Site Specific Plan
Danmadja 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 have been categorized as more affected by ongoing Project land needs than others, including Danmadja. 3 more are undergoing additional land acquisition for infill drilling. The total of 10 geographical villages is split into 15 administratively recognized ones.

Purpose of the Danamadja Site Specific Plan
The purpose of the Danamadja plan is to provide the village and affected people in the village with sufficient livelihood 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 Danamadja 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.

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

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) was 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 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.

Danmadja's Land and Population, Past and Present

Kome Canton's Danamadja lies next to the Nya River and benefits from its perennial water flow for fishing, rice and – more recently – vegetable gardening.
Danamadja still forms a single village unit:

- Most of the land occupied by the Project falls in the southeastern corner of Danmadja's land, bordering the spine road that links the eastern and western oil fields.
- Danmadja still forms a single village unit with a population of 570.
- Danmadja's population according to the 1993 national census was 206 inhabitants.
- Danmadja's population growth between the1993 National Census and the 2009 village survey was 177%:
    - Between 1993 and the beginning of the Project in late 2000 it grew 62%.
    - Between 1993 and 2007 the average growth in most area villages in this period fell somewhere in the 90-100% range; but Danmadja grew 129%.
- Danmadja's total land area in March 2009 is 419 ha or 87% of its pre-project area:
    - During the Village Survey, village has declared an area of 0 Ha of Bush. The bush that was estimated on the 2003 satellite image is long-term fallow).
- It has lost 13% of its pre-Project arable land.
- Before the Project, in 2000, Danmadja (at 0.88 people per ha), along with Ngalaba (at 0.64 people per ha) had the highest population density per ha if any among the 20 Project-affected OFDA villages.

- Today its population density is 1.48 persons per ha of village land, still the highest by far, above Ngalaba's 0.74 and 0.87 that characterizes Dokaidilti and a third riverine village, Madjo, which is only 0.27 people per ha after part of its population set up another village across the river.
- In terms of availability of arable land (fields/fallow/bush), Danmadja's neighboring villages have:
    - Bela to the east = 1 993 ha, with a population density of 0.42 persons per ha.
    - Mouarom to the south = 1 180 ha, with a population density of 0.38 persons per ha.
- During construction the total arable land available to Danamadja had been reduced by 5%. Following the 2008 return of newly reclaimed land, Danamadja has returned to 87% of its pre-Project holdings.
- The Project land take has increased the density by 15.4%, the population increase by 41.8% and the settlement expansion by 2.5%: (1.48 = 1.154*1.418*1.025 * 0.88).
- The neighboring village of Mouarom, which when the Project began was only a farm hamlet for the village of Kome Ndolebe, the canton capital, is now an independent village. It has been, like Danmadja, impacted by the facilities and well pads of Bolobo oil field, which are located fairly close to Mouarom village itself. Mouarom was founded as a farm hamlet because arable land was available, and still is, all 1175 ha of it.
- Danamadja, which has such a high population density, uses farm land outside its own village boundaries belonging to Mouarom. 39% of Mouarom's farm land is cultivated by Danmadjites (7%) and people from Bolobo (12%), Kome (6%) Atan (11%), Koutou Nya (3%) and others.

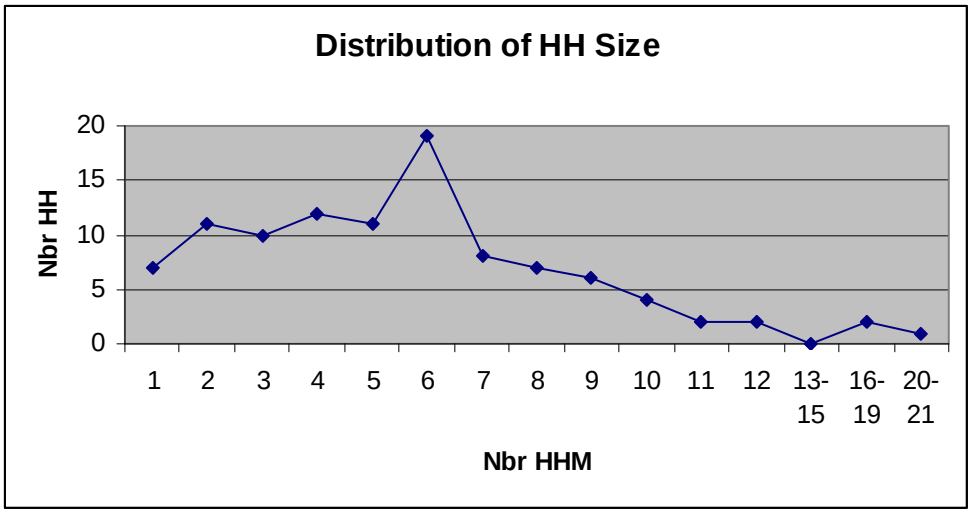
	Danmadjia		
	Year 1993	**Year 2000**	**After Project**
Population	206	402	570
Village Area	480	480	419
Density (people/Ha)	0.451	0.880	1.481
Density increase (Land Take factor)	15.4%	15.4%	
Density increase (Population factor)	176.7%	41.8%	
Density increase (Settlement)	2.5%	2.5%	

Danmadja's Current Demographics

- Danamadja has 101 households (HH) and 570 inhabitants.
  The average number of HHM is 5.7:
    - 87 HH are headed by men, with 11 below the viability threshold of 2/3 cordes per HHM.
    - 14% of HH are headed by women, of whom 2 are under the viability threshold

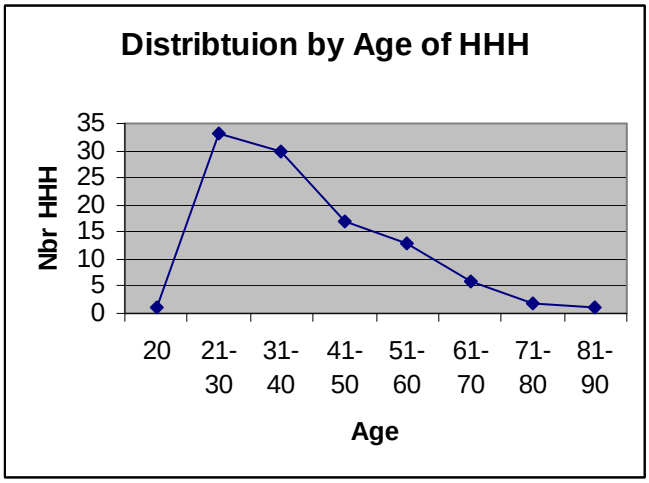
Comparison of Danmadja HH Size Distribution			
HH Size Range	Number Households		
	Danmadja	Dildo	Ngalaba
1	7	24	26
2	10	38	24
3	10	39	37
4	13	38	30
5	10	36	34
6	20	27	22
7	7	21	24
8	7	22	9
9	6	6	12
10	4	10	12
11	2	7	5
12	2	1	7
13	0	2	4
14	0	2	3
15	0	1	0
16	1	0	1
17	1	0	0
18	0	0	0
19	0	0	0
20	0	0	0
21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

- There are fewer larger than average HH in Danamadja than in other surveyed villages, but 3 very large HH.



