

**Esso Exploration & Production Chad Inc.**

**Site Specific Plan  
Ngalaba Village**

**Land Use Mitigation Action Plan**

**Prepared by the EMP Department  
May 2015**



## List of Acronyms & Terms Used in this Report

BBS	Basic Business Skills Training
CRCP	Chad Resettlement and Compensation Plan
CdM	Household Chief (Chef de Ménage)
EEPCI	Esso Exploration & Production Chad Inc (the Project)
Eligible	Generic term to designate an individual that may be eligible to the EMP Resettlement Program.
EMP	Environmental Management Plan
EMP-IS	EMP Information System: manages Land Acquisition, Socioeconomic and Land return data.
ECMG	External Compliance Monitoring Group
HH	Household
HHH	Head of Household
HHM	Household Member. Include the CdM and all its dependents, regardless of their age.
IFC	International Finance Corporation
LCC	Local Community Contact
MARP	Participatory Rural Assessment process
NGO	Non Governmental Organization
Potential Eligible	Individual that may be eligible to the EMP Resettlement Program. Analysis must be completed.
Project Footprint	Total area occupied by the Project at a given time (e.g. Compensated but not returned land)
True Eligible	Individual eligible to the EMP Resettlement Program. Individual whose eligibility established initially through the declarative process was confirmed using the VLUS.
VLUS	Village Land Use Survey previously called Cadastral survey. Refer to the measurement of every field, fallow & house of households.
WBG	World Bank Group
WHHH	Women head of household

## 1. Introduction

While the Village Land Use Survey (VLUS) data has allowed us to gain a very good understanding of the processes taking place in the field, incorporating data from the Synergy Team, the impact surveys and the land return surveys allow us to gain a real time perspective of the effects the Project is having on communities and individuals.

Previously developed tools, such as the Site Specific Plan (SSP), gave us a fairly detailed view of the communities which are impacted by the Project. We now find that such tools are difficult to update and review in view of the masses of information they contain. Often the SSP incorporated too much information and much of this information was not necessarily relevant to the ultimate objective. The purpose of a Site Specific Plan (SSP) is to clearly define the village's situation and identify a set of measures that mitigate the specific issues the village's population is encountering within their own village area. After having identified the issues which are specific to a village, the plan will consolidate all applicable livelihood restoration tactics into a strategy that will lead the restoration of its livelihood.

While an SSP was performed for Ngalaba (Mindaoom Canton) in 2009, this community has since gone through a number of new rounds of infill drilling. We must, at this point wonder whether previous mitigation efforts in terms of Community Compensation and individual resettlement initiatives were sufficient to fully mitigate the impact of the repeated land take on this community. Ngalaba is considered to be in the approaching high village impact category in terms of the land take factor (% of village area occupied by Project) and in the moderate village impact category on social impact basis (% of individuals found to be at risk) (as per the 1Q-2015 Village Impact Report).

As of March 31<sup>st</sup>, 2015 these facilities occupied 152 ha out of a village land area of about 2122 ha, or about 7.2% of the village's area. Although the Project has at one time occupied 460 ha of land, the rehabilitation and return of unneeded land has made it possible to maintain the footprint at as a low level as possible. At present Ngalaba is considered to be in the approaching high village impact category, these impacts could include:

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

In addition to having received an initial community compensation package, in the form of a two room school building, this community received a water well, a school-director's house, and furniture and supplies for one school room.

As such the purpose of Ngalaba's SSP is to establish whether the village as a whole has been able to offset its land losses to the Project in view of the compensation received by individual land users (in the form of compensation and resettlement training) and the community as a whole. The SSP

additionally evaluates the land-holding situation of all the households (HH) in the village to judge whether the village as a whole is still at risk and, if so, what actions would be efficacious.

The proposed mitigations measures must be feasible, using resources that are available to the project and within the community, emphasizing the enhancement of the knowledge and capabilities of its residents. The plan will consolidate all applicable livelihood restoration tactics into a strategy that will lead to livelihood restoration in this impacted village.

**2. Ngalaba’s population at a glance**

With a total area of 2122 ha, Ngalaba is a relatively large village, in fact it ranks 7th out of 21 in terms of area (see annex 2). While only two villages have a larger population, It has a relatively high population density with 0.62 persons per ha. Its population is made up of 242 households and 1395 residents, 6.1% increase since 2009 SSP (see annex 1 for comparison). This is reflected by the fact that this village has a resettlement eligibility factor of 2.51 cordes per household member, only 8 villages out of the 21, on which data is reported in annex 2, have less land available per HHM. The village has been impacted by the development of the Miandoum oil field.

Ngalaba’s households are made up on average of 5.8 individuals reflecting the average of the OFDAH (see annex 3)). Some notable facts can nonetheless be outlined:

- 30% of households are headed by women. This is higher than what is found in comparable villages. The average number of women headed households in the OFDA is 18%.
- 570 individuals or 41% of the population have received a form of compensation at one time or another. This probably reflects the fact that the development has been concentrated in a relatively small part of the village affecting only a small number of relatively large land owners.
- 88.3 % of the area of the village is either actively cultivated or being fallowed. The residents of this village farm some land outside its limits; this gives them access to 87.5 ha. This land accounts for 4.9% of the land available to Ngalaba’s residents.
- From table 1 (page 5), we can note that more than 90% of Ngalaba’s households are viable, in fact the non-viable category is made-up of 19 households.

