Socio-Demographic, Economic and Attitudinal Analysis of the Achichire-Sureso-Pebaseman Community Resource Management Area (CREMA)

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1. Background note

The Achichire-Sureso-Pebaseman CREMA is located in the western region of Ghana. The CREMA's boundaries lie within two political districts; namely *The Amenfi West* and *Amenfi Central Districts*, respectively. The CREMA consists of 11 key communities and 17 Satellite communities[1]. It falls within the International Union for Conservation of Nature (IUCN's) project landscape, which is one of the selected National REDD+ demonstration sites. The CREMA landscape is about 9,107 hectares in sizea and consists of a mosaic of individual tree plantations mixed with cocoa farming and food crop production. Cocoa farming is the main source of rural income and the main driver of the local economy. The population consists of an "indigenous"/resident population and large population of immigrants from other parts of the country who settled when the wider region was part of the cocoa frontier. The mix of indigenous people and migrant settlers has lead to a complex and rich social mosaic, with a wide variety of ethnic groups and languages. The land tenure system, based on legally recognized customary land tenure is complicated by the presence of migrants who generally farm land through tenancy arrangements.

Some of the underlying causes of deforestation and degradation in the landscape include among others - unclear land and tree tenure; inadequate involvement of land owners and forest marginal communities in policy making and governance processes; illegal timber harvesting; conversion of forest lands to other land uses; poor access to natural resources benefits by communities. Whilst some of these causes are institutional gaps within the sector that need to be streamlined at a higher level, others are driven directly by increased pressure from the inhabitants of the area through their heavy dependence on the forest for fuel-wood, farming practices (particularly the conversion of fallow to other crops or cocoa, and the conversion of primary and secondary forest to cocoa), bush burning, etc.

The following analyses present the main results of a comprehensive demographic survey of the Achichire-Sureso-Pebaseman CREMA landscape. The CREMA demographic survey is an initiative of the CREMA Executive Committee with technical and financial support from International Union for Conservation of Nature (IUCN) Ghana and Codesult Network.

The survey was undertaken within the twenty-eight (28) communities between 5thand 25th December 2015 with a mop up exercise from 1st -19th February, 2016. 14550 households were interview, corresponding to 91% of the entire household population in the CREMA communities.

The survey serves to provide a baseline understanding of the demographics of CREMA communities and the socio-demographic and economic characteristics of CREMA and non-CREMA households. Other relevant information in relation to land and tree registration was collected concurrently as a baseline for future initiatives/follow-ups

Within the following report, basic-socio demographic and economic data from the survey will be presented. The first section is concerned with CREMA membership and general knowledge of CREMAs amongst households. The second section takes a closer look at the main land use and economic activities of CREMA and non-CREMA households. The third section provides a comparative analysis of the main socio-economic characteristics of CREMA and non-CREMA households. The fourth section presents

[1] As indicated in the Revised CREMA constitution. *Satellite communities in parenthesis
Attobrakrom (Bogyakrom); Nkrankrom (Essandohkrom and Betemaso); Gonukrom (Koduakrom); Achichire; Sureso; Supanso; Kamaso (Meteameba); Donkorkrom (Camp, Forest Ano); Sika Nti (Asante Akyem, Appiahkrom, Aboagyekrom and Kyikyiresua); Kamaboi (Ayensukrom and Yewheade, Akakpokrom, Owuyaw); Ataase (Adoboakrom, Kansahkrom)

gender-segregated data with respect to land ownership, tree planting and tree registration. The annex to the report provides standard demographic data for all the CREMA communities.

2. Methodology

The survey was undertaken between 5th-25th December, 2015, and a mop up exercise from 1st -19th February, 2016. The survey was done in the twenty eight (28) communities within the CREMA. A total of one thousand four hundred and fifty five (1455) households were surveyed. One hundred and forty (140) households/heads could not be interviewed due to their unavailability during the two (2) survey exercises. The survey engaged nine (9) enumerators throughout the exercise.

In order to ensure that every household in each community was surveyed, the following methodologies were devised.

1. Codesult Network sent formal letters to inform all CREMA Communities about the purpose of the survey exercise and dates for visiting each of the communities was also communicated.
2. Communities divided into two halves by major roads passing through them, the enumerators were divided into two groups. Each group started from one half of the community and worked to the end of that half, by transect walking. This helped to ensure that every household was visited.
3. In communities which were not divided by roads, the enumerators were divided into two groups. One group begun from the centre of the community to its end, whilst the other group worked from the centre to the beginning of the community.

Whilst the survey was generally successful, some major challenges were encountered .These include:

1. Absence of household heads due to farming activities: Since farming is the major source of livelihood in the area, most household heads were out to work on their farms. Some had their wives home to provide information whilst other houses were locked with nobody at home.

2. Absence of household heads due to Christmas Season: Most of the farming communities were set up by migrant farmers. However due to the festive season most of these migrant farmers left their villages to their native towns outside the Wassa Amenfi landscape to celebrate the Christmas Season with their family members.

Due to the challenges above, a mop up exercise was undertaken between 1st-19th February, 2016 to gather information on households, whose heads were absent during the initial survey.
The following methodologies were adopted for the mop up exercise.

1. Key informants were identified in each of the communities to put together names of all those household heads who could not participate in the survey during the major exercise in December.

   Community announcements were made at the various information centres to inform each community about the importance of the survey and entreated those who were not interviewed to present their names and locations to the identified key informants within their communities. The planned dates of arrival of the enumerators to conduct the interviews in each community were also communicated to the community members.
2. On the day of the enumerator's visit to each community, another community announcement was made for all those who did not take part of the survey to meet the enumerators at an identified area to be interviewed. The list was taken from each key informant and the names of those who appeared to be interviewed ticked and the rest counted as 'not interviewed'.

3. Basic statistics on CREMA membership, knowledge of CREMAs and the intention to register

Consulting figures 1 through 5 in basic CREMA statistics on membership, knowledge of CREMAs etc., it can be seen that the majority – 71% - of households are aware of the existence of CREMAs (**Figure 1**). Only 18% of the total surveyed population however, have registered as a member of a CREMA at the time when the survey was undertaken **(figure 2)**. However, 64% of the surveyed population, and especially those that are aware of the CREMAS, plan to register in the near future (**figure 3**).

When asked why they plan to register (figure 4), about a half of the participants answers were due to environmental considerations with 25% wanting to protect natural resources more generally and 22% specifically noting the importance of trees within their communities. 4% were registering as they saw it more effective to be part of a group. The remaining household heads (25%) did not specify why they would register (25%).

Those households who plan not to register as a CREMA member (19%), have decided not to due to reasons such as lack of time (8%), unable to see the benefit (3%), too old to be a member of a group (4%) or indeed did not specify exactly why (81%). Again this demonstrates perhaps the lack of awareness within the communities of CREMAS.