- As in Dokaidilti, which also has a high population density, the HH is larger than the other surveyed villages, closer to 6 HHM (specifically 5.7 HHM in Danmadja, 6.3 in Dokaidilti) versus the other villages whose average HH size is around 5 members.

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



Danamadja HHH Age Distribution				
Age	# HH	Average HH size	# all At Risk HH	# female At Risk HH
< 20	0	0	0	0
20-29	30	4.8	4	0
30-39	31	6.7	7	1
40-49	16	6.9	1	0
50-59	15	5.2	1	1
60-69	6	4.5	0	0
70-79	2	3.0	0	0
80 +	1	4.0	0	0

Comparison of Danamadja HH Age Distribution			
Age HHH	Danmadja	Dildo	Ngalaba
0 – 20	0	1	0
21-30	30	93	70
31-40	31	51	70
41-50	16	60	48
51-60	15	36	35
61-70	6	19	13
71-80	2	8	9
81-90	1	6	5
Total	101	275	250

Description of Project Impact

- As a village, Project land acquisition has not left Danmadja in an At Risk state. There is still plenty of land and the average viability factor per HH is quite high:

Pre-Project		With Project	
Av Land/HH	av fct/HH	Av Land/HH	av fct/HH
9.4 cordes	1.70 c./dep	8.2 cordes	1.65 c/dep

- 90 men and 49 women received compensation.
- The Project's land acquisition moved 5 % of the entire population of Danmadja into an At Risk agricultural situation.

- 87/101 of Danmadja's households were compensated:
    - 74/87 male-headed HH received compensation.
    - 9/14 female-headed HH as well.
    - In total only 14% of Danmadja's HH have not received some compensation.
- The largest area surrendered by a single HH in Danmadja was 12.7 cordes, the equivalent of 140 sacks of sorghum—had all 12 cordes been in cultivation.
- 33% of Danmadja's HHs currently have more than 10 c of land, similar to the percentage of large land holders in other surveyed villages.

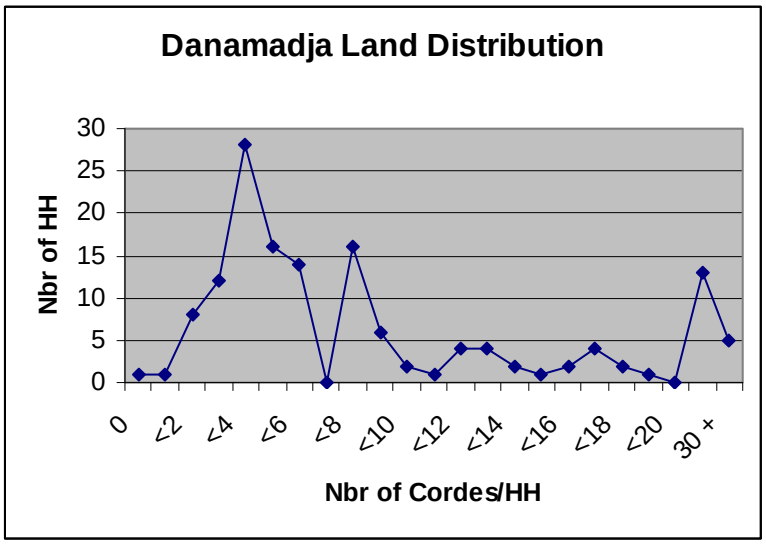
In the Compensation Database, the figures on the actual number of individuals compensated and the GPS measures of the total area for which they were compensated can be judged as reliable, measured data.

The amount of land and number of dependents of the person being compensated, on the other hand, depends on declarative information given by the person being compensated. This information in the compensation database is not verified with a count or with measures and is, as a result, much less certain:

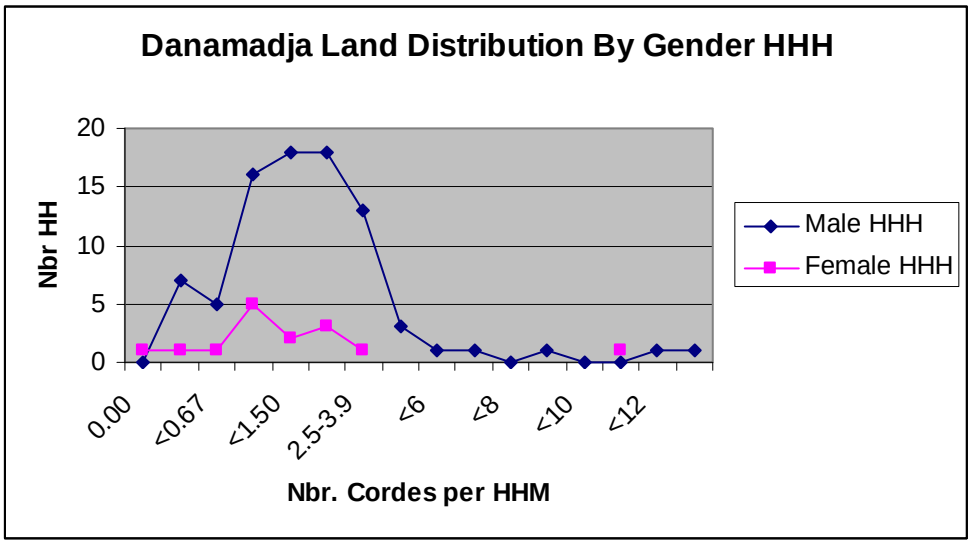
- According to the compensation database i.e. data of people's ***reported*** landholdings, even before the Project started, 10% of the individuals were already below the Project's metric for viable farming (2/3 corde of land per Household Member or c per HHM).
- According to the same database, Project land take increased the number of eligible individuals to 21%.

Today, looking at Danmadja's households and using topographic measurements of land holdings rather than individuals' reported dependents and holdings:

- Upon completion of the village survey in January 2009, 13 HH appeared below the agricultural viability level of 2/3 corde per HHM, i.e. 13%.
- 9/101 HH were At Risk before the Project began, i.e. 9%.
- 4/101 HH were made At Risk by the Project, i.e. 4%.
- 11/13 have been compensated by the Project for land:
    - 3 were Marginal before the Project.
    - 1 was OK before the Project.
- 2 of the At Risk HH were At Risk before the Project and have surrendered no land to the Project.
- Another 12 HH at the time of the survey lay close to the threshold of non-viability, holding between 2/3 c. to just under 1 c./HHM:
    - 5 % or 5 HH were Marginal before the Project.
    - 9% or 9 of Danmadja's HH were made Marginal by Project land take.
- 48 HH had enough farmland – up to 2.5 cordes/HHM.
- 28 HH had ample land holdings of 2.5 or more cordes/HHM.



Land is distributed among both males and females across the whole spectrum, from minimal to extensive holdings for the HHH regardless of sex.



Finally, at the village level the Project has not caused any change in the average HH's situation; in other words, at the village level the community has not been severely affected.

Looking at HH at the village level, Project land take:

- 28 HHs' land holding status changed.
- 6 HH changed into Marginal or at risk levels.
- 3 Marginal HH became At Risk.
- 1 OK HH became At Risk.
- 7 HH which had been fine before became Marginal.