**Table 1: Distribution of Households and Individuals by Eligibility Factor**

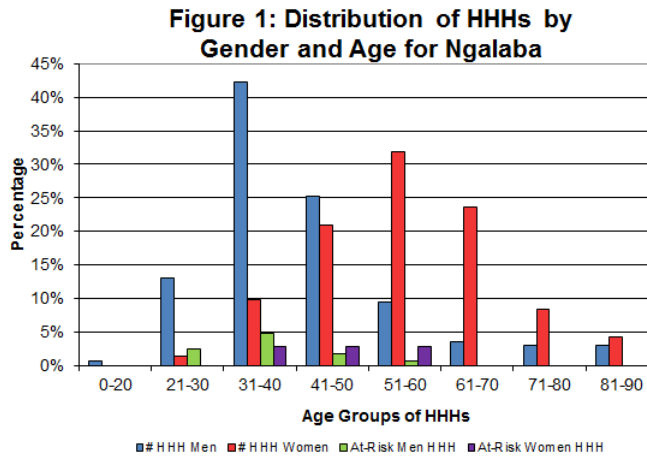
Range	Nbr HH	Nbr Individual
0.000 – 0.667	19 (8 %)	140 (10 %)
0.668 – 0.999	12 (5 %)	99 (7 %)
1.000 – 2.499	115 (48 %)	690 (49 %)
2.5000 - .....	96 (40 %)	466 (33 %)
Total	242 (100 %)	1395 (100 %)

- With 9.6 % (140 individuals) of its population which is made up of non-viable project individuals individuals, this village is considered to be in the moderate impact category for the socio-economic criteria.

In order to ascertain whether any vulnerable groups (youngsters, elderly villagers and women) are put at any particular risk/disadvantage by the Project infill drilling program we must:

- Identify the most vulnerable groups (Elderly villagers, youngsters and women).
- Evaluate whether any of the groups are facing an inappropriate portion of the burden.

While most households are headed by men (70% of cases), women are far more present as household heads when they are older (starting in their forties) (Figure 1). Women are the household head in 46% of cases where the HHH is more than 40 years old. This would appear to result from the fact that some widows retain control of a sufficient asset base to support their family following the death of the spouse or that some women accumulated sufficient wealth/resources to have gained their autonomy and have separated from their spouse. It should be noted that the more significant presence of women headed households is not uncommon in larger villages where such a situation may be more acceptable from a social/cultural point of view.



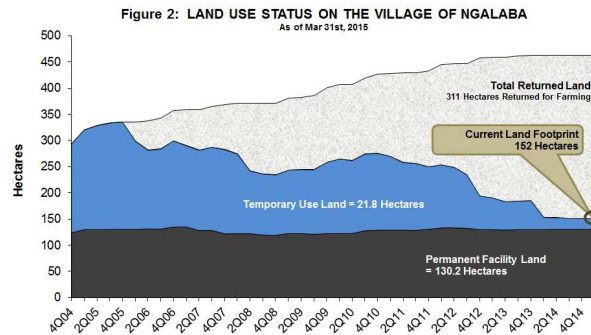
As is normally the case in most communities of the OFDA, the proportion of at risk household tends to correspond to the gender distribution, Ngalaba WHHH (Women Head of Household) represent 27% of at risk HHs while representing 30% of households. MHHH would thus appear to face a slight disadvantage. As is the case in most communities we find that non-viable or at-risk households are mainly headed by young adults (less than 40 years of age), 64% of non-viable households are headed by younger adults, although they represent only 43% of the households.

While it is not reflected through the eligibility factor women have lost access to 48% of the land which they controlled in 2009 (see annex 1). The loss of this land would have arisen through traditional land transfer processes. It should be noted that as a dominantly patriarchal society formal land control is often left to the elder men of the families. The change we are seeing take place may simply be a correction towards a more traditional status. Nonetheless it would appear that women in general have nonetheless been able to retain sufficient access to land to remain in the comfortable or wealthy categories, from an eligibility factor point of view.

### 3. The Project's Footprint at the Village Level

While the original land take was relatively important (293.9 ha), emphasis on land return limited the increase of the project's footprint. While permanent facilities without public access, such as the Miandoum gathering station, make up 52% of the Project's footprint in this community the establishment of new wells in surrounding villages required the construction of new flow lines and manifolds in the territory of Ngalaba.

Figure 2 demonstrates that, while the area affected by the projected as only increased progressively since the last round of supplemental community compensation (2010) and may not appear to be significant, it still amounts to a fair additional encroachment on the villages available land base (69 ha or 16% increase of the area affected by the Project). If we do not account for recent land return the project has touched 463 ha representing 21.8% of the village's area. 311 ha have since been returned or 67% of the total land-take. At present the Project's foot print stands at 151.9 ha or 7.1 % of the village area. Little gain is expected to take place in terms of land return as 93% of the Project's temporary land take has already been returned.



It must be noted that the initial community compensation (school building housing two class rooms and an office) was a compensation for the original land take, a number of additional land takes have taken place since then. Two supplemental Community Compensation made it possible for this community to receive a community building, a school director's house, a water well and assorted furniture and supplies for one class room. The above figure nonetheless indicates that a significant amount of land has been returned since the latter part of 2010. From this illustration we can conclude that while the Project's net footprint has not grown over the last four years, the project has had a recurring impact on Ngalaba.

From table 3 (page 8), we further learn that 72% of the land taken by the project and returned since then, was returned with some form of restriction as to the use to which it can be put. This indicates that even when land has been and will be returned some residual effects may remain.