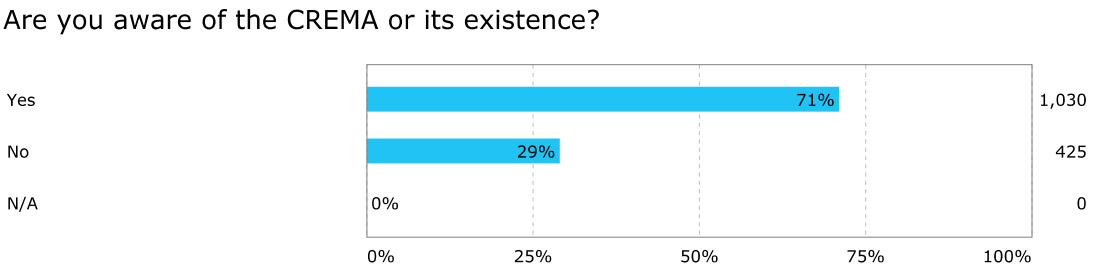

Figure 1: Awareness of CREMA

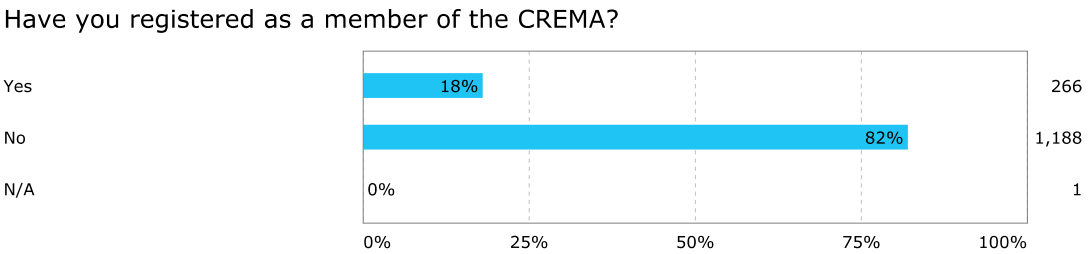

Figure 2: Registration as a CREMA member

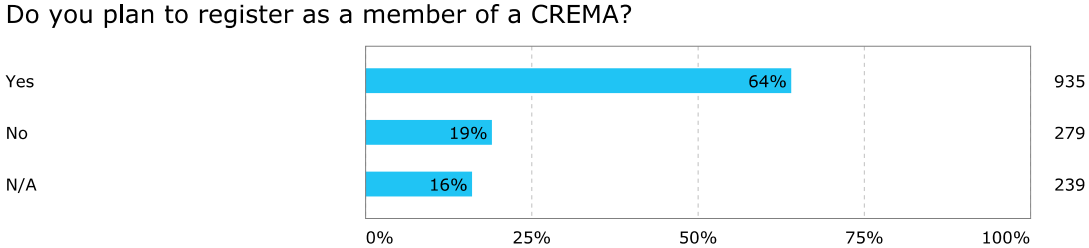

Figure 3: Planning to register

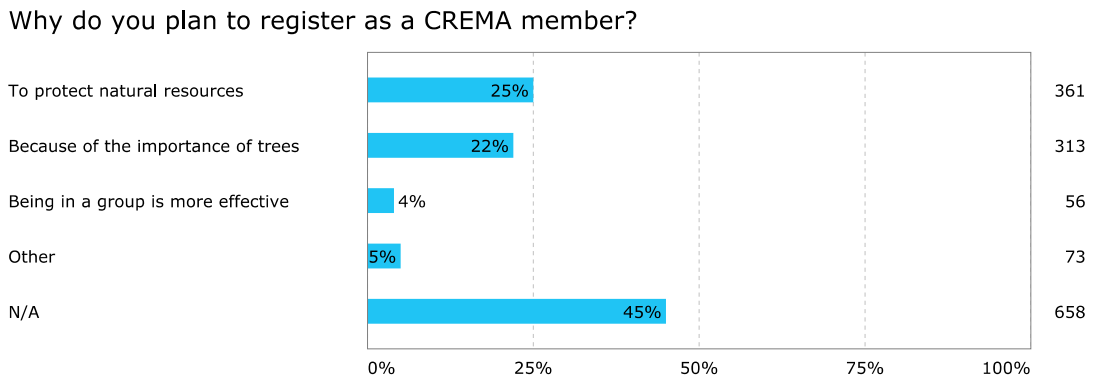

Figure 4: Reason to register as a CREMA member

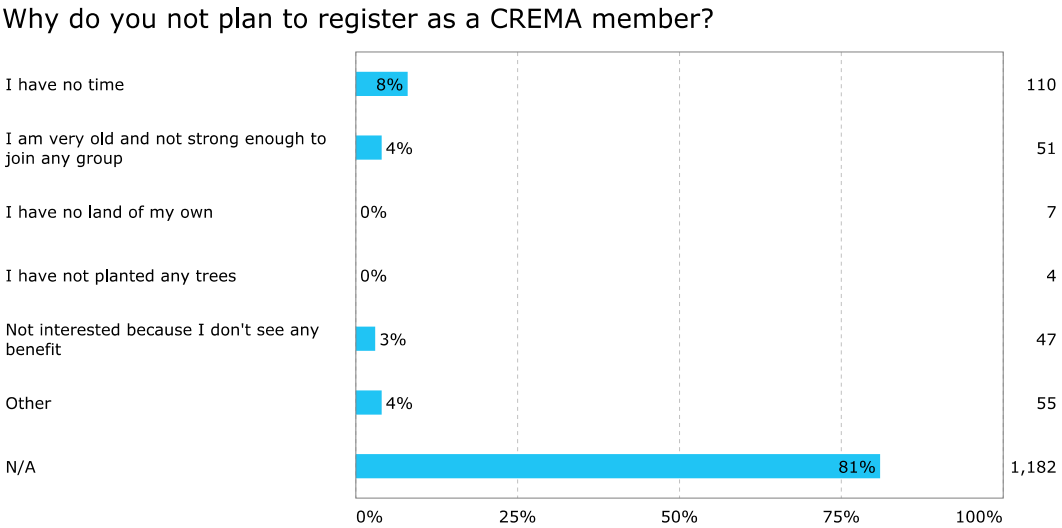

Figure 5: Reason to register as a CREMA member

4. Key features of the main land use and economic activities of the CREMA and non-CREMA households.

a. Management, acquisition and registration of land

In terms of the key features of the land use activities of the CREMA and non-CREMA households, **figure 6** reveal that those respondents that are registered as a CREMA member, control or manage an average of 15.2 acres. In contrast, those respondents that are not registered as CREMA members manage only 10.8 acres of land. This data is consistent with the household cash income data **(figure 22)** showing that households that are members of CREMAs have higher agricultural income. 1 respondent who owes 12 acres of land is not applicable to the CREMA membership question.

Consulting **figure 7**, for CREMA registered and non-CREMA registered households, most of the land was acquired through inheritance - the CREMA registered group with 61%, the Non-CREMA group at 55%. For the remaining land acquisition possibilities, the survey shows that it is acquired the land through Abunu tenancy (37% for both CREMA and non-CREMA household members) followed by purchased of the land (11% for CREMA and 8% for non-CREMA households). A minor fraction also acquires land through Freehold in the Non-CREMA respondent group. This suggests that CREMA registered households seem to acquire land through inheritance to a slightly higher degree than non-CREMA registered groups.

Figure 8 provides an overview of how land is acquired across the whole sample of 1455 households.