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

As a rule of thumb 1 person requires 1.8 sacks/year

Sex (tr = training)	Cordes Lost	Remaining cordes	% original holding compensated	# Household Members	Resettlement Factor	Replacement value in CFA	Replacement value of sorghum: # sacks
Male	1.157	1.224	49%	8	0.153	27 558	2.2
Male	0.127	1.060	11%	6	0.177	6 068	0.5
Male	4.111	1.862	69%	9	0.207	39 041	3.1
Male	0.873	2.106	29%	6	0351	16 619	1.3
Male (tr)	3.322	4.048	45%	11	0.368	25 562	2.0
Male	0.662	2.587	20%	6	0.431	11 555	0.9
Male	1.027	3.044	25%	6	0.507	14 307	1.1
Male	0.739	4.199	15%	8	0.525	8 487	0.7
Female	0.038	1.665	2%	3	0.555	1 265	0.1
Male (tr)	2.374	6.037	28%	10	0.604	16 007	1.3
Male (tr)	4.138	3.236	56%	5	0.647	31 824	2.5

- Total number of people at risk in these Project-affected HH = 78 out of a population of 570, or 14% of today's population:
  - 7 of these At Risk HH were already At Risk before the Project.
  - Today the number of people in these HH made At Risk by the Project is 27.
  - In other words the Project has moved 5% of Danmadja's population into an At Risk position.
  - Only 1 HH was ok before the Project and made At Risk by the Project; today the HH has 5 members.
  - All the others were already.
  - 3 of the HH made At Risk by the Project were Marginal HH before the Project.
- 10 of the At Risk HH are above the average size HH in Danmadja (5.7).
- 4 of the HH lost enough land to sustain 1 HHM; all the others lost much less.

In other words, the At Risk HH are characterized as:

- Larger than average.
- With less land than average.
- In good part already in an At Risk position before the Project.
- Predominantly headed by males:
    - HHH divided equally in age groups between 20-30 and 31-40, with 3 older At Risk HHH.
    - The At Risk female HHH is between 31-40.

Livelihood Restoration

The information in this section has been developed from surveys and monitoring results of Improved Agriculture and Off-Farm training plus the Social/Land Survey. For HH for which no Improved Agriculture or Off-Farm survey information is available, the Social/Land Survey provide the only, though detailed, basis for judging impact.

<u>Resettlement Program Impact on Danmadja</u>

Compensated HH in an At Risk situation can choose among a number of resettlement options.

Physical Resettlement

- In Danmadja no one has chosen physical resettlement.

Improved Agriculture

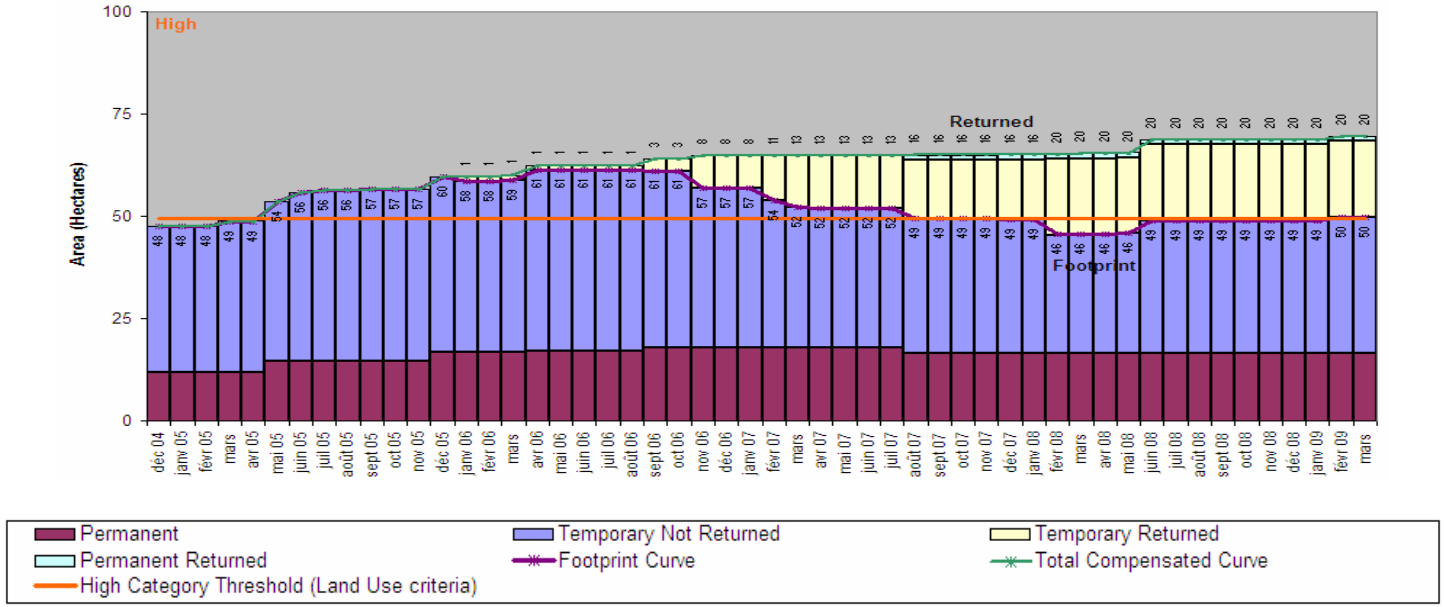
- Up through the completion of the village survey, 8 people had been trained in Improved Agriculture (all in 2005 except one in 2004). 3 HH are now in training.

Off-Farm Training

- 21 had received Off Farm training in 2006 or 2007. 3 individuals had been trained in Improved Agriculture but subsequent land take left them with such little land (according to their declarations) that they also received training in an Off Farm craft.
- The 10 remaining HH found by the survey to be under 2/3 corde/HHM have all chosen Improved Agriculture training as their option:
    - 7 in vegetable gardening to take advantage of their proximity to the river as a water source.
    - The rest have chosen animal husbandry.
- 4 out of the 10 attended the Basic Business, Literacy and Arithmetic Training for literacy/numeracy/business management training from Jan-March 2009:
    - 2 received grades of “B”.
    - 2 received grades of “B+”.
    - The remainder will attend BBS in early 2010.

Land Return

- Only 1 HH will receive back some temporary land once it is restored, but this return will still leave it At Risk.



Land Acquired and Returned in Danmadjia by 1Q 2009

Observations

- Like Dildo, Dokaidilti and Ngalaba, Danmadja's land distribution is skewed, but not nearly as sharply as the other villages:
    - Of the 101 HH, 13 HH, or 13% of the number of HH in the village, have less than 2/3 c/HHM.
    - 3 HH affected by the Project and 4 that have not been touched are close to agricultural non-viability, with between 2/3 and 1 c/HHM.
    - The bulk of the population (40%) has between 1.5 and 2.5 c/HHM whereas 25% have more cordes.
    - The single largest holding in Danmadja is 87 some odd cordes, and only 4 HH (4%) have more than 30 cordes compared to Ngalaba and Dildo, both of which have 8% of HH with more than 30 cordes apiece.
- In contrast to the other 3 villages, a large portion of Danmadja's inhabitants – 27% -- have between 2 and 4 cordes of land versus 16-17% in the others.
- Though more people in Danmadja have land holdings on the smaller side, the same large proportion – about 1/3 -- of the population has more than 10 c per HH as in the other villages.