Table 3: Compensated and Returned Land by Land Use and Facility Type

Land use type	Total area (hectares)		
	Compensated	Returned	
Permanent with public access	92.5	12.8	14 %
Permanent with no Public access	65.7	15.2	23 %
<b>Sub-Total Permanent</b>	<b>158.2</b>	<b>28.0</b>	<b>18 %</b>
Temporary returned without restriction	79.3	59.1	74 %
Temporary returned with restriction	225.3	223.8	99%
<b>Sub-Total Temporary</b>	<b>304.6</b>	<b>282.9</b>	<b>93 %</b>
<b>Grand Total</b>	<b>462.8</b>	<b>310.9</b>	<b>67 %</b>

- The column “total areas in hectares: compensated” shows the total area compensated since the project started up to the end of the quarter covered in this report.
- Total areas in hectares: returned” shows the total area returned since the project started up to the end of the quarter covered in this report.



## 4. The Project and the Environment of Ngalaba

### Groundwater Quality Monitoring

Over years EEPCI has established a network of community level groundwater quality monitoring stations.

This network is comprised of:

- EEPCI owned and operated groundwater monitoring wells (piezometer) built specifically for the purpose of sampling ground water quality and collecting data on the level of the aquifers.
- Community owned surface or traditional wells. Communities allow EEPCI to monitor the quality of the water.

For the village of Ngalaba the data is collected from a Piezometer MPZ 05 and a village well. The water does not breach the standards for most indicators. The low pH in Ngalaba's wells is a recurring concern and is due to the nature of the soil. These results indicate that the water has not been affected by the activities of the Project (see Table 4 on page 9). In fact, the results indicate that the presence of monitored chemical compounds is often many times lower than the actual applicable norms.

Table 4: Water quality monitoring data for the village of Ngalaba

Results	Cond ( $\mu\text{S}/\text{cm}$ )	PH	Turb. (NTU)	Cl <sup>-</sup>	SO <sub>4</sub> <sup>2-</sup>	NO <sub>3</sub> <sup>-</sup> - N	NO <sub>2</sub> <sup>-</sup> - N	NH <sub>3</sub> -N	Fe	Mn	fecal coliforms	Temp
Piezometer MPZ 05												
Q4-2014	13.42	5.0	2.12	0.2	0	0.2	0.012	0.06	0.003	0.1	0	30.6
Q1-2015	12.9	5.0	4.19	0.2	1	0.6	0.008	0.01	0.002	0.1	0	29.1
Traditional village well												
Q4-2014	39.7	5.0	18.5	0.2	0	0.1	0.005	0.05	0.042	0.1	TNTC	28.3
Q1-2015	20.6	5.6	5.07	0.2	1	0.5	0.005	0.01	0.111	0.1	TNTC	28.7
Standard		6.5 - 8.5	5	250	250	50	3	1.5	0.3	0.5	OMP/100ml	

NT: Not Tested

N/D: Not detected

TNTC: Too numerous to count

## Air Quality Monitoring Data

In accordance with schedule 17 of the Credit Coordination Agreement and Exxon Mobil's Environmental Standards, there is a continuous monitoring of ambient air for nitrogen oxides (NO<sub>2</sub>) and monitoring of sulfur dioxides (SO<sub>2</sub>) on a quarterly basis.

A sampling location for air monitoring is present at Miandoum Gathering Station (MGS) located inside the territory of Ngalaba village.

Ambient air data collected shows the following:

- Average of monthly levels of emission (Oct and Nov-2014) for NO<sub>2</sub> varies between 3.07 and 5.33 micro grams per cubic meter of air (ug/m<sup>3</sup>), or at worst 18.7 times less than the maximum allowable of 100 ug/m<sup>3</sup>.
- Average monthly levels of emission (Oct and Nov-2015) for SO<sub>2</sub> at this site (MGS) varies between 1.0 and 1.11 micro grams per cubic meter of air (ug/m<sup>3</sup>), or at worst 72 times less than the maximum allowable of 80 ug/m<sup>3</sup>.
- PM10 data are not available for this specific location. All results for other locations where data is available indicate that levels of particulate in the air are below thresholds. Worst case is 2.32 times below threshold of 150 ug/m<sup>3</sup>.

From the above, we can conclude that the project has no significant if any detrimental impact on both the air and water quality of the village of Ngalaba.

## 5. Mitigation of the effect of the Project on Impacted Individuals

As discussed in the previous section, the sensitivity of HHs and their heads to a land take depends to a large extent on other changes which may be taking place within their households. Each household will change over time through the addition or removal of HH members, through traditional land sharing practices which result in either the reduction or expansion of the land base available to the household and finally because of the impacts of the Project through either the land take or land return processes.

However, we must also understand that with the advent of the infill drilling program, a small number of HHs may have a large number of interactions with the Project. At this level it must be noted that interactions do not necessarily mean land loss to the Project. In fact, the majority of interactions that have taken place in the last years take the form of land return for the benefit of these households and of the community. Some specific process improvements are in progress to address the needs of currently at risk or marginal HHs that had frequent interactions with the Project.

In order to ensure that households can withstand the impact of the land takes while awaiting an eventual land return, a number of programs have been established as per the EMP.