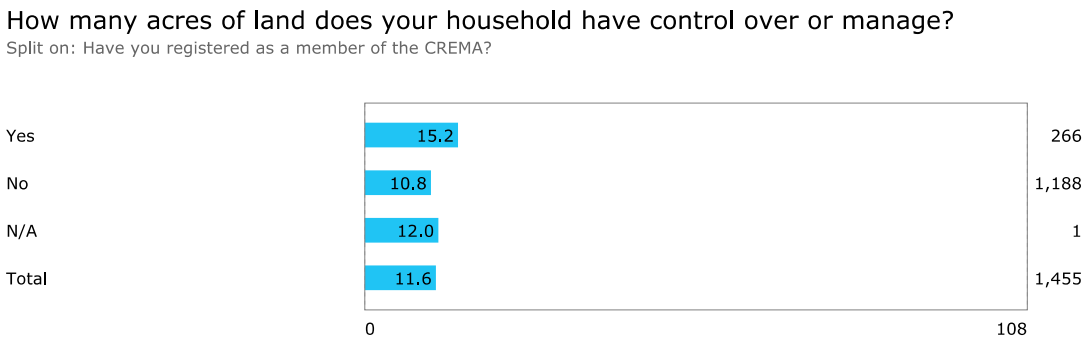

Figure 6: Acres of land under the control of the household

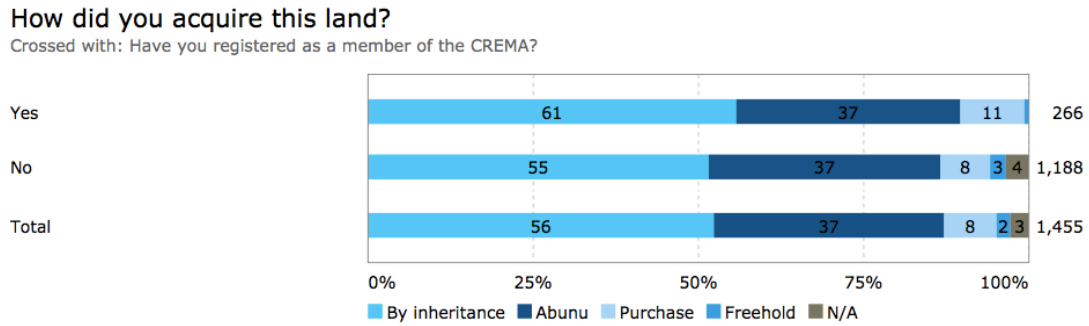

Figure 7: Land acquisition by CREMA membership

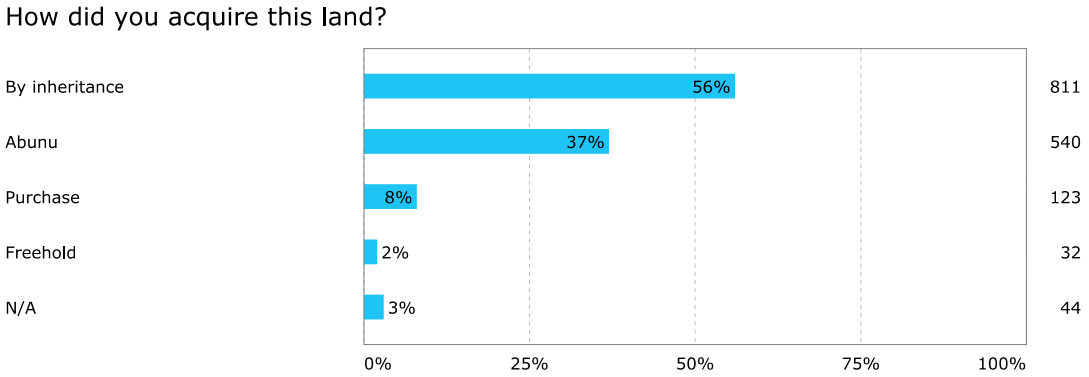

Figure 8: How was land acquired, aggregate

In terms of land registration, only 39% on the surveyed population has registered their land and 59% has not **(figure 9).** Amongst households that are members of CREMAs, 62% have registered their land. In contrast, amongst non-CREMA members only 38% have registered their land. This suggests that, either 1) CREMA members are more aware of the importance of registering their land thanks to CREMA membership, or 2) CREMA member in general are characterised by people who are more interested in land management and understand the importance of institutions.

The reasons given for not registering land (**figure 11a and 11b**) ranges from being unaware of land registration, followed by the land still being under Abunu, followed by financial constraints and being indigenous, and finally having no time to register (2%). For both CREMA and non-CREMA members, having no idea about land registration is the most prevalent cause for not having registered. As expected, unawareness about land registration is higher (22%) among non-CREMA members than CREMA members (11%).