Difference in land distribution between OFDA average 1995 and Danmadja in 2008

Land Distribution among HH					
	OFDA	**Dildo**	**Dokaidilti**	**Ngalaba**	**Danmadja**
cordes	1995 HH	2008 HH	2007 HH	2008 HH	2008 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%	5%
< 3	12.1%	8.0%	9.4%	4%	12%
< 4	16.0%	8.4%	8.2%	5%	15%
< 5	14.8%	8.7%	4.7%	7%	9%
< 6	9.3%	7.3%	8.2%	9%	8%
< 7	8.0%	6.9%	4.7%	6%	0%
< 8	5.1%	4.4%	8.2%	4%	9%
< 9	6.8%	3.3%	11.6%	4%	4%
< 10	2.3%	5.5%	5.9%	5%	2%
> 10	8.2%	36.0%	35.3%	41%	35%

Danmadja's Current Needs and Resources

- It is too early to tell if the 3 HH that have graduated from training in order to restore their livelihoods will succeed. They will be monitored for 2 years to find out.
- The total land shortage in Danamadja is 13 ha:
    - 11 ha for households directly affected by the Project.
    - The amount of land needed by the other families untouched by the Project to be economically viable is 2 ha.
- The Project has reclaimed and returned to Danmadja 9.7 ha of Borrow Pit which, with well pad reinstatement and Overhead Electrical Lines, gives Danmadja a total of 13 ha back in use.
- Danmadja's wealthy land holders have some 560 cordes shared among some 120 HHM, more that 4.5 cordes per HHM. Some of this could be shed to At Risk HH via 3rd party compensation.
- Danmadja's arable land = only 385 ha, divided between141 ha of fallow and 241 ha of fields:
    - Only 17 ha of Danamadja land is farmed/fallowed by outsiders.
    - But Danamadjans farm another 122 ha outside the village limits.
- Which brings the total amount of arable land exploited for the 570 inhabitants to 487 ha:
    - Available land density within the village is 0.68 ha per person.
    - Outside the village it is 0.85 ha per person.
- By farming extra land outside the village, Danmadja is able to add about ½ corde per HHM to the land it is using.
- The amount of field and fallow within Danmadja's limits is just sufficient to maintain soil fertility (4 years crops + 3 years fallow) without the additional land being used elsewhere.
- The current ratio of 241 ha of fields and 124 ha of fallows allows 4 years of fallow for each field.
- Danmadja has enough arable land to provide all its inhabitants more than 2/3 c per HHM.
- Danmadja has enough land to maintain a rotation of 4 years of cultivation, 4 years of fallow.

Land Data	Dokaidilti	Dildo	Ngalaba	Danmadja
Cultivated Field or owned fallow by outsiders (% of available land)	121 Ha (21 %)	141 Ha (9 %)	141 Ha (8%)	17 Ha (4%)
Village fields cultivated by residents (% of available land)	302 Ha (52 %)	668 Ha (40 %)	1043 Ha (59%)	241 Ha (63%)
Fallow owned by resident (% of available land)	149 Ha (26 %)	792 Ha (48 %)	553 Ha (31%)	124 Ha (32%)
% of Land "Owned" by women	15 %	17 %	29%	22%
Household Data	**Dokaidilti**	**Dildo**	**Ngalaba**	**Danmadja**
Number of Households	85 HH	275 HH	249	101
Average HH Size	6.3 HHM	4.9 HHM	5.3	5.7
Average Resettlement Factor	1.80 cordes/HHM	2.29 cordes/HHM	2.39 cordes/HHM	1.80 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 LengthFallow =((ArableLand*LengthCultivation/Population) - NecessaryAreaPerPerson*LenghtCultivation)/NecessaryAreaPerPerson								

People that are dependants of the household but reside outside the village are counted in this population (3 in Dokaidilti and 3 in Dildo).

Supplemental Community Compensation

Danmadja, 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 is providing Supplemental Compensation for the "temporary" land that was not returned within 1 year.

Danmadja started the Participatory Rural Assessment Process (PRAP) with the Non Governmental Organization (NGO) BELACD-Doba in 2Q 2008. In May 2009 the village by consensus selected the construction of another school classroom. Construction cannot begin until early 2010 given the onset of the rainy season and the current construction underway in other villages.

Recommended Site Specific Actions

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

Land Return

13 households in Danmadja (10 directly affected by the Project) have less than 2/3 c per HHM. The total amount of land needed to improve the 13 households' situation is 13 h. The current need for land for the 10 affected directly by the Project but whose livelihood has not been restored by resettlement activities or who have not had the offer of a resettlement option is 11 ha.

To date the Project has returned 7.5 ha of reclaimed land to Danmadja.

Only one At Risk HH is scheduled to receive reclaimed temporary land; the amount returned will not put the HH above the viability threshold.

Third Party Compensation along with rainy season resettlement is unlikely given that most Danmadja HH cultivate land in areas nearby outside Danmadja; more importantly, Danmadja disposes of ample rice land and areas good for vegetable farming, both of which can provide extra income to At Risk families.

All At Risk HH not yet having participated in resettlement options have all selected Improved Agriculture training. Land return is not, therefore an immediate and direct necessity for them to restore their livelihoods. Monitoring of their agricultural performance will show if they will need land in the future.

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 Danmadja as per the CRCP, LMM procedures and Management of Change to the LMM currently in place:

Site Specific Actions for Danamadja

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	No one has requested this resettlement option; Danmadja has rice and vegetable gardening land
Third Party Compensation	Land User with surplus land may donate to at risk household and receive normal land compensation payment	No	All At Risk HH have chosen training and none has yet demonstrated that training will not restore livelihood
Off Farm Training	Provide training to earn income in non-agricultural work	No	Graduates appear to be doing well but there is no real market demand for more trained artisans
	Reinforce training to increase income earned to viable level	Yes	Monitoring may show if needed for recent graduates
Improved Agriculture	Provide training to generate more production of subsistence crops and produce cash crops	Yes	Resettlement option choice of all participating At Risk HH
	Reinforce training to generate more production of subsistence/ cash crops	Yes	Reinforcement training is underway;
Rainy Season Resettlement	Provide field clearing, rainy season hut, well, bicycle, and hand cart for use in distant farm field	No	Danamadja currently uses farm land that is less than 3.5 km away; Danmadja has rice and vegetable gardening land
Physical Relocation of Village	Physically relocate entire village to new location in cooperation and in concert with government	No	Not required; not advised; Danmadja has rice and vegetable gardening land

Supplemental Community Compensation	Phase 1: Rapid Participatory Assessment of Needs & Resources	Yes	Completed.
	Phase 2: Oversee implementation; Create management committee	Yes	School to be constructed; Parent-Teacher Association to be strengthened