The first of these programs is the cash or in kind compensation. In this case, the land user or declared user is compensated for his land

effort. This first level of compensation is based on the area lost to the project and takes the form of a monetary compensation. Since the Project was started, 570 individuals were compensated receiving more than 534 million XAF or about 1.07 million \$US.

Table 5: Compensated Individuals and Amounts

Year	Compensation Payment (XAF)	# of Compensated Individuals	Cumul Compensated Individuals*
1998-2000	2,630,775	5	5
2001	50,938,600	134	138
2002	139,741,784	230	276
2003	48,834,500	122	304
2004	4,697,000	12	307
2005	58,505,000	109	348
2006	32,561,000	101	388
2007	32,231,500	111	418
2008	6,276,600	20	421
2009	49,165,000	122	471
2010	47,527,500	178	529
2011	8,788,500	41	538
2012	37,846,000	99	559
2013	12,861,500	31	567
2014	1,711,500	9	570
2015	0	0	570
<b>Total</b>	<b>534,316,159</b>	<b>1,324</b>	<b>570</b>
<b>* Compensated individuals are only counted once</b>			

A second means of supporting impacted individuals or household is through the Resettlement Program.

As individuals are impacted and real land users are identified through the Synergy Process, a number of them, those that are facing a more difficult situation, are being declared eligible for resettlement through on or off-farm training. Since the first impacted individual was trained in 2001, 48 impacted individuals opted for one of the training options of the resettlement program.

Comparing table 5 and 6 we can note that only 14% of impacted individuals have become eligible to resettlement. This situation arises from the fact that:

- Following intervention of synergy team, it is often noted that compensated individuals are not necessarily real land users who could benefit from the resettlement program.
- Most compensated individuals have an eligibility factor of more than 0.67 and are thus not eligible for resettlement.

On the basis of the village land use survey it was found that, 67 of the 80 previously trained individuals have sufficiently increased their available land base to no longer be considered at risk. The increase in land base resulted from, either:

- The identification of land not previously associated with the household. The VLUS being a more precise method than the declarative surveys previously used.
- They may have received, from the project, some reclaimed land through the land return process.
- They may have received some land through more traditional mechanisms (inheritance, land transfers...)

Table 6: Number of trained individuals by option and year

Year	Improved Agriculture	OFF Farm	Total
2001	0	0	0
2002	6	3	9
2003	2	0	2
2004	15	7	22
2005	0	11	11
2006	0	0	0
2007	5	0	5
2008	8	1	9
2009	15	0	15
2010	0	0	0
2011	2	0	2
2012	5	0	5
2013	0	0	0
2014	0	0	0
<b>Total</b>	<b>58</b>	<b>22</b>	<b>80</b>

Ngalaba		Village Land Use Survey	
		Non Viable	Viable
Declarative	Non Viable	True Eligible 13	False Eligible 67
	Viable	False Non-eligible 4	True non-eligible 158

## 6. Mitigation of the effect of the Project on the Community

Ngalaba is a fairly significant community that occupies a central position in the OFDA. Over the years it has benefited from a number of initiatives from the project in the form of various levels of Community Compensation.

In January 2005, Ngalaba received an initial community compensation, in the form of a two class room school building. In 2007 the 5% comity funded the construction of six additional class rooms, of a water-well dedicated to the school and fenced of the school's yard. The 5% comity is a governmental institution established to fund the construction of various public infrastructure and initiatives in the oil production area. This institution is financed through a portion (5%) of the government's income arising from the oil Project. The establishment of this campus as made it possible to offer a complete primary grade program and the first four years of the high school program. It should be noted that two of the four high-school classes are housed in temporary straw structures.



Ngalaba's two-class-room school.

As expressed by Mr Benadji Ngonbé, Assistant Director of Ngalaba's primary grade school:

“the establishment of this campus as had a great impact on the population of the village and the region as a whole. At present it welcomes 473 primary grade students and many more high school students. 96% of our graduating class have successfully completed the primary grade program in 2015, and have thus become admissible to high school (sixth grade in Chad).”



Mr Benadji Ngonbé, Assistant Director of Ngalaba's primary grade school



Ngalaba (1)'s chief, Mr Madjitouloum Zakhari

Ngalaba (1)'s chief, Mr Madjitouloum Zakhari, further added that:

“Education is a necessity. It will, not only, help the pupils themselves have a better life but it will help the village move forward. Many of our children have moved on to complete their high-school and are now enlisted in university and various technical or specialized schools. Some are starting to return with these new skills for the benefit of all.”

In 2009, following the supplemental community compensation, villagers of Ngalaba I, which had by then split in two communities, selected a community hall (to the right). While it has not had much use it is occasionally used for community meeting and to host activities held by local groups. Efforts made to put in place a user fee structure were unsuccessful and were abandoned. Even if it is still in relatively good shape the inability to generate some income from the structure may hinder its sustainability in the long term.



Ngalaba's, one-class-room school

In 2009, Ngalaba II also became eligible to a supplemental community compensation. The members of the community chose a basket of asset comprised of a house for the school's director, a drilled water well and furniture and supplies to equip one class room.

The house (To the right) is presently used by the director of the high school. The assistant director of the primary grade school, Mr Benadji Ngonbé, suggested that such housing would be of great benefit to the director of the primary grade school and himself as they both live outside the village and have to go through a significant commute on a daily basis.