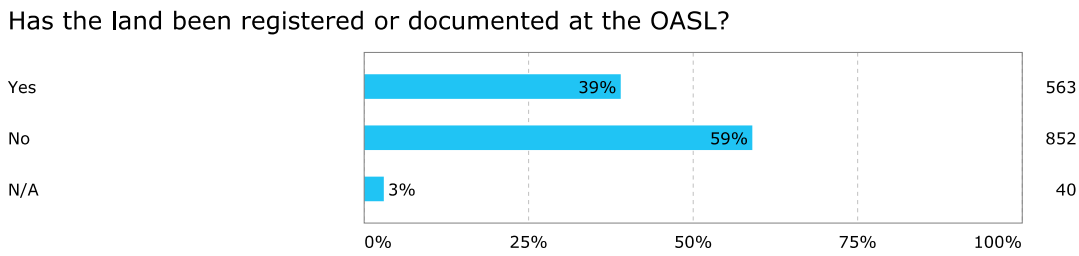

Figure 9: Land registered or documented at OASL

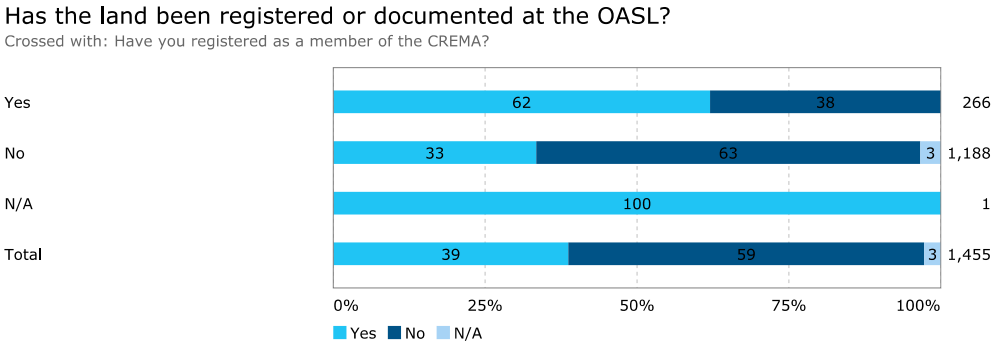

Figure 10: Land registered or documented at OASL – and CREMA membership

Filter: Have you registered as a member of the CREMA = YES

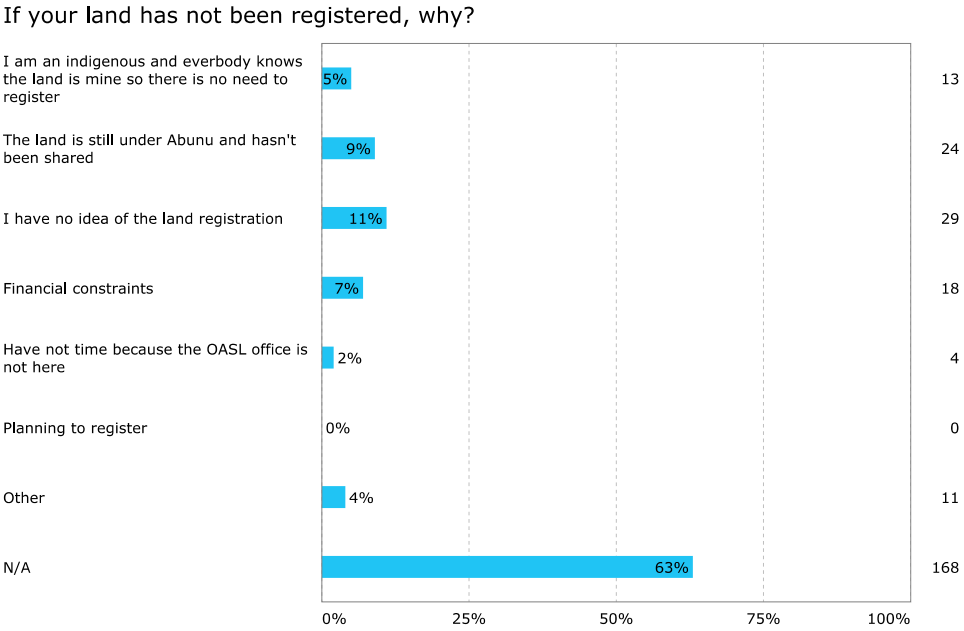

Figure 11a: Why has land not been registered: CREMA households

Filter: Have you registered as a member of the CREMA = NO

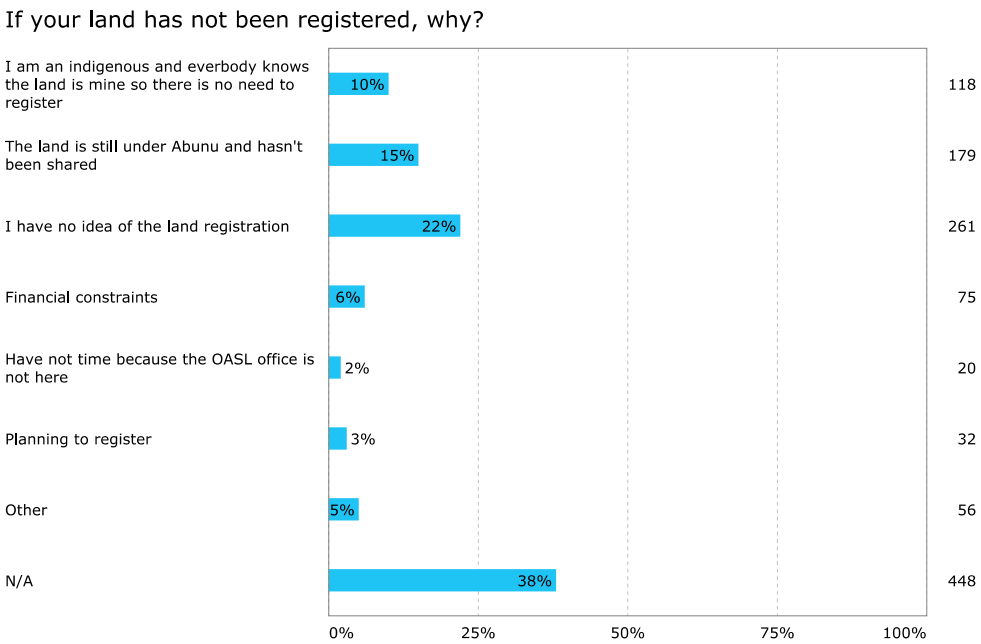

Figure 11b: Why has land not been registered: Non-CREMA households

b. Tree planting and tree registration

In terms of tree planting, 75% of the total surveyed population have planted trees and 22% have not **(figure 12)**. Amongst registered CREMA members 94% have planted trees. This proportion is significantly lower for non-CREMA members, where only 71% have planted trees **(figure 13)**.

Likewise, amongst those who stated *yes, they have planted trees,* it can be seen that CREMA households have planted significantly more trees - 175 trees against 52 trees among non-CREMA members **(figure 14, table 14)**. The maximum number of trees planted by any CREMA household member is 3000 and 2000 for a non-CREMA member.

It appears that CREMA membership does not only increase the likelihood that any one household decide to plant trees, but also the number of trees they decide to plant. This demonstrates the positive effect of being CREMA registered in terms of improved natural resource management. It should be noted however that those household that register with CREMAs are more likely to be environmentally concerned, everything else equals, so it is not strictly possible to tell whether it is CREMA membership that is driving increasing tree planting rates, or the inherent characteristics and attitudes of households that sign-up to CREMAs which is driving this difference.

Finally, **figure 15** shows that tree-registration rates with the FSD are also higher amongst CREMA household members. 29% of CREMA member households have registered their trees, unlike a mere 4% for non-CREMA households. It remains to be said however, that the rate of non-registration within the sample is high – for both CREMA and non-CREMA households. 67% of households have not registered their trees.

The reasons for not registering among CREMA (**figure 16a**) and non-CREMA members (**figure 16b)** are: having no idea about tree registration, followed by the trees being too small, no time financial problems and the process being too lengthy. Thus, the most important reason however, amongst both CREMA and non-CREMA members, is non-awareness about the tree registration possibility. It is surprising that even among CREMA members, 32% of respondents are ignorant about the tree registration process. Among Non-CREMA members the share is 42%.

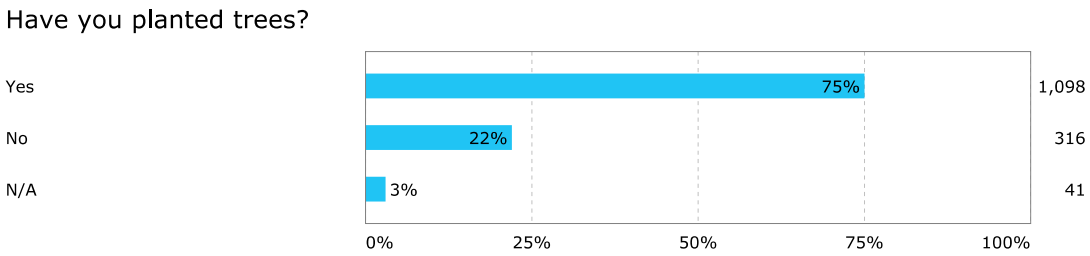

Figure 12: Tree planting

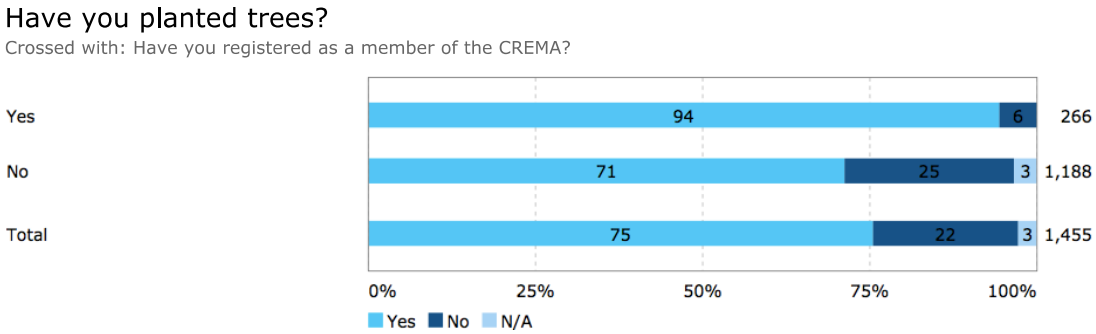

Figure 13: Tree planting by CREMA membership

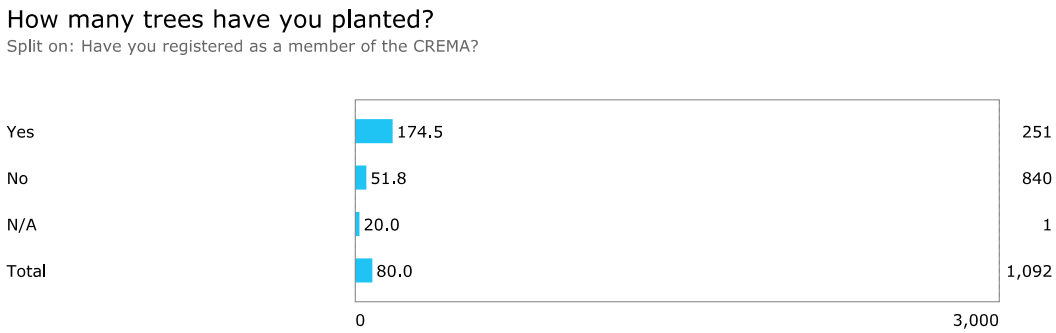

Figure 14: Average number of trees planter amongst CREMA and non-CREMA households