Site Specific Plan Implementation Timeline

Action (grey indicates completed, blue underway)	Timeline
13 ha land reclamation and return	2008
Land and social surveys completed and data entered	Feb 2009
Performance evaluations of Improved Agriculture and Off Farm graduates	July 2008
Implementation of Improved Agriculture and Off Farm reinforcement measures	2009
EEPCI uses 3rd party compensation to transfer land to At Risk individuals	2-4Q 2009
Danmadja choice of Supplemental Community Compensation	7 May 2009
Construction of Supplemental Community Compensation	4Q09 – 1H10

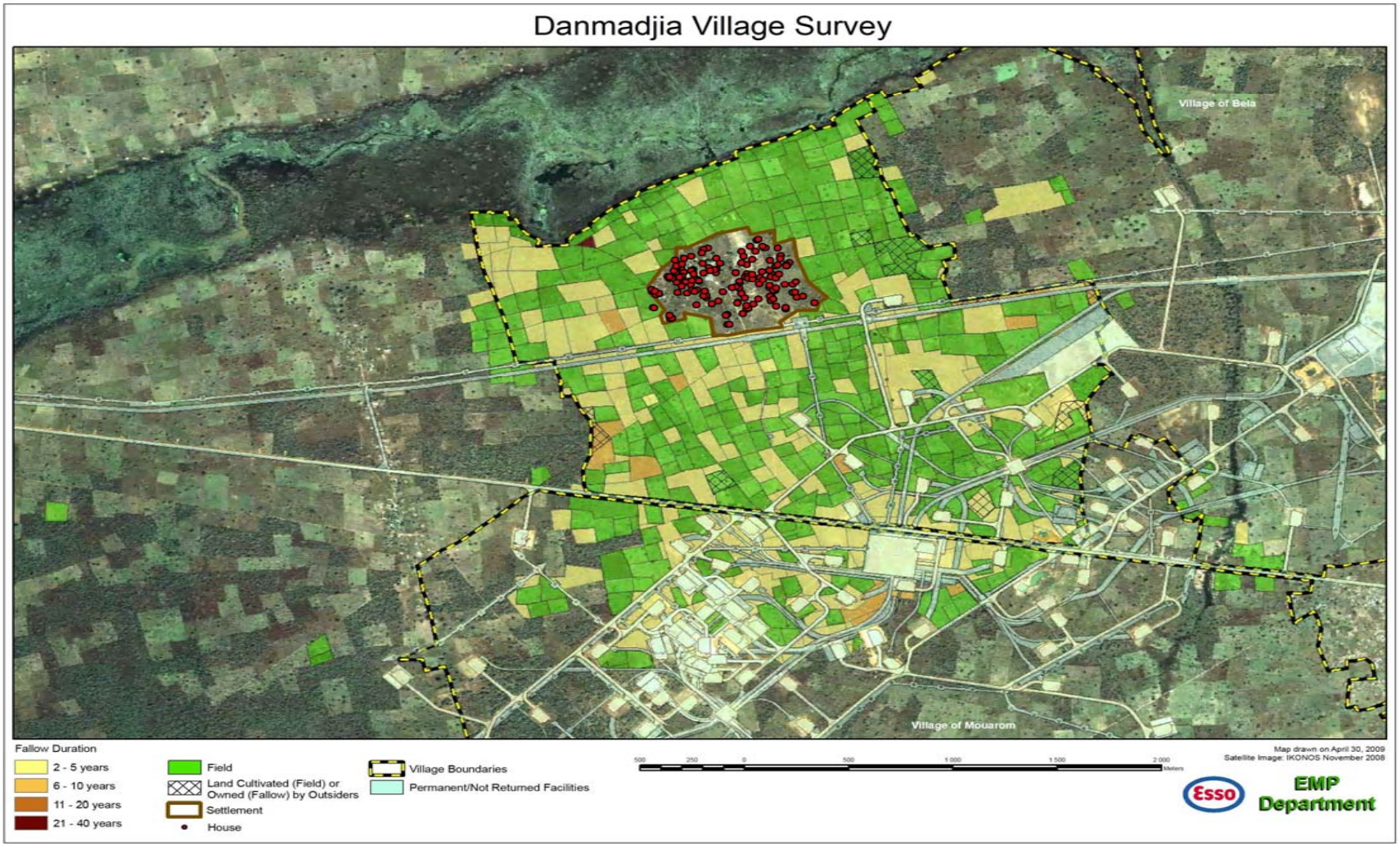
Maps and Diagrams

Danmadja, All Household, Compensated or Not

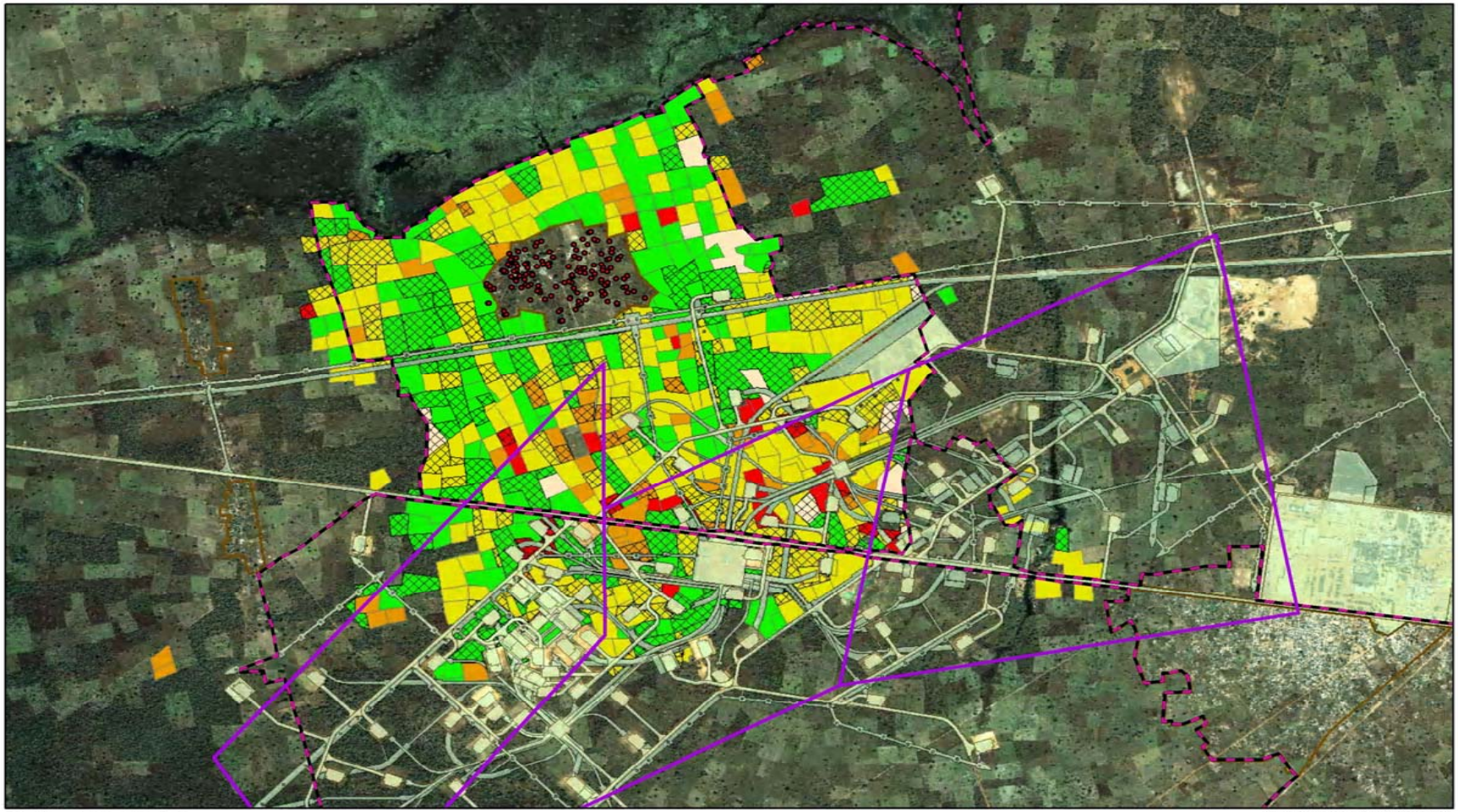
Range	Nbr HH	Nbr HH Members	% HH	% HH members	Nbr Tr	% Tr	Nbr HhM in Tr HH	% HhM in Tr HH
0.000 - 0.499	6	49	5.94	8.48	1	3.23	11	4.51
0.500 - 0.667	7	39	6.93	6.75	2	6.45	15	6.15
0.668 - 0.999	16	81	15.84	14.01	5	16.13	34	13.93
1.000 - 2.499	46	291	45.54	50.35	15	48.39	133	54.51
2.500 - ...	26	118	25.74	20.42	8	25.81	51	20.9

