) and the International Advisory Group (IAG).

A set of principles set out in the EMP have guided the land acquisition and compensation effort, including:

- A transparent compensation procedure with a minimum of four information and consultation steps so that all village residents can see that no other resident is gaining an advantage.
- Sensitivity to cultural practices and local legal requirements. Most land is controlled by the village and allocated by the local chief. In Chad, nearly all land is owned by the state. So farmers, rather than owning land as in Europe or North America, have only the use of the land for crops. The Project therefore does not buy land but compensates for farmer labor and lost crop opportunities as provided in the EMP.
- Recording all compensation transactions. Each payment is archived with a photo of the transaction and the recipient's thumb print.
- Avoiding resettlement of households through land take redesign and by offering two resettlement alternatives - Improved Agriculture Training and Off-Farm Employment Training.

These principles have been developed into a set of guidelines and procedures that govern how compensation, resettlement, and other mitigations are applied. These guidelines are contained in an in-house Land Management Manual, which serves as a Desk Guide to implementation. This guide is periodically updated to include improvements and modifications (last modification in September 2008).

## Evolution of the OFDA Land Use Situation

As the three original OFDA oilfields were being developed, and results began coming in from the completed wells, it became clear that more rather than fewer of the projected wells would be needed in order to develop Chad's oil. This continued drilling, and the infrastructure to collect the oil and to supply electricity to the wells, was consuming more land than originally anticipated on the basis of the low-end estimate. The project's efforts to address this land use situation began in mid-2005, when it declared a Level II Noncompliance Situation (NCS) regarding the pace of returning to communities temporary use land that had been reclaimed in accordance with the Environmental Management Plan (EMP).

By the end of 2006, with the help and input from the World Bank Group, the project had developed an initial mitigation action plan and had begun implementing it. An action plan was agreed in 2007, which included among other actions the development of Site Specific Plans to address particular problems facing certain villages that had surrendered substantial areas to project use and for which land return was lagging.

## Purpose of a Site Specific Plan

The purpose of each Site Specific Plan is to develop, for a defined area, measures that mitigate the precise problems its population is encountering, using the resources that are available to the restricted vicinity and maximizing the knowledge and capabilities of its inhabitants.

Although the absolute foot print of the Project (Permanent Land Take and Temporary Land Take Not Returned) has not grown appreciably since December 2005, the initially slow return of temporary use land plus the increase in compensated land has impacted certain villages located in the OFDA. These impacts include:

- Reduced pool of land available for agricultural use.
- Access to bush resources.
- Depletion of bush resources.
- Shortened fallow availability.

The Land Use Mitigation Action Plan (LUMAP) Site Specific Plan (SSP) for each highly impacted village in the OFDA develops mitigation measures by clearly defining the village's situation. It looks at:

- Existing natural resources in this localized area of the OFDA.
- Identification and assessment of complementary economic resources that are available.
- Villagers use of farmlands and bush.
- Current land needs of villagers.
- Specific measures to re-establish the viability of the village.
- List of closely tailored mitigation measures designed to return the village to viability.

**Focus of a Site Specific Plan**

Within the OFDA, according to the 2008 administrative categorization, there are 47 official villages which have been affected by land acquisition for production facilities. There are 32 official villages if the geographic rather than administrative units are counted. There are 61 villages if all of the unofficial quartiers are included. For the purposes of this Site Specific Plan it is the **geographic unit** that will be considered since the aim is to remediate impacts on the geographical area of the village and its inhabitants.

Out of the 32 geographical villages in the OFDA, 7 were categorized as more affected by ongoing project land needs than others, including Begada. Three more were approaching high. These 10 geographical villages are split into 15 administratively recognized ones. Begada, at its request, has been split into two administrative units, Begada 1 and Begada 2.

**Purpose of the Begada Site Specific Plan**

The purpose of the Begada plan is to offer to the village resources (infrastructure/human/natural) to offset negative project impact. At the HH level, the SSP evaluates whether HH made vulnerable by land take have a continuing need of livelihood restoration assistance to offset their losses to the Project. This can be done by increasing revenues from Off-Farm training or Improved Agriculture or through providing additional land to those below the viability threshold.

**Elements of the Begada Site Specific Plan**

- Land use status of the community prior to the Project:
  - Nature and quantity of resources available before the Project.
- Resources currently available:
  - The inhabitants already have the knowledge and habits to exploit these resources.
- Socioeconomic survey data and analysis to obtain current status of the village:
  - Community inhabitants.
  - Which village and individual resources have been impacted by the Project?
  - Households in difficulty.
- Ways in which the village has been unable to deal with Project impact:
  - Define the livelihood difficulties found at the specific site.
  - Identification of impacts unforeseen in the EMP and CRCP.
  - Will new additional measures be needed to reverse Project impact?
- Review of possible actions for Site Specific Plans providing for village level livelihood enhancement.

- List of actions selected in priority order:
  - Quantify resources needed to reverse Project impact.
  - Identify entities responsible for execution.

- Implementation plan for each listed action, with time-bound actions and dedicated budgets.

**Land Use Status Prior to the Project**

***The OFDA***

- The population of the 10 Highly Affected villages in the OFDA doubled between 1993 and 2006.
- The average population growth was 124% and the modal increase in population ranged from 90-96% in these villages.
- Compared with natural population growth the Project's impact on land (bush, fallow, settlement, fields) has been very limited.
- Project land take caused only a 4% increase in population density per ha compared to the increase caused by natural population growth.
- In the OFDA the population growth reduced the amount of bush/fallow available to people by one half between 1993 and 2006. Only 8% of the decrease in bush area can be attributed to Project land take.

**NOTE: The data used in this analysis are correct as of mid-May 2009; the figures may change slightly as fields cultivated by Begada residents are discovered in other villages being surveyed; since this land only ameliorates the situation any changes have a minimal impact.**

**Begada's Land and Population, Past and Present**

Kome Canton's Begada is a border village lying on the edge of Bero canton. At the beginning of the project it formed one administrative unit but a portion of the population is seeking its independence from Kome Canton. This has led to an administrative split into Begada 1 and Begada 2, both remain in Canton Kome. Because this report deals with resources available to both villages they will be referred to here collectively as "Begada".

The eastern frontier of Begada's village limit is formed by the perennial water course, the Loule River, which is used for fishing and a bit of rice farming. As much of it cannot be used as farm land it also contributes to the large amount of village's long-term bush/fallow.

- Begada's population growth between 1993 and 2009 was 117%:
    - Between 1993 and 2007 –the period for which information is available to compare most villages -- Begada's population increased by 96% (the average growth in most area villages was in the 90-100% range).
    - Between 1993 (the last national census) and 2000 (beginning of project construction): 63%.
    - Between beginning of construction and 2007: 21%.
    - Between 2007 and the village survey in 2009: 11%.
- Begada had 940 ha bush/fallow (estimated from the manual interpretation of a satellite image dated from November 2003) before the Project:

    - As the village land survey discovered, almost all of this is long term fallow for which there is still someone with first rights of access, should the fallow be put into use.
    - During the Village Survey, all land within the village limits was surveyed as fields or long term fallow. The village has an area of 0 ha of Bush.
- Before the Project Begada was sixth from the top of the 20 project-affected OFDA villages with respect to the hectares of bush/fallow available.
- Begada was second from the bottom of villages in population density before the project and remained so in 2007 (the date used for village comparisons):
    - Begada had 0.18 people per ha at the census of 1993, which had grown to 0.30 people/ha pre-project (2000).
    - Today, the population density is 0.43 according to the village land survey.
- Begada's total land area (land inside village limits minus permanent land take and temporary not yet returned) in December 2008 is 3019 ha:
    - During construction the total arable land available to Begada had been reduced by an additional 3%.
    - Following the 2008 return of newly reclaimed land, Begada has returned to 91% of its pre-project holdings.
    - It has lost 9% of its pre-project arable land.