How many trees have you planted?	Minimum	Maximum	Average	Respondents
CREMA household	2	3000	**175**	251
Non CREMA household	0	2000	**52**	840
N/A	20	20	**20**	1
Total	0	3000	**80**	1092

Table 1: Average number of trees planter amongst CREMA and non-CREMA households

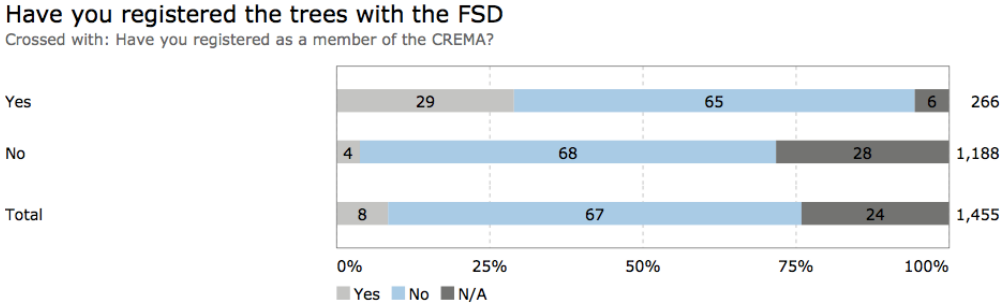

Figure 15a: Has trees been registered with the FSD

Filter: Registered as a member of a CREMA (=YES)

Why have you not registered trees with the FSD?

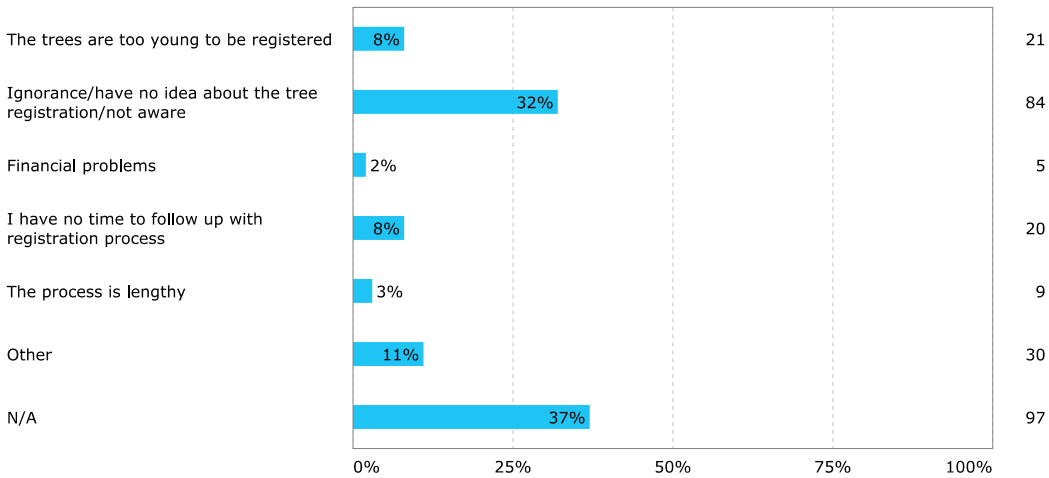

Figure 16a: Reasons for not registering the trees – CREMA members

Filter: Registered as a member of a CREMA (=No)

Why have you not registered trees with the FSD?

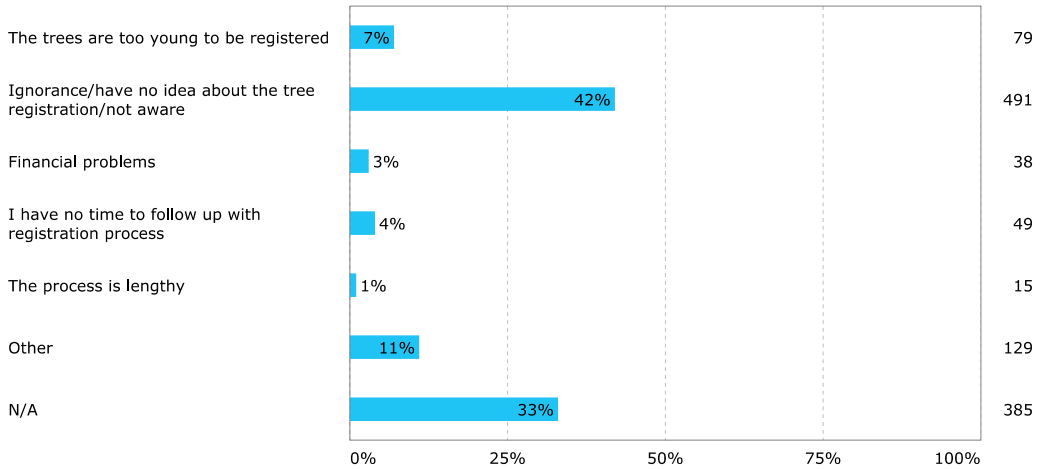

Figure 16b: Reasons for not registering the trees – Non-CREMA members

5. A comparative analysis of CREMA and non-CREMA households in terms of socio-economic characteristics

a. Gender

In terms of the socio-economic characteristics of CREMA and non-CREMA households, 72% of the male population are aware of CREMAs and 28% are not. For the females in the survey, 66% are aware and 34% are not. So, 71% of the total surveyed population (both male and female) are aware of CREMA existence and males have a better overall awareness about CREMAs than women (**figure 17**).

In terms of households actually registering as CREMA members, 20% of the male-headed households have registered. Amongst female-headed households however, only 11% have registered **(figure 18).** Since female-headed are typically headed by single women, it is plausible that they have less time on their hands to engage in non-income generating activities.

For those who had not registered as a CREMA member, here again, there is a higher proportion of male headed (66%) of households that plan to register vis-à-vis female headed households (56%). Additionally, 16% of males and 34% of females answered that they would not register. Of the total surveyed population, 64% plan to register signalling there is significant interest in CREMAS **(figure 19).**