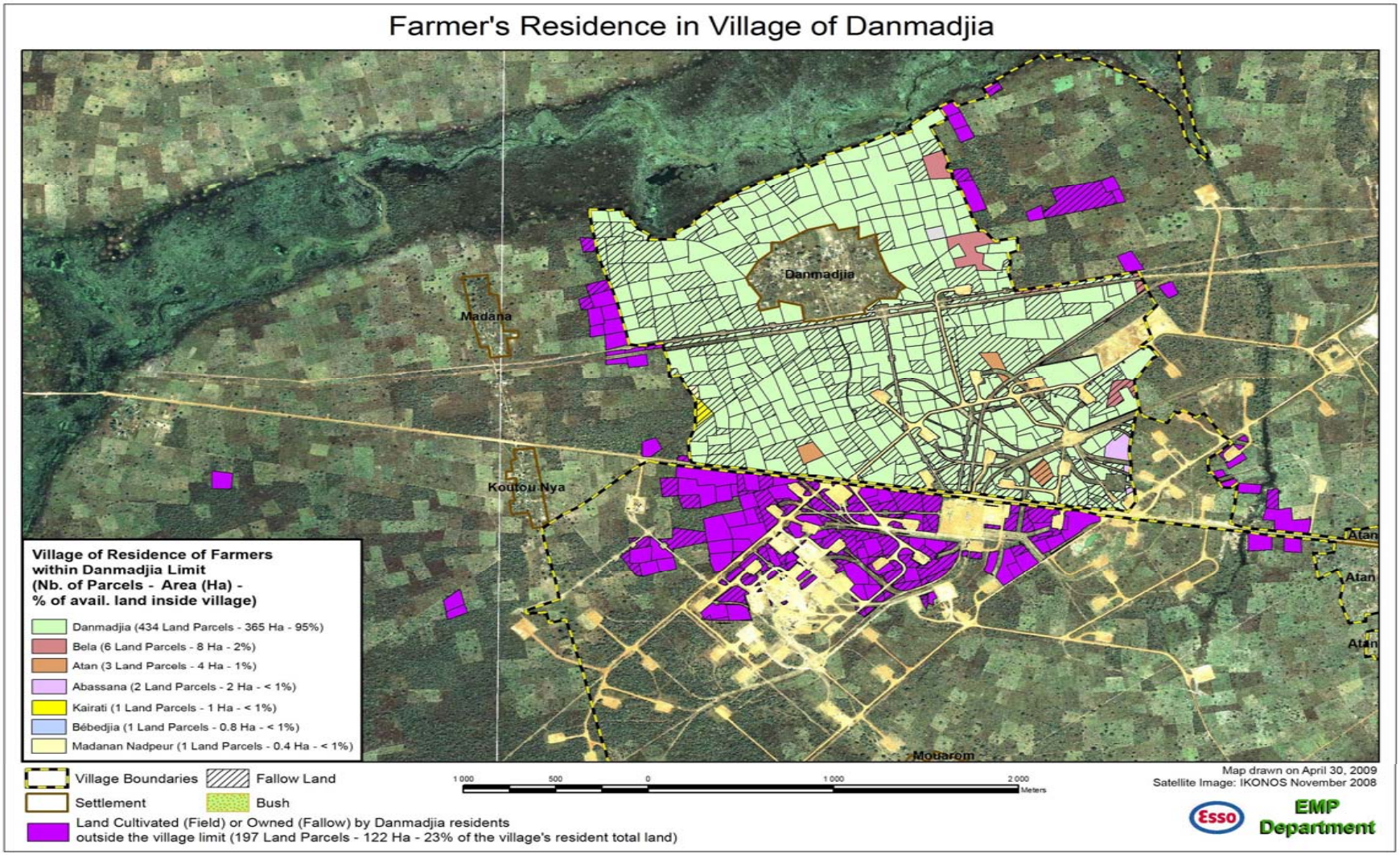
Danmadja, Only compensated Household

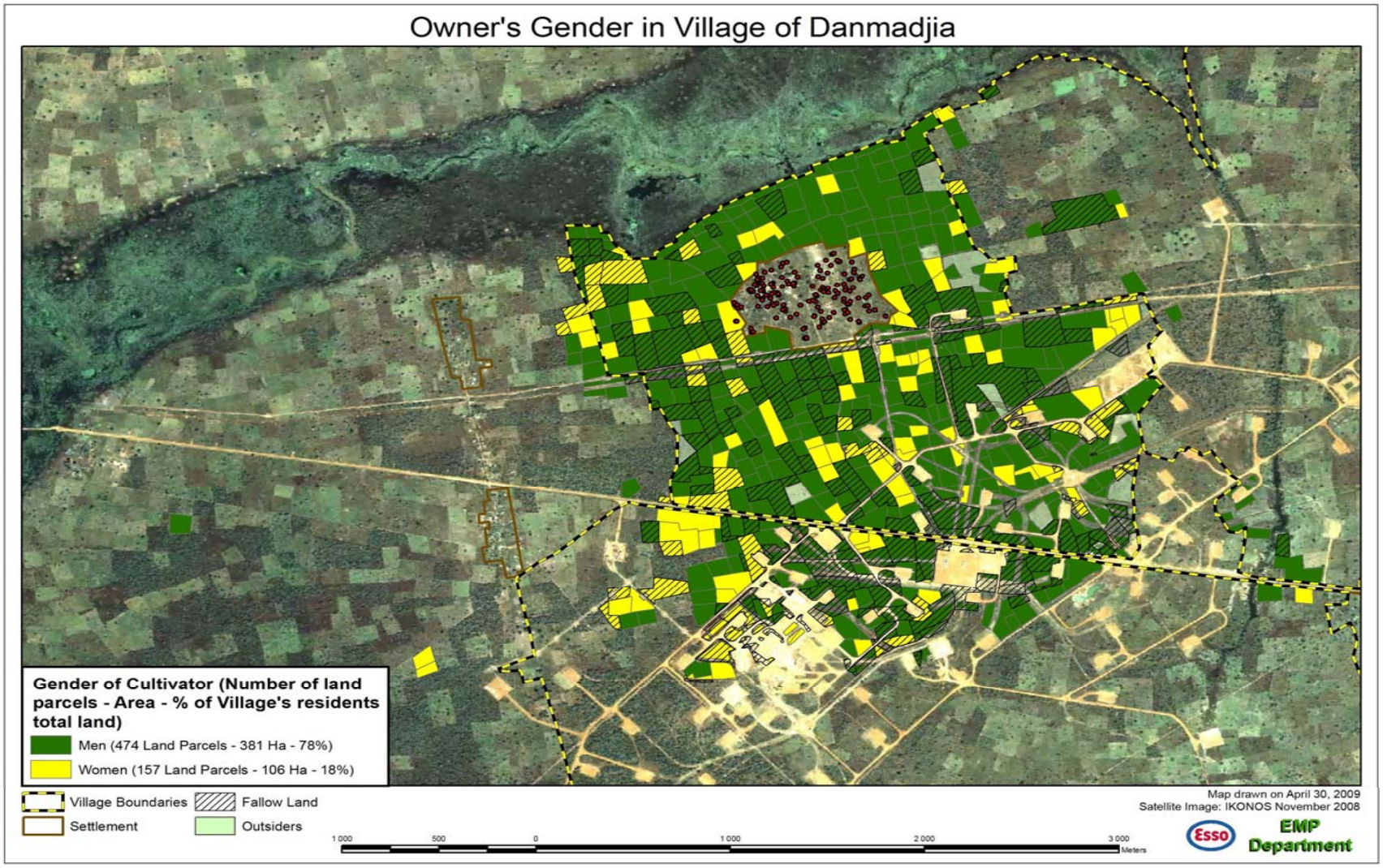
Range	Nbr HH	Nbr HH Members	% HH	% HH members	Nbr Tr	% Tr	Nbr HhM in Tr HH	% HhM in Tr HH
0.000 - 0.499	5	40	5.75	7.48	1	3.23	11	4.51
0.500 - 0.667	6	38	6.9	7.1	2	6.45	15	6.15
0.668 - 0.999	13	74	14.94	13.83	5	16.13	34	13.93
1.000 - 2.499	41	277	47.13	51.78	15	48.39	133	54.51
2.500 - ...	22	106	25.29	19.81	8	25.81	51	20.9
Total	87	535	100	100	31	100	244	100


Danmadjia Village Survey
Village of Bela
Village of Mouarom
Fallow Duration
2 - 5 years
6 - 10 years
11 - 20 years
21 - 40 years
Field
Land Cultivated (Field) or Owned (Fallow) by Outsiders
Settlement
House
Village Boundaries
Permanent/Not Returned Facilities
500 250 0 500 1 000 1 500 2 000 Meters
Map drawn on April 30, 2009
Satellite Image: IKONOS November 2008
Esso
EMP Department