Ngalaba's school director's house



Ngalaba's Human powered water well

Notwithstanding the two drilled wells present in Ngalaba (one each in Ngalaba 1 and 2 (to the left)) water supply remains a significant challenge. The communities have established a pay for use system by which each family pay 100XFA per month to have access to the well. This money is then set aside and used for repairs and maintenance. The village also sought the assistance of IDO (an international NGO supported by both EEPCI and Schlumberger (one of EEPCI's subcontractor)) to obtain support in sustaining their water supply system. While IDO brings forth logistical support and coaching, villagers must take ownership of their water supply and pay for parts and required labor when a break down occurs.

The village explained that such a situation occurred recently, and that IDO was instrumental in resolving the problem and ensuring that the community has a proper water supply system. The chief expressed that:

“Traditional dug wells are open to the air and can easily be contaminated by contaminants carried by the wind or runoff. As such they cannot be viewed as an acceptable alternative to a drilled well. It helps prevent diseases that can threaten the population of the village.”

Globally the community is thankful for the support from the Project and continues to work together with the Project.

## **7. Relations with the community and Major Topics of concerns**

### **Public Consultation (2013 – 2014)**

From 2013 to 2014, 13 public awareness sessions were held. In total 889 participants were present at these various sessions. The major topics discussed during these sessions are:

- Risk of electrocution in OHL
- Theft and act of vandalism in the project facilities
- Malaria Prevention
- Risks of having bath in stagnant waters like borrow pits and push back
- Road security and thief of bolt
- Electrical security
- Security and surveillance of project facilities
- Using of reclaimed sites
- SEWAC: Malaria prevention, security issue and CIS opportunities
- Control measures of surface and underground water
- Using of well pad and other facilities as support for harvest

### **Local job opportunity**

In 2013, 8 people were hired by CAIS for grass cutting in Miandoum Gathering Station and OHL cleaning. In 2014, 9 people were hired by CAIS for the same activities. 2 residents of this village were also hired by Weatherford.

### **Claims process**

With the establishment of a new claims management program/process in early 2011 all of the old claims have been settled.

- 2010: 6 Claims out 7 were found to be valid, resulting in the payment of damage.
- 2011: 7 claims out of 15 were found to be valid, resulting in the payment of damage.
- 2012: 6 claims out of 10 were found to be valid, resulting in the payment of damage.
- 2013: 5 claims out of 15 were found to be valid, resulting in the payment of damage..
- 2014: 4 claims out of 9 were found to be valid, resulting in the payment of damage..
- 2015: 0 Claim received.
- No pending claims.

This new process brought about a number of advantages:



- Claims are settled rapidly
- Because of the very short period between claims receipt and the investigation there is sufficient evidence on the site to make a decision based on evidence. Decisions are thus based on the evidence at hand.
- At present claims are settled in real time with a turn around of about four weeks. Oldest claim from Ngalaba was solved in two weeks ago.

## **Local Job opportunity**

- In 2013, 8 people were hired by CAIS for grass cutting in Miandoum Gathering Station and OHL cleaning. In 2014, 9 people hired by CAIS for the same activities. 2 residents of this village were also hired by Weatherford. In 2012, 3 women hired by CAIS as grass cutters and 2 in 2013. A resident of this village was also hired by CIS

## **Donations or other contributions from the Project**

- Donation of 28 mango trees and associated equipment to 3 impacted households of community.
- Donations of 300 mosquito nets in May 2015

## **8. Ngalaba's Current Needs and Resources**

- The amount of land needed by those compensated non-viable families (19 HH) to become economically viable is 12.99 ha.
- Ngalaba's resident population has access to 1677.9 ha of arable land within the limits of their village; they also have access to 87.55 ha of farmland in other villages.
- 80 HH have previously graduated from resettlement training programs.
- At present, no employment opportunity exists in this community other than agriculture and commerce. 58 of eligible individuals have chosen improved agricultural training (IAT) as a resettlement option.
- In terms of public infrastructure, Ngalaba's children presently have access to 8 modern class rooms, 2 provided through an initial Community Compensation and 6 through the 5% comity. The school complex presently offers a complete Primary grade program and offers the first four years of the high school program. Only the two years of the high school program are housed in temporary sheds.
- Water is supplied through two drilled wells. One located in Ngalaba and the other in Ngalaba II (this later provided as supplemental community compensation). These wells appear to be managed in a sustainable fashion. Three other wells built over the years, provided by the 5% comity or other third parties, have fallen in disrepair either because of mechanical failure or due to poor water quality (presence of iron oxide).

## 9. Recommended Site Specific Actions

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 package made available to the community must reflect the fact that it is now considered to be a moderate impact community, having moved down from its previous rating (high impact).

For the individual HH which are currently non-viable, specific interventions will be used:

- As no non-viable project-affected HHs have not yet received Resettlement benefits this option will not be available to the community.
- Eligible individuals who received resettlement benefits in the past and are still considered to be at risk will be monitored in 2015. Those that were found not to have recovered will be targeted for reinforcement.
- If these at-risk individuals do not succeed during the 5 years of monitoring, then the HH will be offered a physical resettlement options or if qualified reinforcement training and/or grant equipment and livestock.

As described in the following table (page 19) the best avenue of supporting this community and assisting it in facing the issues arising from the new land take which took place since 2010 is to offer them a Supplemental Community Compensation opportunity. While the wish of the community must and will be respected in the selection process (MARP) it is clear that the following option offers the best potential to address the needs of the community. They are:

- A one room school to replace one of the sheds used for either of the high school classes being housed in temporary structures.
- A flour mill or a complementary facility such as a Shea butter or peanut oil extraction mill. Further reinforcing what activities are presently taking place in the community.
- A water well. This village being fairly large a third well would certainly be a welcomed grant.