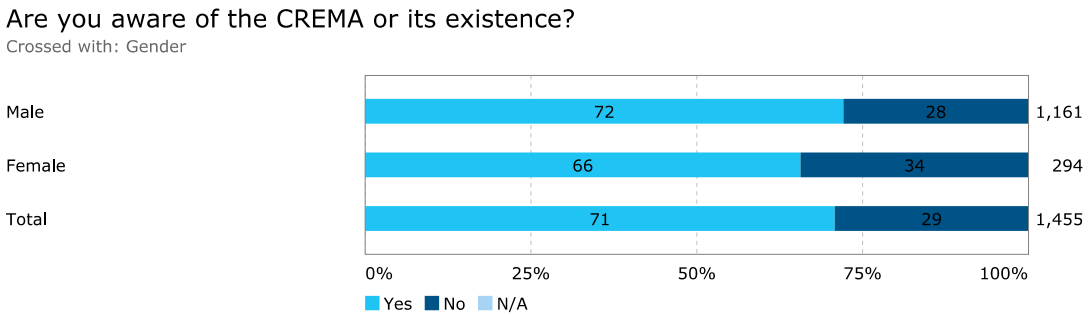

Figure 17: Awareness of CREMA by Gender

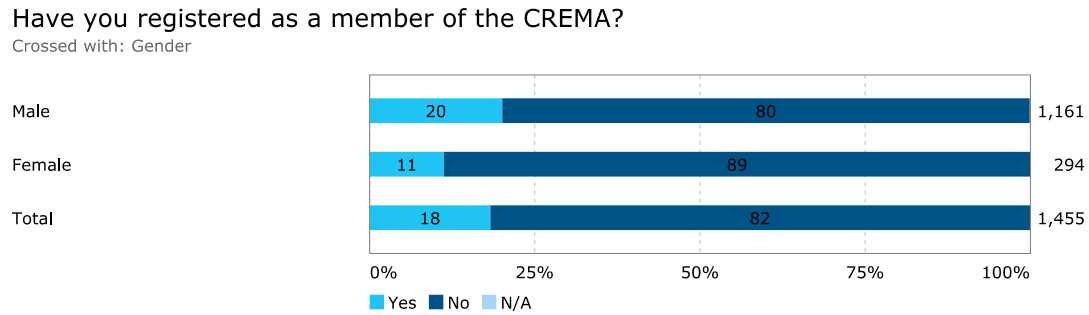

Figure 18: Registration as a member of a CREMA by Gender

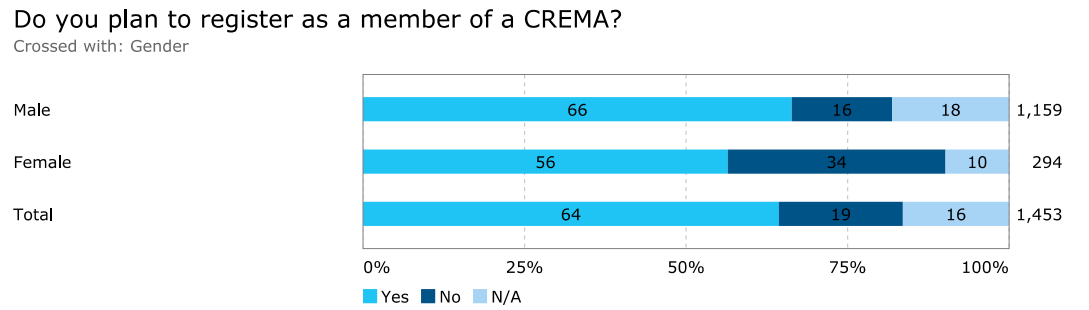

Figure 19: Planning to register as a member of a CREMA by Gender

b. Marital status, age, household size and education

As shown in **figure 20**, most respondents in both the CREMA and non-CREMA groups are married (figure 20), but a higher proportion is married among CREMA-members (87%) relative to non-CREMA members (76%).

The average age of household head across CREMA members is 48 years old whereas the average age of non-CREMA household members is 44 years **(table 2).** CREMA registered households are also slightly larger than non-CREMA registered households, featuring on average 7.3 household members versus 6.3 household members amongst non-CREMA households **(table 3)**

Of the CREMA registered households, 85% of children below 18 years of age go to school, whereas only 73% of the children of non-CREMA registered households, go to school (figure 21a and 21b).

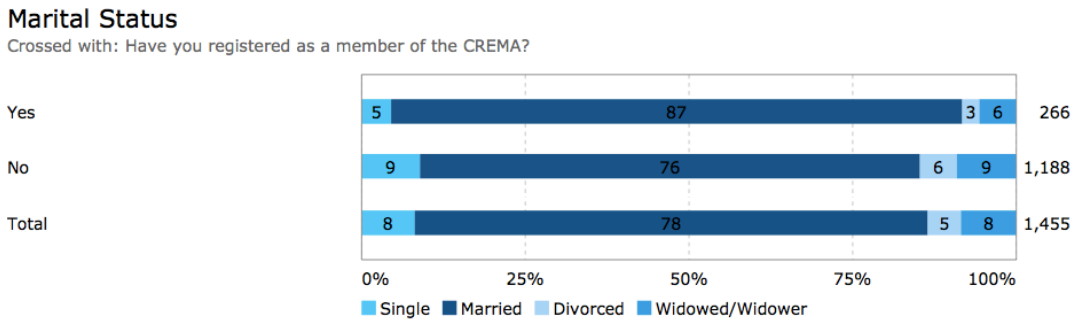

Figure 20: Registration as a CREMA member by marital status

Age of household head	Minimum	Maximum	Average	Respondent
Registered as a CREMA member	4	100	48	266
Not registered as a CREMA member	17	102	44	1188
N/A	75	75	75	1
Total	4	102	45	1455

Table 2: Registration as a CREMA member by age of household head

Household size	Minimum	Maximum	Average	Respondent
Registered as a CREMA member	1	38	7.3	266
Not registered as a CREMA member	0	101	6.3	1188
N/A	5	5	5.0	1
Total	0	101	6.5	1455

Table 3: Age of household head and registration as a CREMA member

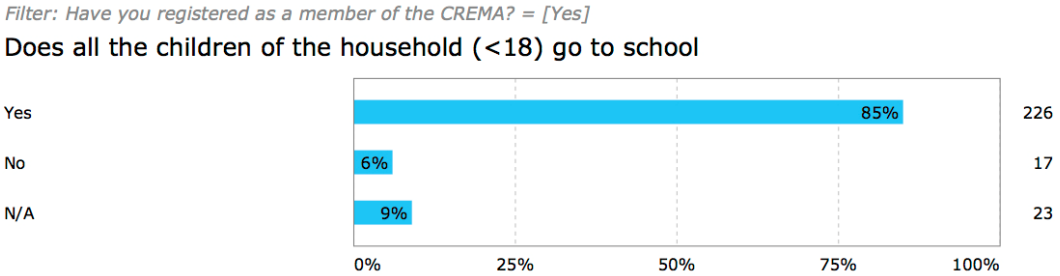

Figure 21a: Age of household head and registration as a CREMA member

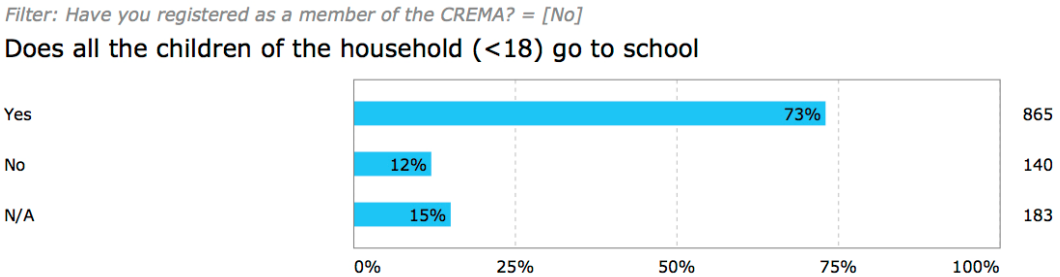

Figure 21b: Age of household head and registration as a CREMA member

c. Non-cash income

The main sources of non-cash farming income are similar across CREMA and non-CREMA households **(table 4).** For both groups, cassava and plantain are the main sources of non-cash income followed by vegetables, cocoyam, yam and maize.

As for non-cash income from forest products**, table 5** shows that the main source of non-cash forest income for households is by far fuelwood. It is the main non-cash income for 98% of CREMA members and for 92% of non-CREMA members. Other important sources of non-cash forest income are: Mushrooms (52%, CREMA and 45% non-CREMA), Snails (29%, CREMA and 33.8%, non-CREMA). Raffia and Ratten is the main source of non-cash forest income for less than 2% of CREMA and non-CREMA households.