**Begada's Demographics**

- Begada has 259 households (HH) and 1285 inhabitants (58 % of pop. in Begada I, 48 % of pop. in Begada II)
- 27% of HH are headed by women (75 % in Begada I, 25 % in Begada II)
- The Project land take has increased the density by 10%, the population increased the density by 117% (see growth 1993-2009)and settlement expansion for 0%: (0.43 = 1.10*2.17*1.00 * 0.18
- The average number of HHM is 5.0
- The overall distribution of households by size is:

| Begada HH Size Distribution | |
|---|---|
| HH Size Range | Nbr HH |
| 1 | 28 |
| 2 | 29 |
| 3 | 37 |
| 4 | 38 |
| 5 | 31 |
| 6 | 32 |
| 7 | 17 |
| 8 | 14 |
| 9 | 14 |
| 10 | 8 |
| 11 | 3 |
| 12 | 3 |
| 13 | 2 |
| 14 | 2 |
| 18 | 1 |
| 19 | 1 |
| Total | 259 |

- HH in Begada are, on the whole small in size, compared to some other villages:

**Comparison of HH Size Distribution**

| HH Size Range | Number Households | | | |
|---|---|---|---|---|
| | Danmadja | Dildo | Ngalaba | Begada |
| 1 | 7 | 24 | 26 | 28 |
| 2 | 10 | 38 | 24 | 29 |
| 3 | 10 | 39 | 37 | 37 |
| 4 | 13 | 38 | 30 | 38 |
| 5 | 10 | 36 | 34 | 31 |
| 6 | 20 | 27 | 22 | 32 |
| 7 | 7 | 21 | 24 | 17 |
| 8 | 7 | 22 | 9 | 14 |
| 9 | 6 | 6 | 12 | 14 |
| 10 | 4 | 10 | 12 | 8 |
| 11 | 2 | 7 | 5 | 3 |
| 12 | 2 | 1 | 7 | 3 |
| 13 | 0 | 2 | 4 | 2 |
| 14 | 0 | 2 | 3 | 2 |
| 15 | 0 | 1 | 0 | 0 |
| 16 | 1 | 0 | 1 | 0 |
| 17 | 1 | 0 | 0 | 0 |
| 18 | 0 | 0 | 0 | 1 |
| 19 | 0 | 0 | 0 | 1 |
| 20 | 0 | 0 | 0 | 0 |
| 21 | 1 | 0 | 0 | 0 |

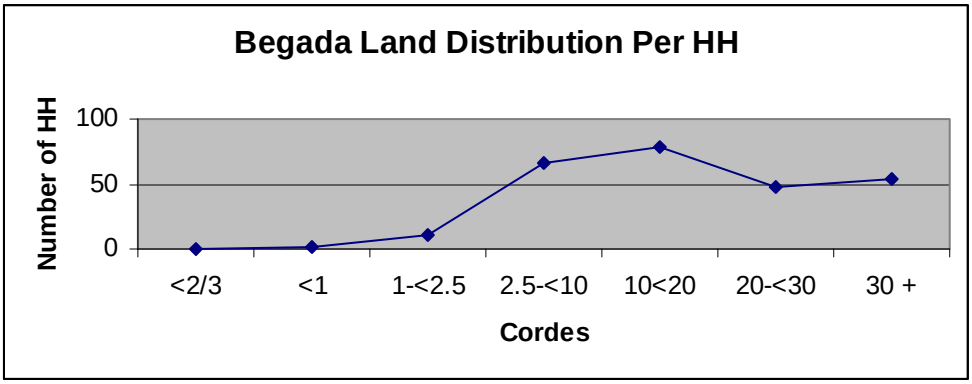
- Begada's overall age distribution of HH heads is:

| Begada HHH Age Distribution | | | |
|---|---|---|---|
| Age | # HH | AVG HH Size | # All At Risk HH |
| 0-20 | 6 | 2.8 | 0 |
| 21-30 | 91 | 5 | 9 |
| 31-40 | 63 | 6.9 | 4 |
| 41-50 | 41 | 4.7 | |
| 51-60 | 33 | 3.8 | 1 |
| 61-70 | 19 | 3.2 | 1 |
| 71-80 | 5 | 2 | 0 |
| 81-90 | 2 | 1 | 0 |
| 91-100 | 0 | 0 | 0 |
| Total | 259 | 5 | 15 |

- Mouarom and Ngalaba have 2 teenage HHH, all male and all viable; Dildo has 1 female HHH age 19, also viable.
- Begada has more teenage HHH than the other villages surveyed so far:
  - 3 HHH 16 years old.
  - 1 HHH age seventeen.
- All 4 teenage HH are viable, 3 comfortable, and the last just entering the wealthy category of land holders in Begada.
- 5% of HH in Begada are agriculturally At Risk.
- A further 5 % have Marginal land holdings.
- Most farmers in Begada have very large land holdings per capita:

**Begada Level of HH Viability**

| # HH at Vulnerability Factor Per Capita | | | | |
|---|---|---|---|---|
| | Male HHH | | Female HHH | |
| HH viability | 188 | | 72 | |
| factor | before | now | before | now |
| zero | 0 | 1 | 0 | 1 |
| <2/3 | 6 | 9 | 5 | 5 |
| <1 | 3 | 6 | 4 | 5 |
| <2.5 | 34 | 40 | 18 | 17 |
| 2.5 -<10 | 129 | 117 | 32 | 31 |
| 10-<20 | 11 | 10 | 7 | 7 |
| 20-<30 | 4 | 4 | 3 | 3 |
| 30 + | 1 | 1 | 3 | 3 |




- Like other surveyed villages, Begada's land distribution is skewed – of the 259 HH, 2 HH with 3 and 4 members have no land, and the largest land holding family has 6 HHM.
- Overall land distribution in Begada is even less equitable than in most other villages.
- 69% of Begada HH have over 10 cordes of land per HH.

**Difference in land distribution between OFDA average 1995 and Begada in 2008**

| Land Distribution among HH (green = mode) | | | | | |
|---|---|---|---|---|---|
| | **OFDA** | **Dildo** | **Dokaidilti** | **Ngalaba** | **Begada** |
| cordes | 1995 HH | 2008 HH | 2007 HH | 2008 HH | 2009 HH |
| 0 | see < 1 | 1.8% | 0.0% | 1% | 1% |
| < 1 | 4.7% | 1.1% | 1.2% | 0% | 1% |
| < 2 | 10.5% | 9.1% | 2.4% | 4% | 3% |
| < 3 | 12.1% | 8.0% | 9.4% | 4% | 3% |
| < 4 | 16.0% | 8.4% | 8.2% | 5% | 3% |
| < 5 | 14.8% | 8.7% | 4.7% | 7% | 2% |
| < 6 | 9.3% | 7.3% | 8.2% | 9% | 3% |
| < 7 | 8.0% | 6.9% | 4.7% | 6% | 4% |
| < 8 | 5.1% | 4.4% | 8.2% | 4% | 3% |
| < 9 | 6.8% | 3.3% | 11.6% | 4% | 4% |
| < 10 | 2.3% | 5.5% | 5.9% | 5% | 5% |
| > 10 | 8.2% | 36.0% | 35.3% | 41% | 69% |

**Description of Project Impact**

- Most of the land occupied by the project parallels the Loule River, just to the west, and lies distant from the village settlement.
- As a village, Project land acquisition has not left Begada in an At Risk state. There is still plenty of land and the average viability factor per HH is quite high.
- Data from the compensation database (declarative HHM and Land Holdings) and the village land survey data paint different pictures:
    - According to the village land survey measures and GPS-measured land compensated by the Project [1]:

        + 10 HH (4%) were vulnerable before the Project versus 14 HH (5%) currently **(an increase of 4 At Risk HH due to the Project).**

        + 7 HH were Marginal (3%) versus 11 (4%) currently **(an increase of 4 Marginal HH due to the Project).**