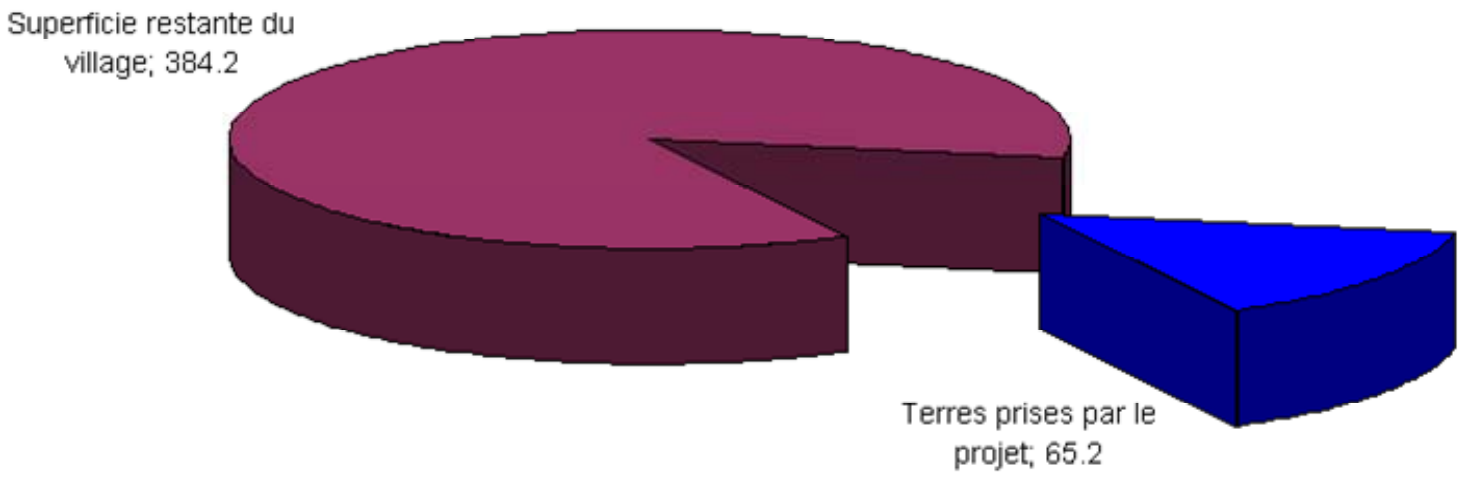
At Risk Households in Danmadjia




Farmer's Residence in Village of Danmadjia
Danmadjia
Madana
Koutou Nya
Atan
Atan
Atan
Mouarom
Village of Residence of Farmers within Danmadjia Limit (Nb. of Parcels - Area (Ha) - % of avail. land inside village)
Danmadjia (434 Land Parcels - 365 Ha - 95%)
Bela (6 Land Parcels - 8 Ha - 2%)
Atan (3 Land Parcels - 4 Ha - 1%)
Abassana (2 Land Parcels - 2 Ha - < 1%)
Kairati (1 Land Parcels - 1 Ha - < 1%)
Bébedjia (1 Land Parcels - 0.8 Ha - < 1%)
Madanan Nadpeur (1 Land Parcels - 0.4 Ha - < 1%)
Village Boundaries
Fallow Land
Settlement
Bush
Land Cultivated (Field) or Owned (Fallow) by Danmadjia residents outside the village limit (197 Land Parcels - 122 Ha - 23% of the village's resident total land)
1 000 500 0 1 000 2 000 Meters
Map drawn on April 30, 2009
Satellite Image: IKONOS November 2008
Esso
EMP Department