As explained earlier and while we can use our influence to give the relevant information so that the villagers make a wise choice, this must not be construed as an attempt to stifle their ability to make a choice. Ultimately the community will make the final choice that best meets its' needs and aspiration.

The following table describes each option and its relevance to the At Risk Households in Ngalaba as per the CRCP, LMM procedures:

**Table 7: Site Specific Actions for Ngalaba**

<b>CRCP/LMM Resettlement Option</b>	<b>Description</b>	<b>Desirable Option (Yes/No)</b>	<b>Comments</b>
Land Reclamation & Return	Reclaim land and return to community & former users; free land targeted to vulnerable HH	Yes	Limited land return is expected in the immediate future, little significant gains are expected in this area.
Physical Relocation Individuals	Physically move at risk household to new location outside of current village	Yes	Possible however, no one in Ngalaba has chosen physical resettlement options.
Third Party Compensation	Land User with surplus land may donate to at risk household and receive normal land compensation payment	Yes	This is possible however no one in the OFDA has used this option to date.
Rainy Season Resettlement	Provide field clearing, rainy season hut, well, bicycle, and hand cart for use in distant farm field	Yes	Possible but no requests in this regards at this point.
Off Farm Training	Provide training to earn income in non-agricultural work	No	22 had been trained prior to 2008. The rural demand for non-agricultural skills is now considered to be saturated.
<b>Improved Agriculture</b>	<b>Provide training to generate more production of subsistence crops and produce cash crops</b>	<b>Yes</b>	<b>Most widely used resettlement option in the OFDA. 58 eligible persons underwent the training program since 2001. None are eligible as part of 2015 promotion.</b>
Physical Relocation of Village	Physically relocate entire village to new location in cooperation and in concert with government	No	The traditional mechanisms for voluntary and gradual resettlement are working well in the OFDA.
First time Community Compensation	Phase 1: Rural Participatory Assessment of Needs & Resources	Yes	Completed in 2004. Community chose a two classroom school building
	Phase 2: Oversee implementation; Create management committee	Yes	Construction and establishment completed in 2005.

<b>CRCP/LMM Resettlement Option</b>	<b>Description</b>	<b>Desirable Option (Yes/No)</b>	<b>Comments</b>
Supplemental Community Compensation: Ngalaba	Phase 1: MARP	Yes	Complete in 2009. Community chose a community building.
	Phase 2: Oversee implementation; create management committee.	Yes	Completed in 2010
Supplemental Community Compensation: Ngalaba II	Phase 1: MARP	Yes	Complete in 2009. Community chose a School Director's house, a drilled well and furniture for one class room.
	Phase 2: Oversee implementation; create management committee.	Yes	Completed in 2010
<b>Supplemental Community Compensation</b>	<b>Phase 1: MARP</b>	<b>Yes</b>	<b>Could start in Q3 2015</b>
	<b>Phase 2: Oversee implementation; create management committee.</b>	<b>Yes</b>	<b>Could be completed latest in September 2016 if budget permits</b>

**Table 8: Site Specific Plan Implementation Timeline**

Green = Completed; Blue = Underway; White = To implement

<b>Action</b>	<b><u>Timeline</u></b>
EEPCI provides Training and equipment to qualified resettlement training program graduates.	2004-2012 (80)
EEPCI provided Reinforcement Training and equipment to qualified resettlement training program graduates.	2009-2015(32)
MARP, Initial Compensation, Two room School	2009
Construction Initial Community Compensation	2010
Village Land Use Survey	2008
MARP (Ngalaba)– First Supplemental Compensation, One room School	2009
Construction First Supplemental Community Compensation	2010
MARP (Ngalaba II)– Supplemental Compensation, One room School	2009
Construction First Supplemental Community Compensation	2010
Monitoring process of individuals who previously received resettlement.	2015 (4)
EEPCI provides Reinforcement Training and equipment to qualified resettlement training program graduates. (2)	Q2-2015 (2)
MARP – Second round of Supplemental Compensation	Q3 2015
Ngalaba choice of Supplemental Community Compensation	July 2015 – July 2016
Earliest Construction of Supplemental Community Compensation Projects	Q4 2015 Budget permitting