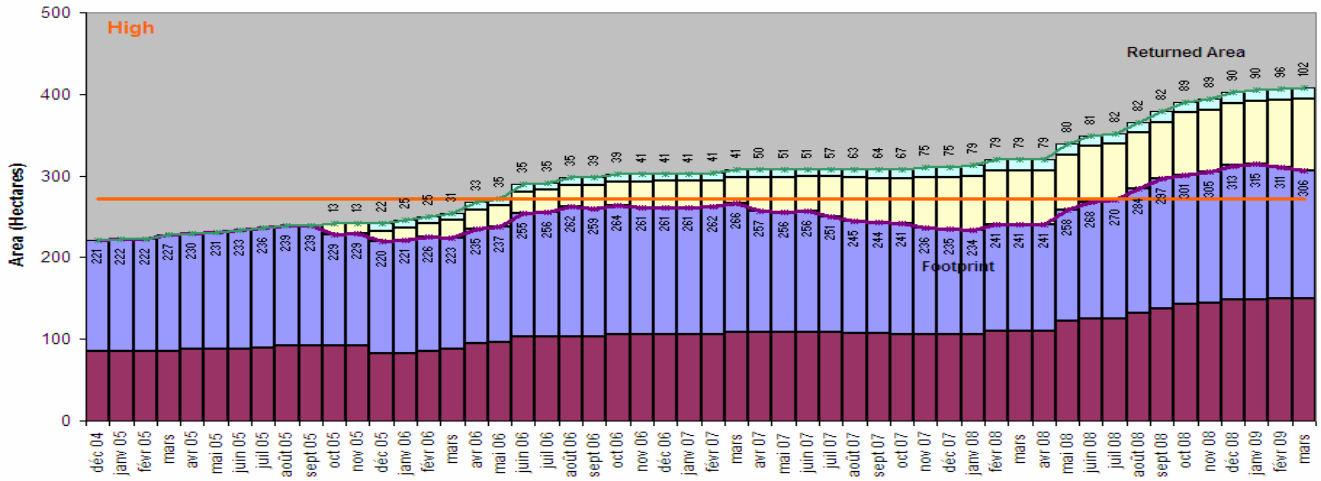
[1] Total land holdings were not measured at first compensation; the number of HHM reported at different times is highly variable, so pre-project holdings are calculated from known data: (current land area + total of land compensated) / current HHM = pre-project vulnerability factor. A HH may have been larger or smaller, the family may have surrendered fallow land not attributed to their compensation data (instead paid by community compensation), hence the HH land holding may have been larger, but this gives an estimate of the HH's pre-project situation.

- 73% of Begada's HH had a HHM who was compensated:
    - Of today's vulnerable and Marginal HHs, 9 and 10 were compensated respectively i.e. the Project diminished their land holdings.
    - 5 HH are At Risk and 1 is Marginal through their own circumstances/actions.

- The largest area surrendered by a single HH was approximately 22 cordes, the loss of which moved the HH from wealthy to OK status.
- The next largest surrender of total land area was 19.59 cordes, which left the HH still wealthy.
- 2 HH that lost 12 and 13 cordes moved from OK to Marginal.
- But only one HH in top 23 HH that lost the largest amount of land was put At Risk (see table below):

**Land Holdings of Project-Affected HH with Less Than 2/3 corde per Household Member**

| Sex | Cordes lost | Remaining cordes | % original holding compensated | # Household Members | Replacement value of sorghum: # sacks |
|---|---|---|---|---|---|
| Female | 0.244 | 1.769 | 12% | 4 | 2.7 |
| Female | 0.415 | 0 | 100% | 3 | 4.6 |
| Female | 0.627 | 1.724 | 27% | 4 | 6.9 |
| Female | 1.144 | 2.158 | 31% | 5 | 12.6 |
| Male | 1.483 | 1.078 | 58% | 4 | 16.3 |
| Female | 1.978 | 0.813 | 71% | 6 | 21.8 |
| Male | 5.265 | 5.828 | 47% | 9 | 57.9 |
| Male | 6.538 | 9.115 | 42% | 18 | 71.9 |
| Male | 6.891 | 2.247 | 75% | 7 | 75.8 |
| Male | 12.180 | 3.729 | 79% | 10 | 134.0 |




**Land Acquired and Returned in Begada**

Begada was for a period in the category of “approaching high” impact. With the acquisition of additional land for well pads as part of Infill Drilling it has risen above the threshold (red line) to highly impacted, but this is a temporary situation. Most of the land acquired is land that had been previously compensated for underground flowlines, etc. These flowline right of ways must be opened up again to lay more piping to connect infill wells. Once this has been completed the land will again be reclaimed and returned. Begada will likely be classified as Moderately Impacted post In Fill Drilling and completion of SSP.

**Begada's Current Needs and Resources**

- 10% of HH are currently in a At Risk or Marginal situation regarding land holdings:
    - 5% are At Risk.
    - 5% are Marginal.
- The total land shortage in Begada is 12.3 ha:
    - The amount of land needed to return all At Risk HH in Begada to viability is 12.3 ha.
    - For HH affected by the Project = 11.0 ha.
    - HH unaffected by project – 11.3.
    - 3 eligible HH have kin with plenty of land (see below):

**Case Studies in Vulnerability**

Mr. X, age 61, surrendered 0.018 corde to the Project. He has lost all 3 of his wives and with no one to cook for him he follows the common cultural practice of eating with his 2 friends and neighbors, ages 44 with 3.038 c/ HHM and 61 with 17.091 c /HHM. He handed over his remaining land to his son, who had already received his land inheritance, so the son passed it on to an aunt who had returned home after a divorce.

5 brothers each received his land inheritance. The oldest brother, age 36, married to 5 wives, lost a large area to the Project: 6.538 cordes leaving him with 0.506 corde /HHM. His brother age 26, married to 1 woman, also lost a lot (12.180 cordes) and he now has 0.327 cordes /HHM. Neither is in financial difficulty; the older works for the Project's catering service as a gardener and each of his first three wives earns 4 000 CFA per month from alcohol and the two others earn at least 9 000 per month from petty commerce. The 26 year old is a butcher and earns 30 000 to 35 000 CFA per month while his wife earns 4 500 CFA /month from alcohol.

Brothers 3, 4 and 5, ages 29, 21 and 16 have 5.972 c/HHM, 6.694 c and 2.776 respectively. None is willing – and older brother age 26 freely admits as much – to share their own part of the inheritance with the two "vulnerable" HH because they were not generous in sharing their compensation wealth among the brothers when they were paid.

- The total arable land available to Begada totals 2763 ha, including land within the village limits and other land farmed outside:
    - Begada residents "own" 1190 ha of fields and 1497 ha of fallow within their village bounds.
    - Outsiders "own" 272 ha of land within Begada limits.
    - Available land density on all the land within the village limits is 2.32 ha per person.
    - Density on available arable land inside and outside the village is 2.15 ha per person.

- 69% of HH are holding more than 10 cordes of land apiece.
- One Project-affected At Risk female HHH has returned to viability through her Improved Agriculture training in 2005; all the other At Risk HH that are in training do no yet have a track record and must be monitored.
- A very small % of Begada's land in cultivation or in fallow is farmed by people from outside Begada – only 272 ha or 9%, unlike Dokaidilti (21%) or Mouarom (45%).
- 2% (28 inhabitants) of Begada inhabitants have declared farm land outside of Begada, mostly in Mainani village which is close enough for Begada farmers to make the daily trip to their fields; the area outside is equal to a mere 3% of the village's own land.
- The current ratio of 1190 ha of fields, 1497 ha of fallows allows 23 years of fallow for each field.
- 3 years is the current norm for fallow to recover in the OFDA.
- Begada has enough arable land to provide all its inhabitants more than 2/3 c per HHM.
- Begada has enough land to maintain a rotation of 4 years of cultivation, 3 years of fallow.