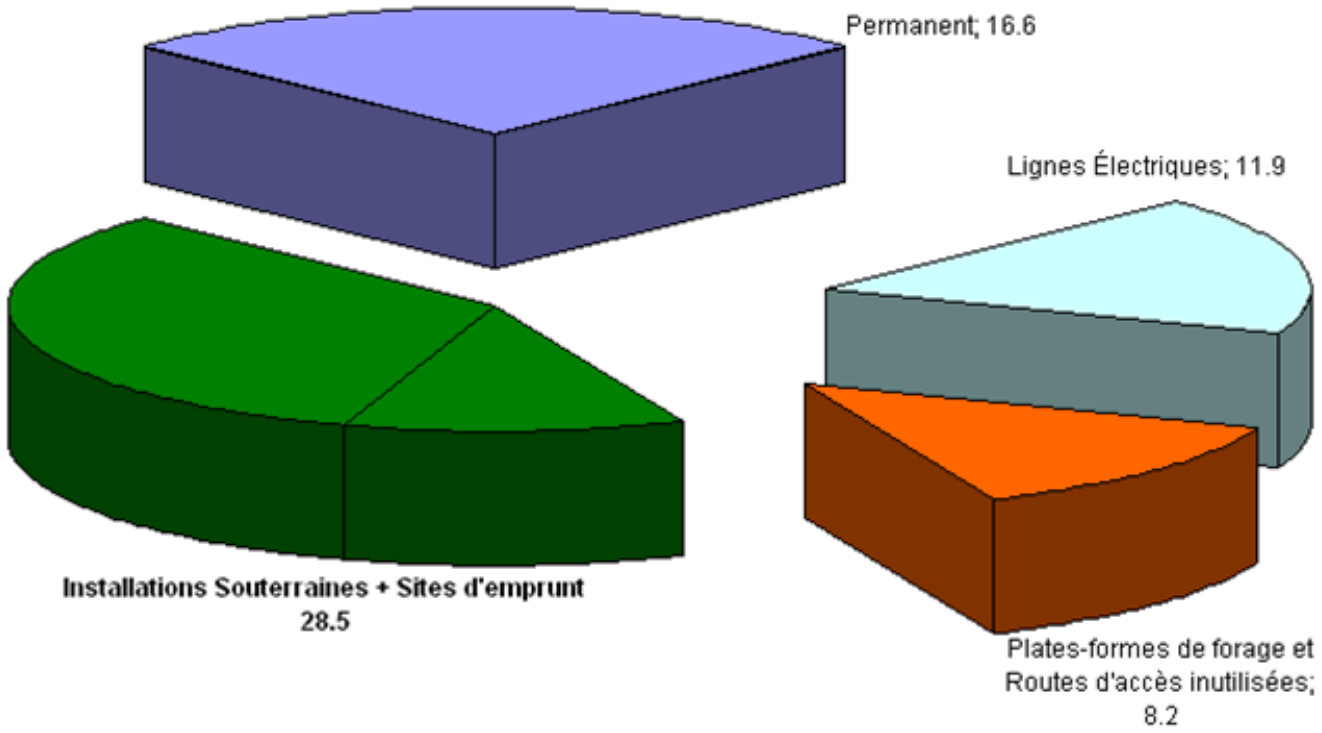

Owner's Gender in Village of Danmadjia
Gender of Cultivator (Number of land parcels - Area - % of Village's residents total land)
Men (474 Land Parcels - 381 Ha - 78%)
Women (157 Land Parcels - 106 Ha - 18%)
Village Boundaries
Fallow Land
Settlement
Outsiders
1 000
500
0
1 000
2 000
3 000
Meters
Map drawn on April 30, 2009
Satellite Image: IKONOS November 2008
Esso
EMP Department

Danmadjia - Portion du village prise par le projet

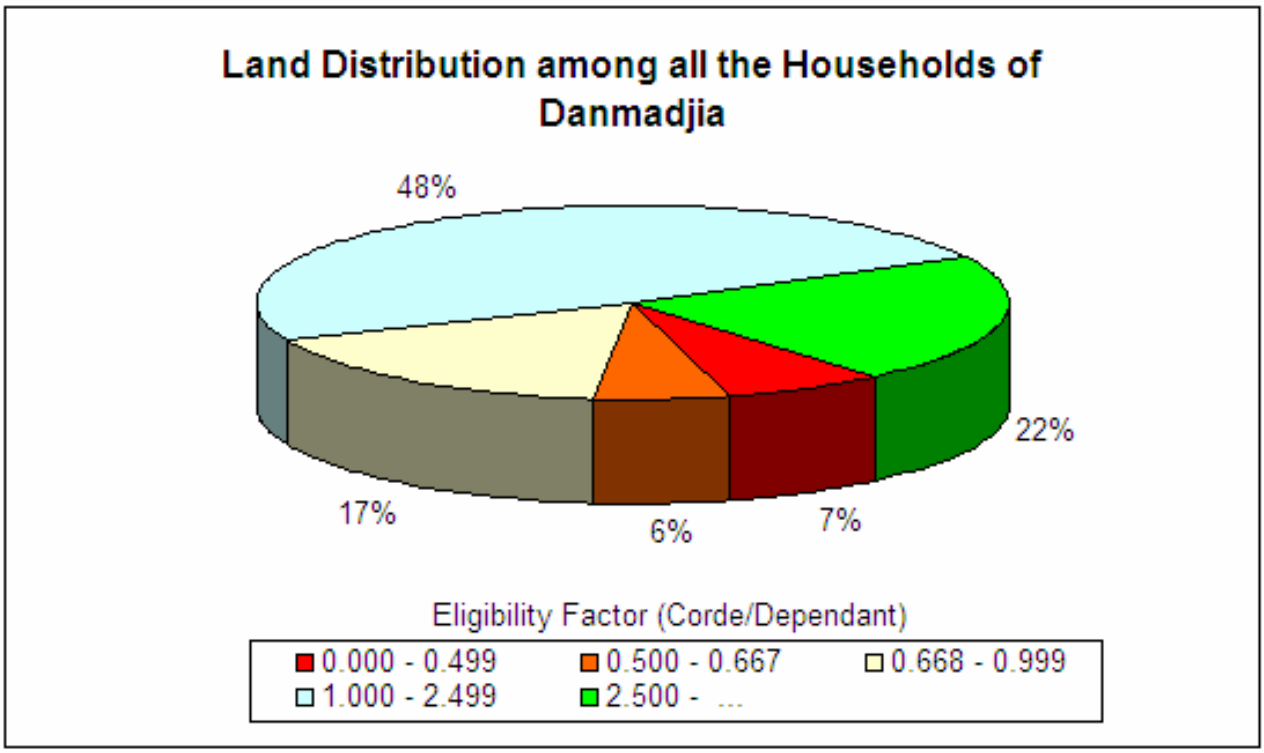


Les chiffres représentent la superficie en hectares

Danmadjia - Utilisation des terres du projet



Les chiffres représentent la superficie en hectares



	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	7	55	6	46	6.9%	8.6%
0.500 - 0.667	6	33	5	32	5.8%	6.0%
0.668 - 0.999	17	92	14	85	16.1%	15.9%
1.000 - 2.499	49	305	44	291	50.6%	54.4%
2.500 - ...	22	93	18	81	20.7%	15.1%
Total	101	578	87	535	100%	100%