Main source of non-cash farming income for the household	CREMA members		Non-CREMA members	
	Respondents	Percent	Respondents	Percent
Cassava	229	86%	1003	84%
Plantain	230	87%	1019	86%
Cocoyam	99	37%	347	29%
Palm	1	0.5%	6	0.5%
Vegetables	127	48%	473	40%
Yam	90	34%	302	25%
Poultry	6	2%	38	3.2%
Sheep	0	0.0%	2	0.2%
Goats	2	1%	9	1%
N/A	3	1%	91	8%
Maize	57	21%	200	17%
Total	266	100.0%	1188	100.0%

*A t-test revealed no significant difference between the two groups

**Questionnaire respondents could tick more than one non-cash income category explaining why the total percentage add up to more than 100%

Table 4: Main sources of non-cash farming income CREMA and non-CREMA members

Main source of non-cash forest income for the household	CREMA members		Non-CREMA members	
	Respondents	Percent	Respondents	Percent
Mushrooms	138	60%	536	45%
Bushmeat	34	13%	170	14%
Raffia	4	1.5%	16	1%
Rattan	0	0%	16	1%
Canes	0	0%	1	0.1%
Fuel wood	261	98 %	1099	93%
Timber	0	0%	2	0.2%
Allanblackia	0	0%	1	0.1%
Snails	78	29%	401	34%
Other	2	1%	3	0.3%
N/A	1	0.5%	52	4%
Total	266	100.0%	1188	100.0%

*A t-test revealed no significant difference between the two groups.

**Questionnaire respondents could tick more than one non-cash income category explaining why the total percentage adds up to more than 100%

Table 5: Main sources of non-cash forest income for CREMA and non-CREMA members

d. Cash income

A detailed decomposition of income by products, own-business activities and salaried income is shown in **table 7**. In terms of cash-income, CREMA and non-CREMA households earn most from farm income (crop and animals), followed by own business, salaried work and finally forest products[2]. Whilst this ranking is the same

[2] *It is worth highlighting a word of caution regarding total forest income reported here. Since forest income is typically composed by a very large number of products, collected a various times throughout the year, research (e.g. through the Poverty Environment Network/CIFOR) has shown that the calculation of forest income necessitates the decomposition of every single product into quantities and prices. Additionally, given household difficulties with recalling, it is also advised (in the ideal) that yearly income should be derived on the basis of 4 interviews (1 every 3 month).*

for both CREMA and non-CREMA household members, CREMA members earn more from farm income relative non-CREMA members. This finding is supported by the fact that CREMA members have on average 5 acres more land than non-CREMA members **(figure 6).** The additional revenue is generated essentially from cocoa.

As shown in **figure 22a and 23b,** very few households, whether CREMA or non-CREMA have salaried income. The same conclusion goes for other income **(figure 22b**). There is neither any statistically significant difference across CREMA and non-CREMA members in terms of own-business income **(figure 23 and 24)**. No distinction has therefore been made between CREMA and non-CREMA household for these two income categories.

Average yearly cash income (in GHC) from:	CREMA households	Non-CREMA households	Whole Sample
Crops and animals	9228	5477	6166
Forest products	72	96	92
Own business	703	620	634
Salaried work	426	521	462