| Land Data | Dokaidilti | Dildo | Ngalaba | Begada |
|---|---|---|---|---|
| Cultivated Field or owned fallow by outsiders (% of available land) | 121 Ha (21 %) | 141 Ha (9 %) | 141 Ha (8 %) | 272 Ha (9 %) |
| Field cultivated by resident (% of available land) | 302 Ha (52 %) | 668 Ha (40 %) | 1043 Ha (59 %) | 1190Ha (40 %) |
| Fallow owned by resident (% of available land) | 149 Ha (26 %) | 792 Ha (48 %) | 553 Ha (31 %) | 1497 Ha (50 %) |
| % of Land “Owned” by women | 15 % | 17 % | 29 % | 30 % |
| **Household Data** | **Dokaidilti** | **Dildo** | **Ngalaba** | **Begada** |
| Number of Households | 85 HH | 275 HH | 250 HH | 259 HH |
| Average HH Size | 6.3 HHM | 4.9 HHM | 5.3 HHM | 5.0 HHM |
| Average Land per HH | 11.3 cordes | 11.2 cordes | 12.6 cordes | 20.7 cordes |
| Average Resettlement Factor | 1.80 cordes/HHM | 2.29 cordes/HHM | 2.39 cordes/HHM | 4.17 cordes/HHM |

| Number of Years Fallow Possible Given Current Land and Population | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Village** | **Measure** | **Bela** | **Mouarom** | **Dildo** | **Ngalaba** | **Begada** | **Danmadja** | **Dokaidilti** |
| Arable Land INSIDE | ha | 1950 | 1175 | 1656 | 1768 | 2963 | 385 | 583 |
| Arable Land OUTSIDE | ha | 73 | 217 | 101 | 69 | 60 | 122 | 39 |
| Total Arable Land | ha | 2023 | 1392 | 1757 | 1837 | 3023 | 507 | 622 |
| Arable Land INSIDE | m2 | 19500000 | 11750000 | 16560000 | 17680000 | 29630000 | 3580000 | 5830000 |
| Arable Land OUTSIDE | m2 | 730000 | 2170000 | 1010000 | 690000 | 600000 | 1220000 | 390000 |
| Total Arable Land | m2 | 20230000 | 13920000 | 17570000 | 18370000 | 30230000 | 4800000 | 6220000 |
| Population | per capita | 846 | 447 | 1346 | 1324 | 1285 | 570 | 534 |
| Length Cultivation | years | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| Necessary Area Per Person | m2 | 3362 | 3362 | 3362 | 3362 | 3362 | 3362 | 3362 |
| | | | | | | | | |
| **Years Fallow Village Only** | | **23.4** | **27.2** | **10.6** | **11.8** | **23.4** | **3.4** | **8.9** |
| **Years Fallow Village + Outside** | | **24.4** | 33 | **11.5** | **12.5** | **23.9** | **6** | **9.8** |
| Formula : Allan & Brush<br>LengthFallow =((ArableLand*LengthCultivation/Population ) - NecessaryAreaPerPerson*LengthCultivation)/NecessaryAreaPerPerson | | | | | | | | |

The following table sums up the land situation in Begada over the past years:

| | Begada | | |
|---|---|---|---|
| | **Year 1993** | **Year 2000** | **2009 (with project)** |
| **Population** | 592 | 962 | 1285 |
| **Village Area** | 3321 | 3321 | 3019 |
| **Density (people/Ha)** | 0.182 | 0.295 | 0.434 |
| **Density increase (Land Take factor)** | 10.2% | 10.2% | |
| **Density increase (Population factor)** | 117.1% | 33.6% | |
| **Density increase (Settlement)** | -0.2% | -0.2% | |

**Observations**

Begada village is a single geographic entity split into two administrative units, each paying a poll tax to a different village chief. In the late 1990s Begada had some "suburban sprawl" which became the nucleus of Begada 2. So at each end of the village there is a preponderance of adherents of one or the other unit, but they form one contiguous group with contiguous fields.

Begada's land situation today resembles that of many of the other surveyed villages back in 1993. Its population density today is what the others had 15 years ago. One could, therefore, make the assumption that the relationship between population and land in Begada today is a window on what it was in other villages back in the time prior to the Project.

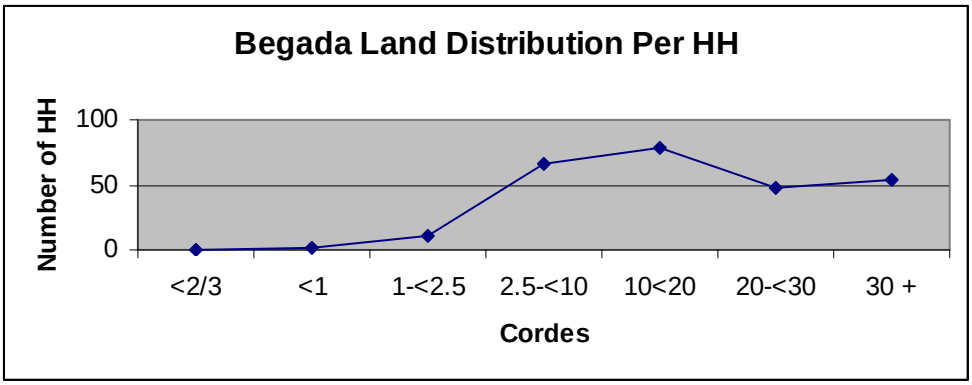
**Comparison Population Density**

| Year | Village | Population Density (people per Ha) |
|---|---|---|
| 1993 | Ngalaba | 0.403 |
| 1993 | Danmadja | 0.451 |
| 1993 | Bendoh | 0.498 |
| 2009 | Begada | 0.434 |

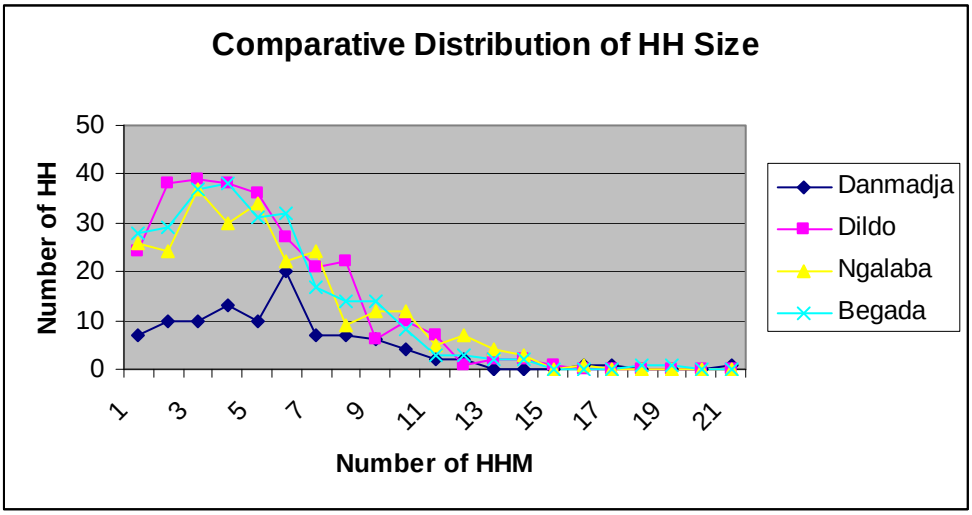
Both Ngalaba and Bendoh are villages which have split since 1993. Ngalaba initially split physically between Ngalaba and the hamlet Hollo to the south. More recently, during the project period, geographic Ngalaba center has split into two administrative units, like Begada. Bendoh split between 1993 and the beginning of the project in 2000 into two villages in two different cantons.

This is an interesting social dynamic to be explored; when some people leave their village behind to exploit land in another area, what are the HH and village dynamics which lead them to move? How do villages/HH break up?

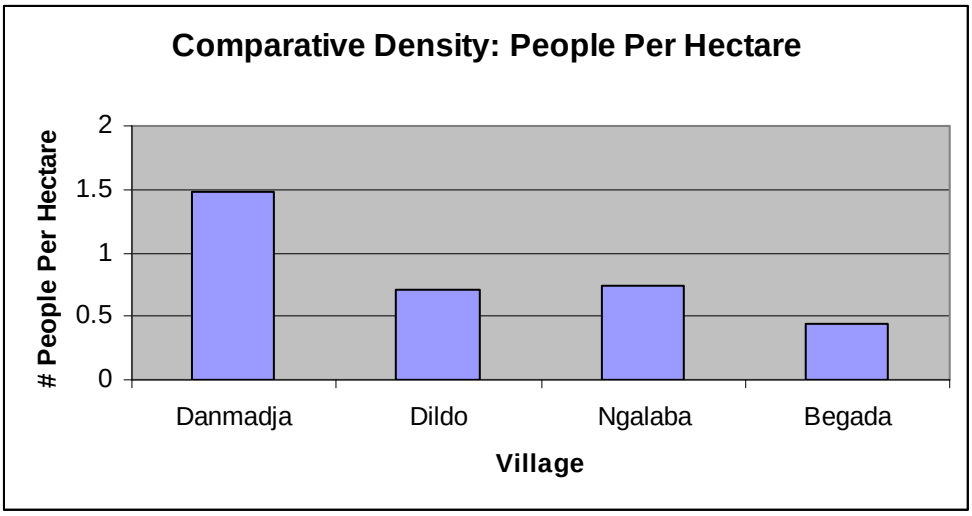
One unusual characteristic of Begada today is its land distribution. Here it is even more skewed than elsewhere. 69% of HH are above the 10 corde per HH line, versus about 35 % in other villages.