## Annexes

## Annex 1: Change in situation of community between 2009 and 2015 (March 31<sup>st</sup>)

		2009	2015	Trend
<b>Population</b>	Nbr of Residents	1315	1395	6.1%
	Nbr HH	249	242	-2.8%
	Nbr Women HHH	77	72	-6.5%
	At-Risk Women HHH	9	6	-33.3%
	Avg. HH size	5.3	5.8	9.2%
	Avg. cordes Land per HH inside and outside village	12.7	14.5	13.7%
	Avg. Resettlement Factor (Based on all land inside and outside)	2.41	2.51	4.2%
<b>Land Use</b>	Village Area in Hectares	2118	2122	0.2%
	Project Perm. Land Take + Temp. No Returned in Hectares	244.4	152	-37.8%
	(% village)	11.5%	7.2%	-4.4 points
	Available Land inside the village limit in Hectares	1597	1872.9	17.3%
	(% village)	75.4%	88.3%	12.9 points
	Available Land Density inside the village limit (Hectares/Person)	1.21	1.34	10.7%
<b>Pop. Density</b>	Density (people/Ha)	0.62	0.66	5.9%
	Density Increase (Land Take Factor)	-14.7%		
	Density Increase (Population factor)	6.1%		
<b>Land "Owned" by Women</b>	Area cultivated (Field) or owned (Fallow) by women	511.0	262.8	-48.6%
	%	32.0%	14.9%	-17.1 points
<b>Outsiders Fields</b>	Cultivated (Field) or Owned (Fallow) by non-residents inside the village	146	153.6	5.2%
	%	9.1%	8.2%	-0.9 points
<b>Villagers Fields</b>	Cultivated Field Farmed by Resident inside the village limit in hectares (% of available land)	1044	1059.9	1.5%
	%	65.4%	56.6%	-8.8 points
	Fallow Owned by Resident inside the village limit in hectares (% of available land)	490	618.0	26.1%
	%	30.7%	33.0%	2.3 points
	Ratio Fallow/Field	0.47	0.58	23.4%
	Cultivated (Field) or Owned (Fallow) outside the village in Hectares	63	87.5	38.9%
	(% of total land of the residents)	3.9	5	28.2%
	Total Cultivated (Field) or Owned (Fallow) by the residents in Hectares	1597	1765.4	10.5%
Available Land Density inside and outside the village limit (Hectares/Person)	1.21	1.27	5.0%	
<b>Number of Years Fallow Possible Given Current Land and Population</b>				
Formula : Allan & Brush				
LengthFallow =((ArableLand*LengthCultivation/Population) - NecessaryAreaPerPerson*LengthCultivation)/NecessaryAreaPerPerson				
	Arable Land INSIDE (m2)	15,340,000	16,778,513	
	Arable Land TOTAL (m2)	15,970,000	17,653,882	
	Population	1315	1395	
	Length Cultivation	4	4	
	Necessary Area Per Person (2/3 corde)	3362	3362	
	Years Fallow Village Only	9.9	10.3	4.4%
	Years Fallow Village + Outside	10.4	11.1	5.8%

## Annex 2: Land available to villages

	Atan	Begada	Bela	Bero	Danmadja	Dildo	Dokaidilti	Kome	Madjo	Maikeri	Mainani	Mbanga	Missimadji	Mouarom	Naikam	Ndoheuri	Ngalaba	Poutougum	OFDA	Bémira	Benguirakol	Moundouli	Moundouli Satellite
Village Area in Hectares	338	3282	2200	5772	480	1890	690	2448	2139	1245	1413	3059	181	1359	1450	811	2122	562	31440	651	1068	1151	2871
Settlement area in Hectares	223.9	55.5	35.0	158.0	34.9	46.0	24.2	80.6	27.4	46.4	67.5	62.3	7.5	22.8	22.8	42.1	97.1	28.2	1082.2	24.7	27.7	44.9	97.3
(% village)	66.3	1.7	1.6	2.7	7.3	2.4	3.5	3.3	1.3	3.7	4.8	2	4.1	1.7	1.6	5.2	4.6	5	3.4	3.8	2.6	3.9	3.4
Project Perm. Land Take + Temp. No Returned in Hectares	23.9	189.6	137.6	502.3	57.3	173.4	53	16.7	101.2	61.8	67.7	113.2	16.7	106.1	17.9	25.7	152	38.6	1854.7	13.1	47.5	44.9	105.5
(% village)	7.1	5.8	6.3	8.7	11.9	9.2	7.7	0.7	4.7	5	4.8	3.7	9.2	7.8	1.2	3.2	7.2	6.9	5.9	2	4.4	3.9	3.7
Available Land inside the village limit in Hectares	90	3037	2027	5111	388	1671	613	2350	1533	1137	1278	2884	157	1230	1409	744	1873	495	28503	613	993	1062	2668
(% village)	26.6	92.5	92.2	88.6	80.8	88.4	88.8	96	71.7	91.3	90.4	94.3	86.7	90.5	97.2	91.6	88.3	88.1	90.7	94.2	93	92.2	92.9
Available Land Density inside the village limit (Hectares/Person)	N/A	2.39	2.25	1.3	0.63	1.2	1.04	2.29	1.77	1.51	1.81	1.83	1.03	2.62	5.05	1.43	1.34	1.74	1.7	0.79	1.49	0.98	1.06
Cultivated (Field) or Owned (Fallow) outside the village in Hectares	830.1	117.5	81.8	794.4	161.1	127.7	124.9	394.6	177.6	86.0	378.5	129.6	139.7	226.1	21.4	48.3	87.5	7.5	3934.3	55.3	73.7	142.5	271.5
(% of total land of the residents)	96.3	4.1	4.8	15	30.5	8	21	19	14.3	8.2	24.6	5.6	49.6	24.8	2.8	9.6	5	2.8	15.1	8.7	10	15.8	11.9
Total Cultivated (Field) or Owned (Fallow) by the residents in Hectares	862.2	2839.4	1698.0	5280.2	527.8	1598.6	593.9	2081.3	1238.1	1049.2	1538.6	2316.4	281.4	910.6	752.2	501.2	1765.4	264.3	26098.8	637.5	734.5	903.3	2275.2
Available Land Density inside and outside the village limit (Hectares/Person)	N/A	2.23	1.88	1.34	0.86	1.15	1.01	2.03	1.43	1.39	2.18	1.47	1.84	1.94	2.7	0.97	1.27	0.93	1.56	0.82	1.1	0.83	0.9
Area Acquired by Project (ha)	49.6	486.5	317.7	1036.2	131.5	271.6	117.3	103.7	236.5	180.0	134.1	453.8	57.6	240.1	45.6	66.6	462.9	90.2	4481.6	36.2	127.0	125.8	289.0