In addition, in Begada households tend to be smaller than in some other surveyed villages. In particular contrast is the village of Danmadja, where the density today is 1.48 people per hectare, the highest in the area. Danmadja's HH have, preponderantly, 7 HHM; Begada between 3-7. Even though the Project land take has increased the density of people per hectare in Begada by 10% and natural population growth increased it by 117%, Begada's HH size still remain small. (See also table on **Comparison of HH Size Distribution** given above**.)**




Yet another difference between Begada and other villages is the population density, as the table at the beginning of this section showed; Begada today resembles the other villages years ago:




From these tables one can deduce that changes in density of people per Ha are expressed through the HH increasing in size on the same amount of land rather than the HH maintaining a smaller size and exploiting a smaller amount of land per HH. In other words, it does not appear that HHs split to retain equilibrium in population density, but instead more share what was available before.

Rather than the area per HH being reduced, and also tied with the fact that many At Risk HH have many members for the amount of land they have available, may be that one symptom of pressure on land may be HH agricultural viability? Does greater the pressure mean more HH become At Risk, even while the majority of HH retain a comfortable or rich margin?

In Begada today, among the vulnerable HH:

- 1 female-headed household has no land, whereas before the project she had a little something (2000 $m^2$).
- 1 male HHH, age 61, has no land either for his HH of 4.

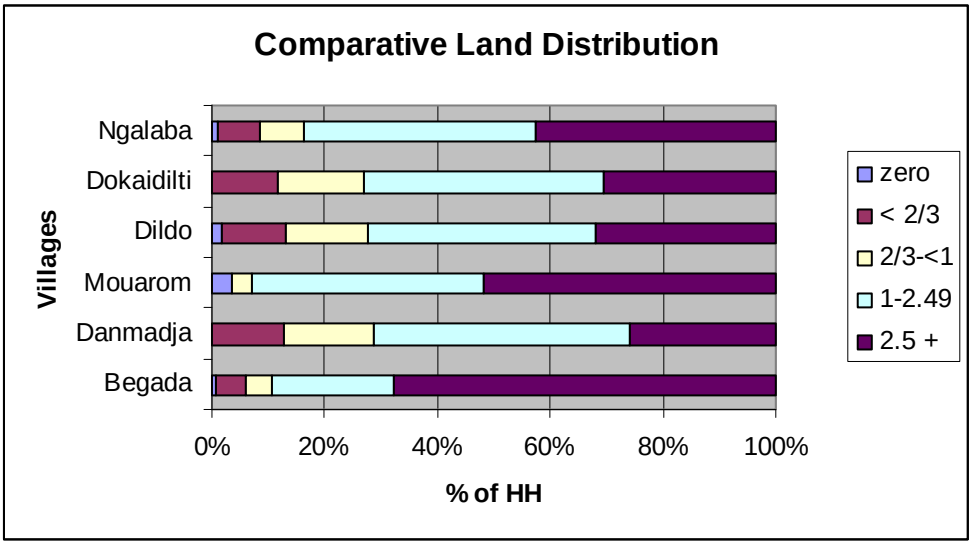
Even though Begada as a village has plenty of land, not all HH do:

- Similarly, Mouarom, Dildo and Ngalaba, all of which have – like Begada— a fairly good land to population ratio, have HH with no land.
- Whereas every HH in Danmadja and Dokaildilti, villages with more land pressure, has something:

## Landless HH

| Village | # HH Zero Land | # At Risk | # Marginal HH | Pop Density/Ha |
|---|---|---|---|---|
| Begada | 2 | 13 | 12 | 0.43 |
| Dildo | 5 | 31 | 39 | 0.71 |
| Ngalaba | 2 | 18 | 20 | 0.71 |
| Mouarom | 3 | 2 | 3 | 0.38 |
| Danmadja | 0 | 13 | 16 | 1.48 |
| Dokaidilti | 0 | 10 | 13 | 1.78 |

So land pressure does not mean that some HH lose everything. Perhaps HH in these villages are more likely to be vulnerable – big HH with little land, as we have seen is typical of At Risk HH:




Rather than some HH in villages with land pressure losing all their land, or becoming At Risk but with something to exploit, it appears instead that more HH become Marginal. The move from comfortable to At Risk is gradual, rather than HH undergoing a sudden change in living standards.

- In all villages except Begada, about the same percent of HH fall into the comfortable landholding of 1 - 2.49 cordes per HHM.
- What changes is the number of Marginal HH and the number of very large land holders:
  - Mouarom with lots of land has more large land holders and fewer Marginal ones.
  - Danmadja and Dokaidilti, with more land pressure, have fewer large land holders and more Marginal HH.
- Begada, as has been seen above, more HH that are land wealthy, rather than just “comfortable”.

Land pressure is expressed first at the HH level, where the HH increases in size to share the same resource. With more pressure some HH are pushed first into a Marginal, not vulnerable, landholding position.

**Resettlement Program Impact on Begada**

The information in this section has been developed from surveys and monitoring results of Improved Agriculture Techniques Training (IAT) and Off-Farm Training (OFT) plus the Village Land Use Survey (VLUS) and post graduation social monitoring. For HH for which no IAT or OFT survey information is available, the VLUS provide the only, though detailed, basis for judging impact.

***Training***

- 38 of Begada's inhabitants received training in the past, 6 in OFT and 32 in IAT.

***Off Farm Training***

- 6 have been trained in Off Farm between 2004 and 2007:
    - All were and are viable, except 1 female, who is a dependent.
    - 1, age 57, has never practiced his training in blacksmithing; his family has 3.129 cordes per HHM.
    - 1 – no income information is available; he lost 19.59 cordes but his HH still has 5.357 cordes per HHM.
    - The 4 others do very well in earnings: one earns 180 000 CFA/ year, 2 earn 360 000 CFA/year and 1 earns over 1 000 000 per year as a tailor.

***Improved Agriculture Training***

- 32 have received training in agriculture:
    - 3 are At Risk HHs, currently in training.
    - 1 At Risk female HHH trained in 2005 is now viable.
    - 3 are Marginal HH, currently in training.
- Of the 32 trainees that have finished training long enough ago to have a track record:
    - 1 is Excellent; he is a Marginal HHH, with a vulnerability factor of 0.801.
    - 6 Very Good.
    - 1 Good.
    - 1 OK to Good.
    - 3 OK, including 1 previously At Risk female HHH.
    - 4 failed.

***Project Mitigation Measures***

**Land Return**

- Neither past nor projected return of land taken from At Risk HH for temporary use by the project will raise them to a viable status, above 2/3 corde:
    - 3 of the HH are currently in Improved Agriculture training and will be monitored for 2 years.
    - 1 took Improved Agriculture training in 2005 and has restored her livelihood.
    - 7 other HH, with a total of 35 HHM are At Risk and will be offered a choice of resettlement option.

***Physical Resettlement***

No one in Begada has chosen to be resettled in another village, despite the frequent reiterations of some NGOs to villagers that the entire village of Begada would be targeted for resettlement.

**Conclusions on Resettlement Options**

- To date there has been no physical resettlement nor has any HH indicated interest in resettling itself.
- Off Farm training has considerably improved the living standard of 4/5 of Begada's inhabitants affected by Project land needs.
- 1 HH has restored livelihood through Improved Agriculture Training; the others are currently in the program.

**Provide For Creating Village Level Livelihood Enhancement Through Economic Development Projects**

Begada, like the other impacted villages in the OFDA, is being included in a Supplemental Community Compensation program. According to the principles of compensation, Individual compensation for land covered the lost crop plus the cost of putting another field in cultivation for a replacement crop in the next year. Community compensation was given for permanent land take or for temporary land taken for more than one year. In highly affected villages the time for return of temporary land has been protracted and there has been more stress on community land resources. LUMAP will provide Supplemental Compensation for the "temporary" land that was not returned within 1 year.

Begada started the Participatory Rural Assessment Process (PRAP) with the Non Governmental Organization (NGO) BELACD-Doba in 2Q 2008. Begada has recently been granted the privilege of hosting a CEG, the first 4 years of high-school. Begada 2 made a consensual choice on 15 May to have a school classroom. Begada 1 is still deciding between a classroom and a community pump.

**Recommended Site Specific Actions**

- 15 households in Begada (11 directly affected by the Project) have less than 2/3 c per HHM. The total amount of land needed to improve the 15 households' situation is 10.6 ha; there is not enough land that will be directly returned from their former holdings (once reclaimed) to make them viable.
- The current need for land for the 11 affected directly by the Project whose livelihoods have not yet been restored by resettlement activities or who have not had the offer of a resettlement option is 11.0 ha.
- At the village level there is plenty of land that can be obtained through 3rd party compensation for any HH that fails at any other option for livelihood restoration.

The LUMAP calls for the Site Specific Plan to consider all of the options in the CRCP and its implementing procedures described in the Land Management Manual (LMM). The following table describes each option and its relevance to the At Risk Households in Begada as per the CRCP, LMM procedures and Management of Change to the LMM currently in place.

To provide for restored livelihoods the following Site Specific Plan Actions are recommended:

## Site Specific Actions for Begada

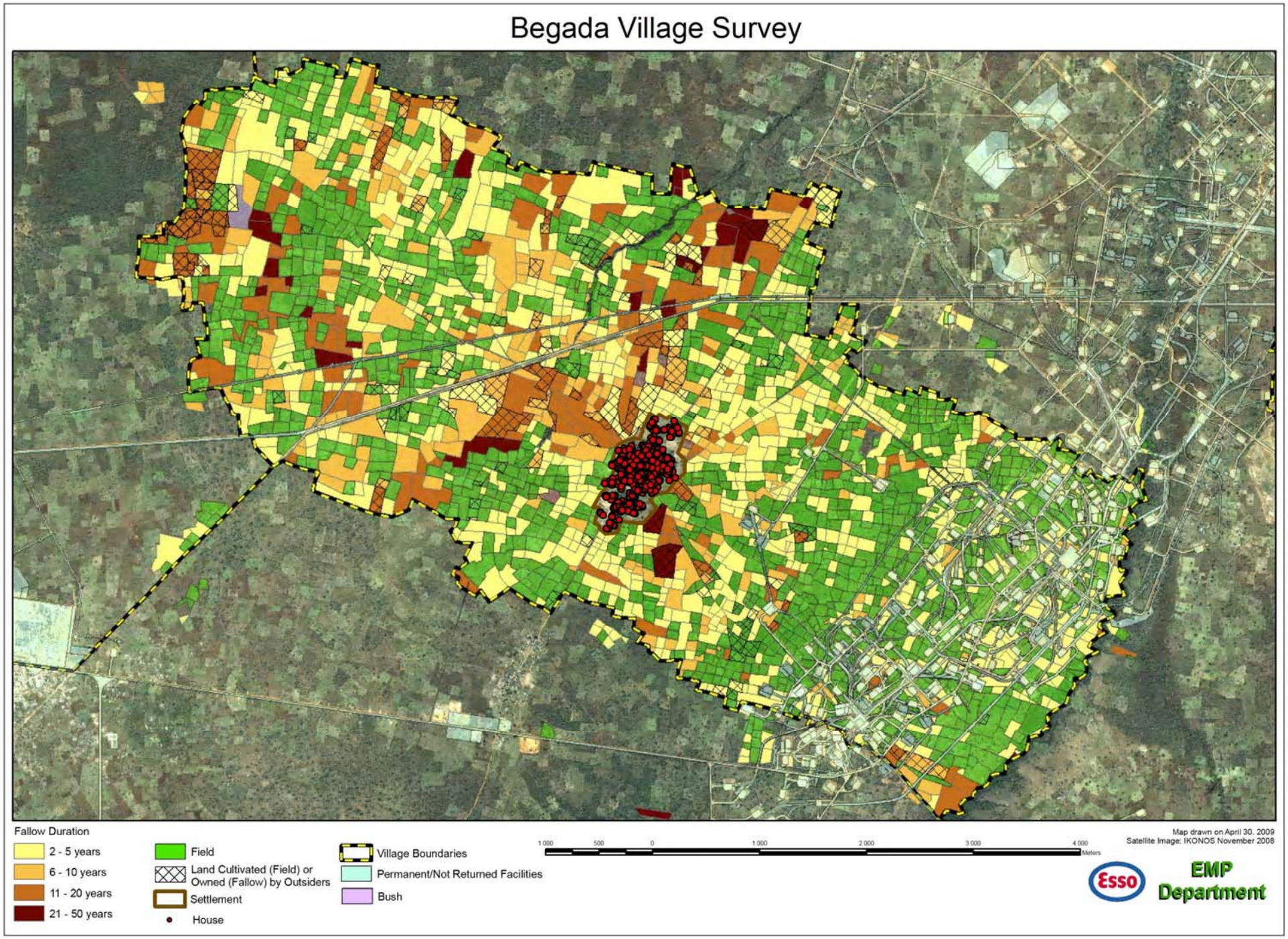
| CRCP/LMM Resettlement Option | Description | Desirable Option (Yes/No) | Comments |
|---|---|---|---|
| Physical Relocation Individuals | Physically move at risk household to new location outside of current village | NO | Begada village has more than adequate land if made available to At Risk HH |
| Third Party Compensation | Land User with surplus land may donate to at risk household and receive normal land compensation payment | YES | Land can be handed over to eligible people through 3rd party compensation. |
| Off Farm Training | Provide training to earn income in non-agricultural work | No | The market for artisan's skills is saturated in the OFDA |
| | Reinforce training to increase income earned to viable level | YES | 4 graduates are currently receiving reinforcement training and equipment |
| Improved Agriculture | Provide training to generate more production of subsistence crops and produce cash crops | YES | 3 are currently in Improved Agriculture training |
| | Reinforce training to generate more production of subsistence/ cash crops | No | Graduate have restored livelihood in the past |
| Rainy Season Resettlement | Provide field clearing, rainy season hut, well, bicycle, and hand cart for use in distant farm field | YES | Begada farmers in At Risk HH may need to access farmland farther from the village |
| Physical Relocation of Village | Physically relocate entire village to new location in cooperation and in concert with government | NO | At the village level there is enough land available |
| Supplemental Community Compensation | Phase 1: Rapid Participatory Assessment of Needs & Resources | YES | The choice of a classroom has been validated by general agreement in May |

| | | | |
|---|---|---|---|
| | | | 2009 in Begada 1; Begada 2 is still deciding. |
| | Phase 2: Oversee implementation; Create management committee | YES | The contractor to build the infrastructure has been contracted; the NGO is training a management committee |