### Annex 3: Use of Available Land per Village

	Atan	Begada	Bela	Bero	Danmadja	Dildo	Dokaidilti	Kome	Madjo	Maikeri	Maïnani	Mbanga	Missimadji	Mouarom	Naikam	Ndoheuri	Ngalaba	Poutougouem	OFDA	Bémira	Benguirakol	Moundouli	Moundouli Satellite
Cultivated (Field) or Owned (Fallow) by non-residents inside the village limit in Hectares (% of available land inside village limit)	7.0	286.6	400.2	509.8	19.3	139.5	138.8	648.1	472.2	177.4	131.7	694.1	2.8	545.6	852.9	283.6	153.6	235.1	5698.3	29.9	324.6	300.1	654.6
%	7.8	9.4	19.7	10	5	8.3	22.7	27.6	30.8	15.6	10.3	24.1	1.8	44.4	60.5	38.1	8.2	47.5	20	4.9	32.7	28.3	2
Cultivated Field Farmed by Resident inside the village limit in hectares (% of available land)	25.4	999.9	832.8	1910.5	275.7	698.1	291.8	547.5	594.4	611.4	453.7	1024.4	84.6	369.7	112.9	375.3	1059.9	186.4	10454.4	392.7	350.5	497.6	1240.8
%	28.2	32.9	41.1	37.4	71.1	41.8	47.6	23.3	38.8	53.8	35.5	35.5	53.8	30.1	8	50.5	56.6	37.6	37	64	35.3	46.9	4
Fallow Owned by Resident inside the village limit in hectares (% of available land)	6.8	1721.9	783.4	2575.2	91.0	772.8	177.2	1139.2	466.2	351.8	706.5	1162.4	57.1	314.8	617.8	77.6	618.0	70.4	11710.1	189.5	310.3	263.1	762.9
%	7.5	56.7	38.6	50.4	23.5	46.3	28.9	48.5	30.4	31	55.3	40.3	36.3	25.6	43.8	10.4	33	14.2	41	30.9	31.2	24.8	3
Ratio Fallow/Field	0.27	1.72	0.94	1.35	0.33	1.11	0.61	2.08	0.78	0.58	1.56	1.13	0.68	0.85	5.47	0.21	0.58	0.38	1.12	0.48	0.89	0.53	0.61
Area cultivated (Field) or owned (Fallow) by women	772.5	414.0	116.6	2037.2	112.8	225.1	44.0	1366.7	167.8	133.6	259.7	487.7	162.7	262.0	81.7	165.3	262.8	21.9	7094.2	66.1	61.3	133.9	261.3
% Area cultivated (Field) or owned (Fallow) by women out of total area "owned" by village residents inside and outside village	89.6	14.6	6.9	38.6	21.4	14.1	7.4	65.7	13.6	12.7	16.9	21.1	57.8	28.8	10.9	33.0	14.9	8.3	27.2	10.4	8.3	14.8	11.5

## Annex 4: Demography of Villages

	Atan	Begada	Bela	Bero	Danmadja	Dildo	Dokaidilti	Kome	Madjo	Maikeri	Mainani	Mbanga	Missimadji	Mouarom	Naikam	Ndoheuri	Ngalaba	Poutouguem	OFDA	Bémira	Benguirakol	Moundouli	Moundouli Satellite
Nbr of Residents	N/A	1273	902	3939	611	1395	588	1027	867	755	707	1576	153	470	279	519	1395	285	16741	777	665	1084	2526
Men	N/A	610	455	1904	307	677	268	517	416	387	373	772	71	234	141	269	700	138	8239	352	329	543	1224
Women	N/A	663	447	1929	304	718	320	510	451	368	334	804	82	236	138	250	695	147	8396	425	336	541	1302
Avg Age in Years	N/A	18.8	18.6	18.1	19.4	19.3	18.3	19.9	18.1	20.2	19.2	19.1	17.2	18.8	18.9	19.8	19.5	19	19.0	18.7	19.1	18.7	18.8
Nbr HH	N/A	250	149	607	105	271	85	200	137	140	120	265	25	84	54	95	242	53	2882	145	106	178	429
Avg. HH size	N/A	5.1	6.1	6.5	5.8	5.1	6.9	5.1	6.3	5.4	5.9	5.9	6.1	5.6	5.2	5.5	5.8	5.4	5.8	5.4	6.3	6.1	5.9
Avg. cordes Land per HH inside and outside village	N/A	22.5	22.6	17.3	10.0	11.7	13.9	20.6	17.9	14.9	25.4	17.3	22.3	21.5	27.6	10.5	14.5	9.9	18.0	8.7	13.7	10.1	10.5
Avg. Resettlement Factor (Based on all land inside and	N/A	4.42	3.71	2.65	1.72	2.29	2.01	4.05	2.85	2.75	4.31	2.94	3.66	3.84	5.31	1.90	2.50	1.83	3.10	1.63	2.19	1.65	1.78
Women HHH	N/A	69	19	90	16	58	10	36	22	23	6	57	7	12	5	14	72	9	525	22	22	24	68
At-Risk HH	N/A	11	11	95	20	41	7	19	24	7	6	14	3	4	0	11	19	6	298	22	11	27	60