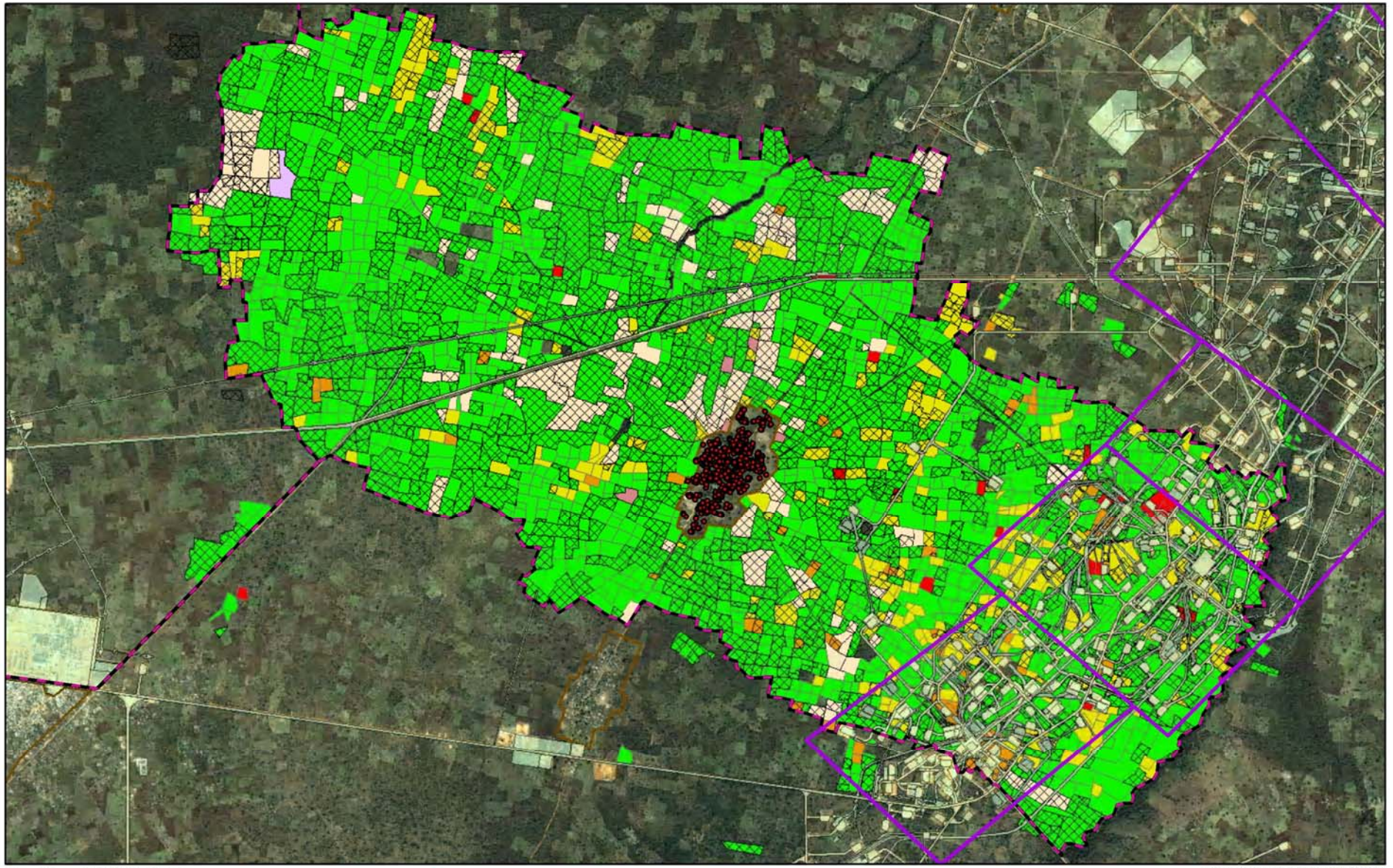
## Site Specific Plan Implementation Timeline

| Action (grey indicates completed, blue underway, white to be done) | Timeline |
|---|---|
| Land and social surveys completed | Mar 2009 |
| Performance evaluations of Improved Agriculture and Off Farm graduates | July 2008 |
| Implementation of Off Farm reinforcement measures | 2 Q 2009 |
| Offer 7 At Risk HH choice of resettlement option | 2-3Q 2009 |
| EEPCI uses 3rd party compensation to transfer land to At Risk individuals who choose this as an option | 3-4Q 2009 |
| EEPCI uses 3rd party compensation to transfer land to At Risk individuals who have not succeeded at other options | 2012 |
| Begada choice of Supplemental Community Compensation | 2Q 2009 |
| Construction of Supplemental Community Compensation | 4Q09 – 1H10 |

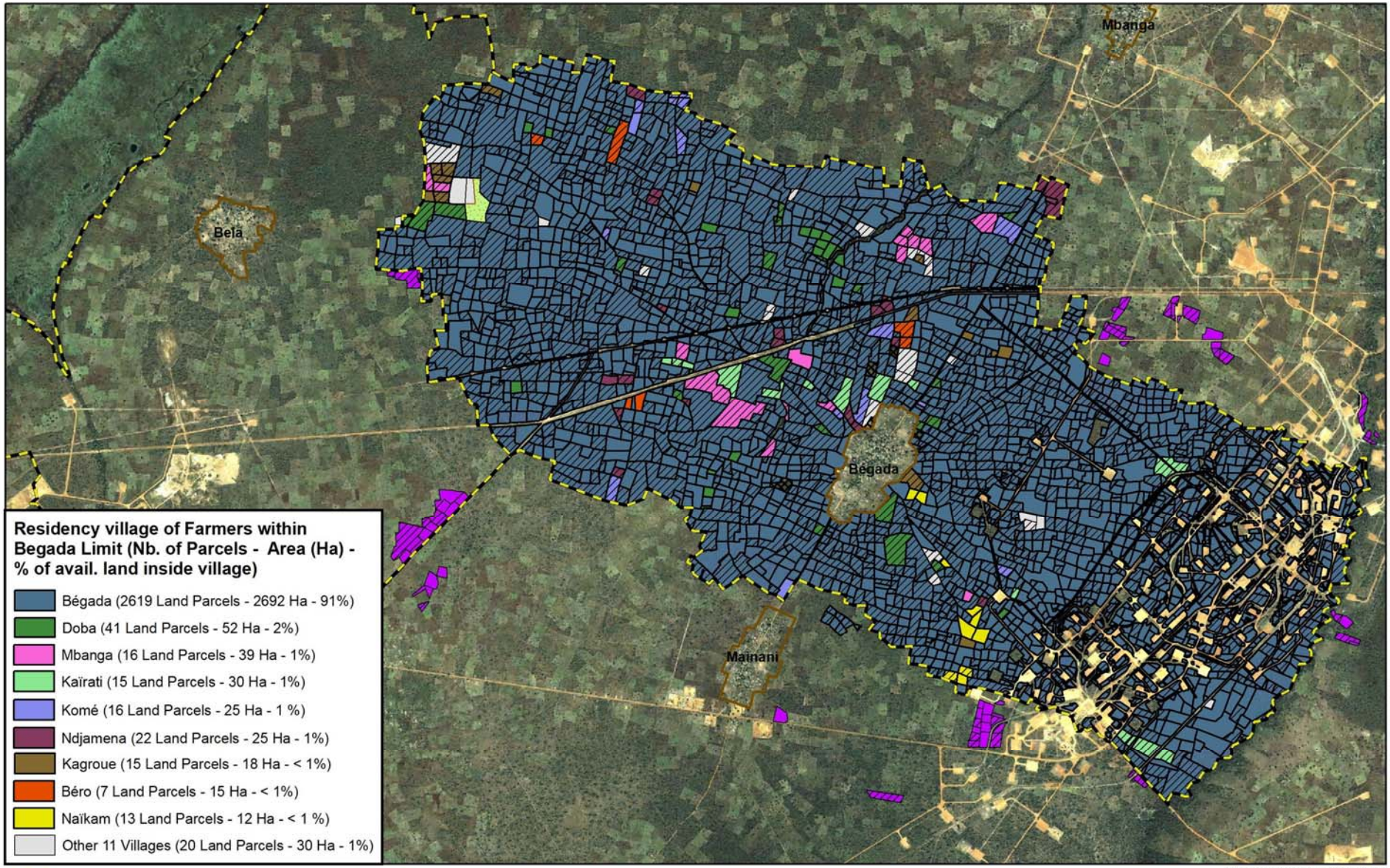
# MAPS AND DIAGRAMS

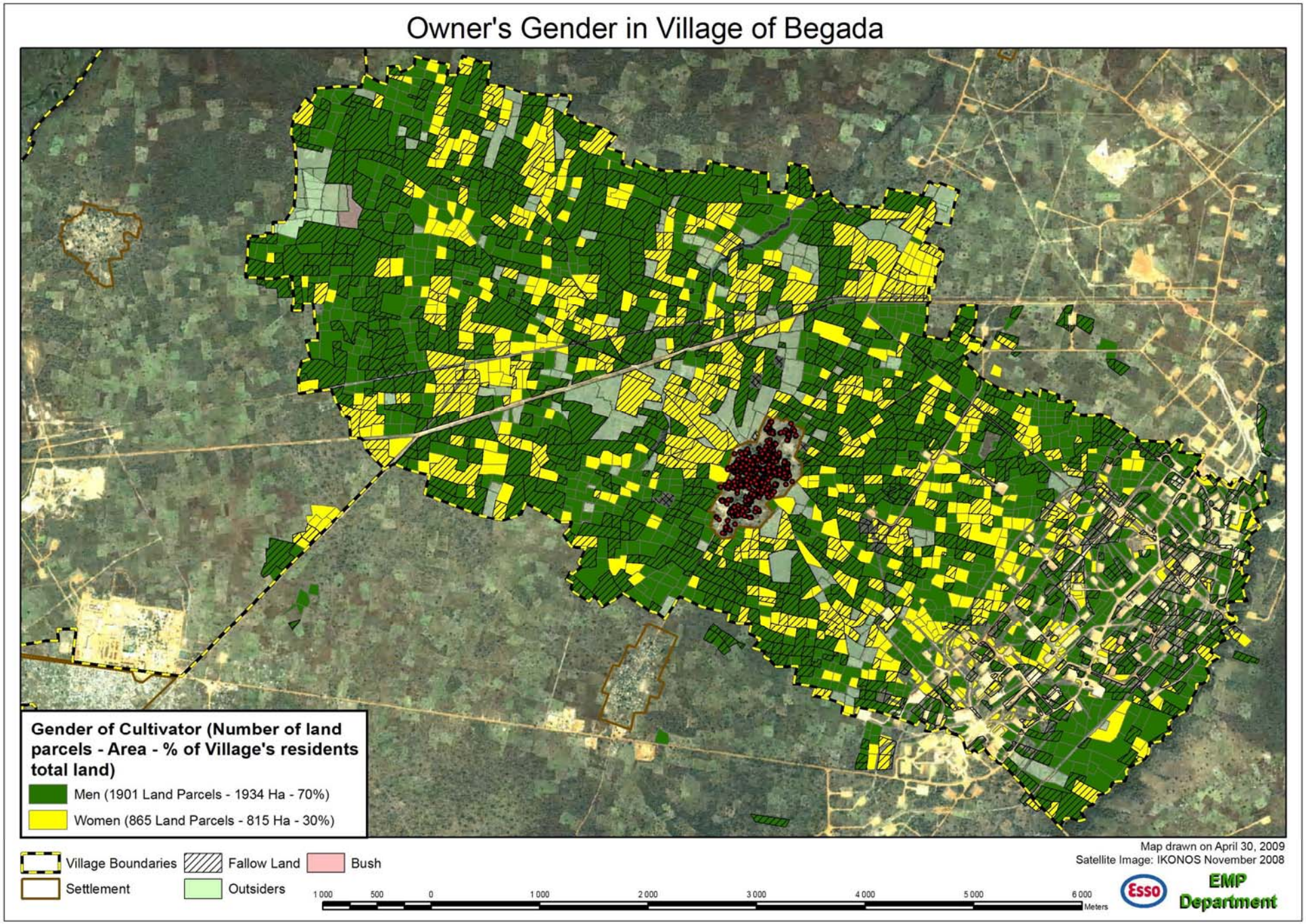

Begada Village Survey
Fallow Duration
2 - 5 years
6 - 10 years
11 - 20 years
21 - 50 years
Field
Land Cultivated (Field) or Owned (Fallow) by Outsiders
Settlement
House
Village Boundaries
Permanent/Not Returned Facilities
Bush
1 000 500 0 1 000 2 000 3 000 4 000 Meters
Map drawn on April 30, 2009
Satellite Image: IKONOS November 2008
Esso
EMP Department

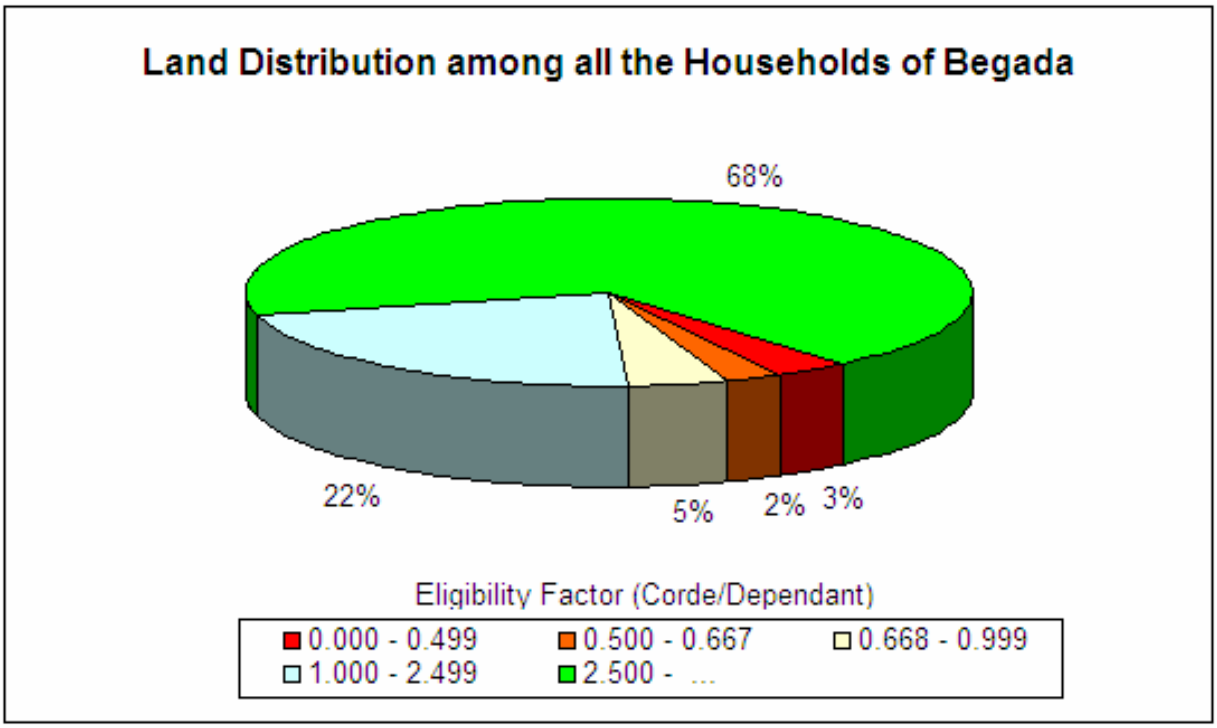
# At Risk Households in Begada



# Farmer's Residence in Village of Begada




Owner's Gender in Village of Begada
Gender of Cultivator (Number of land parcels - Area - % of Village's residents total land)
Men (1901 Land Parcels - 1934 Ha - 70%)
Women (865 Land Parcels - 815 Ha - 30%)
Village Boundaries
Fallow Land
Bush
Settlement
Outsiders
1 000 500 0 1 000 2 000 3 000 4 000 5 000 6 000
Meters
Map drawn on April 30, 2009
Satellite Image: IKONOS November 2008
Esso
EMP Department




| | Total HH | | Compensated HH | | | |
|---|---|---|---|---|---|---|
| | Nbr HH | Nbr. Individual Within HH | Nbr. Of Comp. HH | Nbr. Individual Within Comp HH | % HH | % Individual Within Comp HH |
| 0.000 - 0.499 | 9 | 45 | 8 | 42 | 4.4% | 4.1% |
| 0.500 - 0.667 | 6 | 42 | 3 | 32 | 1.6% | 3.1% |
| 0.668 - 0.999 | 12 | 86 | 9 | 75 | 4.9% | 7.4% |
| 1.000 - 2.499 | 57 | 310 | 40 | 244 | 21.7% | 23.9% |
| 2.500 - ... | 176 | 810 | 124 | 628 | 67.4% | 61.5% |
| Total | 260 | 1293 | 184 | 1021 | 100% | 100% |