Table 6: Average yearly cash income by category for CREMA and non-CREMA members

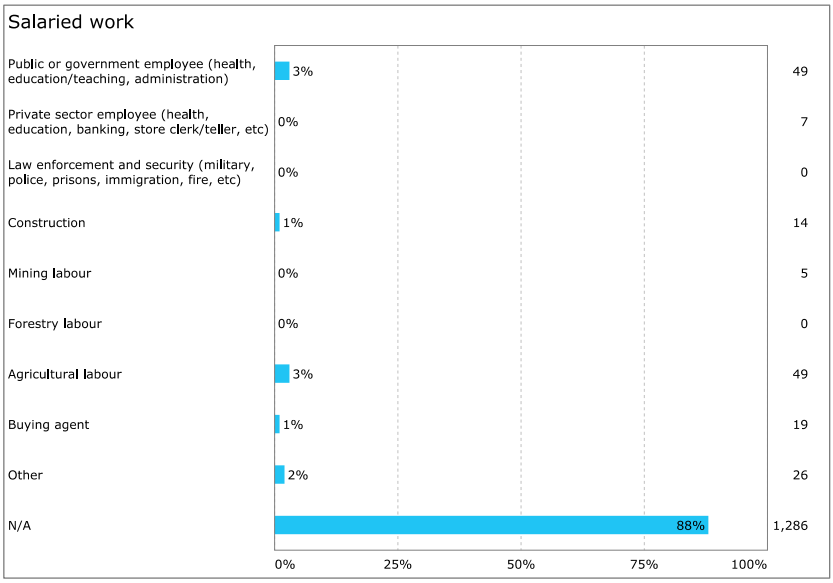

Figure 23a: Main source of salaried work

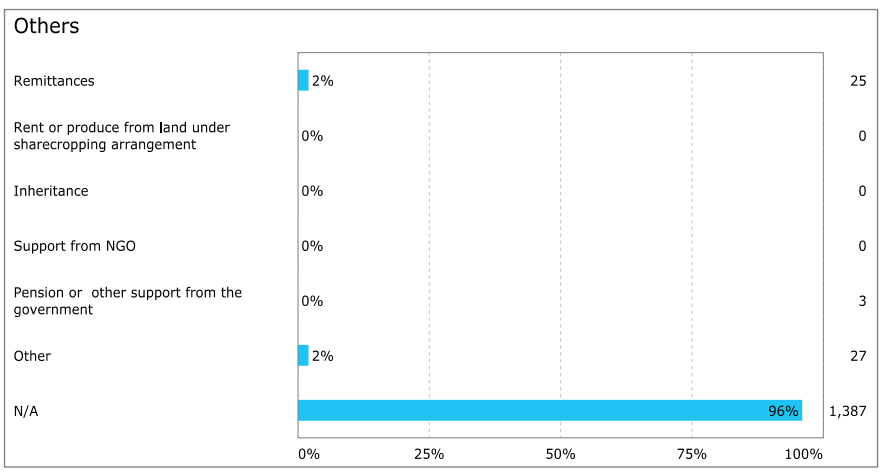

Figure 23b: Main source of other income

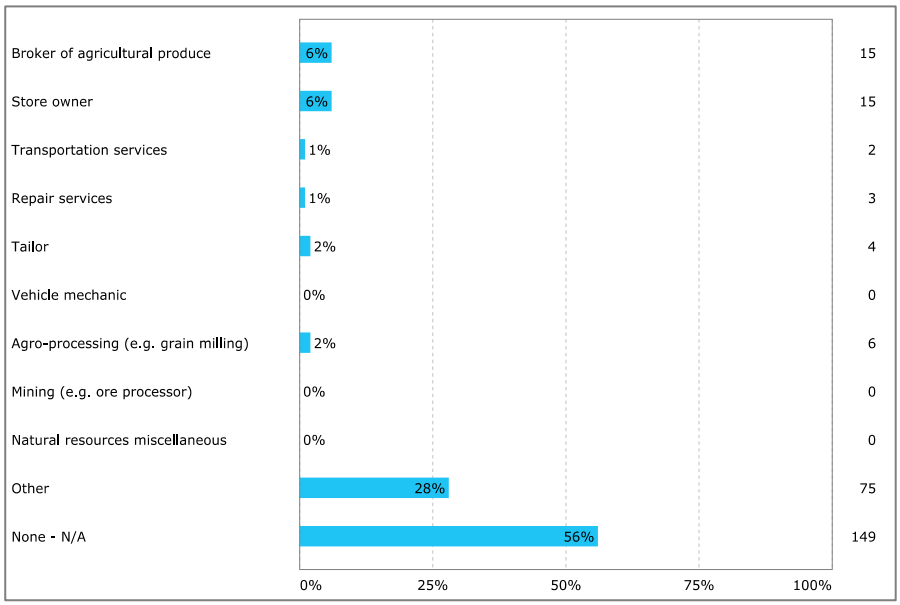

Figure 23: Main source of own-business income CREMA

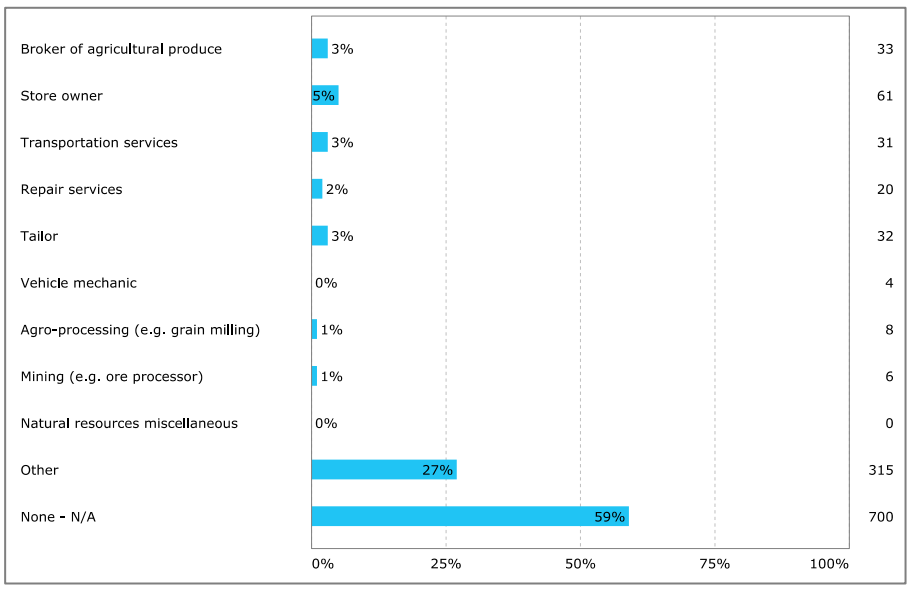

Figure 24: Main source of own-business income non-CREMA

	Whole Sample				CREMA households				NON-CREMA households			
Income from crops and animals (GhC)	**Min**	**Max**	**Average**	**N**	**Min**	**Max**	**Average**	**N**	**Min**	**Max**	**Average**	**N**
Maize	0	1200	**15**	1455	0.0	750.0	15.9	266	0.0	1200.0	14.5	1188
Cocoa	0	229750	**5675**	1455	0.0	120000.0	8649.8	266	0.0	229750.0	5006.8	1188
Cassava	0	2500	**133**	1455	0.0	2000.0	141.7	266	0.0	2500.0	131.4	1188
Plantain	0	5000	**178**	1455	0.0	2000.0	208.3	266	0.0	5000.0	171.6	1188
Cocoyam	0	800	**4**	1455	0.0	500.0	1.9	266	0.0	800.0	3.9	1188
Palm	0	2000	**19**	1455	0.0	2000.0	31.9	266	0.0	2000.0	16.5	1188
Vegetables	0	5500	**46**	1455	0.0	2000.0	41.5	266	0.0	5500.0	46.5	1188
Yam	0	600	**4**	1455	0.0	600.0	4.9	266	0.0	500.0	3.4	1188
Poultry	0	4000	**11**	1455	0.0	60.0	0.2	266	0.0	4000.0	13.4	1188
Sheep	0	3000	**12**	1455	0.0	400.0	1.5	266	0.0	3000.0	14.4	1188
Beekeeping	0	0	**0**	1455	0.0	0.0	0.0	266	0.0	0.0	0.0	1188
Grasscutter	0	0	**0**	1455	0.0	0.0	0.0	266	0.0	0.0	0.0	1188
Goats	0	2000	**5**	1455	0.0	1000.0	3.8	266	0.0	2000.0	5.0	1188
Rabits	0	200	**0**	1455	0.0	0.0	0.0	266	0.0	200.0	0.2	1188
Other	0	37450	**64**	1454	0.0	15600.0	127.1	266	0.0	37450.0	50.0	1187
Average cash income from crops and animals			**6166**				**9228**				**5477**	
Income from forest products (GhC)	**Min**	**Max**	**Average**	**N**	**Min**	**Max**	**Average**	**N**	**Min**	**Max**	**Average**	**N**
Mushroom	0	1500	**21**	1455	0.0	1500.0	27.9	266	0.0	800.0	19.8	1188
Bushmeat	0	1800	**10**	1455	0.0	200.0	2.3	266	0.0	1800.0	11.2	1188
Raffia	0	2550	**5**	1455	0.0	2000.0	7.5	266	0.0	2550.0	4.2	1188
Rattan	0	2700	**2**	1455	0.0	0.0	0.0	266	0.0	2700.0	2.6	1188
Cane	0	6500	**9**	1455	0.0	0.0	0.0	266	0.0	6500.0	11.2	1188
Fuelwood	0	4000	**17**	1455	0.0	4000.0	26.2	266	0.0	4000.0	15.2	1188
Timber	0	4000	**3**	1455	0.0	0.0	0.0	266	0.0	4000.0	3.6	1188
Poles	0	25860	**18**	1455	0.0	0.0	0.0	266	0.0	25860.0	21.8	1188
Allanblackia	0	0	**0**	1455	0.0	0.0	0.0	266	0.0	0.0	0.0	1188
Snails Income	0	500	**6**	1455	0.0	500.0	3.0	266	0.0	500.0	6.5	1188
Other	0	1000	**1**	1455	0.0	1000.0	5.2	266	0.0	200.0	0.2	1188
Average cash income from forest products			**92**				**72**				**96**	
Income from own business	**Min**	**Max**	**Average**	**N**	**Min**	**Max**	**Average**	**N**	**Min**	**Max**	**Average**	**N**
Buying agent (e.g cocoa)	0	15000	**74**	1455	0.0	15000.0	192.1	266	0.0	15000.0	47.9	1188
Store owner	0	12000	**82**	1455	0.0	3000.0	52.4	266	0.0	12000.0	88.3	1188
Transportation services	0	22000	**64**	1455	0.0	1000.0	4.9	266	0.0	22000.0	77.1	1188
Repair services	0	63750	**65**	1455	0.0	6000.0	43.2	266	0.0	63750.0	70.2	1188
Tailor	0	4000	**17**	1455	0.0	230.0	2.2	266	0.0	4000.0	20.2	1188
Vehicle mecanic	0	5400	**6**	1455	0.0	0.0	0.0	266	0.0	5400.0	7.4	1188
Agriculture (e.g. grain milling)	0	7200	**19**	1455	0.0	5000.0	36.8	266	0.0	7200.0	14.5	1188
Mining	0	20000	**21**	1455	0.0	0.0	0.0	266	0.0	20000.0	25.7	1188
Nat resource miscellaneous	0	1500	**1**	1455	0.0	0.0	0.0	266	0.0	1500.0	1.3	1188
Other	0	15000	**285**	1455	0.0	9600.0	370.9	266	0.0	15000.0	267.3	1184
Average cash income from own business			**634**				**703**				**620**	
Income from salaried work	**Min**	**Max**	**Average**	**N**	**Min**	**Max**	**Average**	**N**	**Min**	**Max**	**Average**	**N**
Public or government employee	0	18000	179	1455	0.0	14400.0	224.4	266	0.0	18000.0	168.6	1188
Private sector employee	0	18000	24	1455	0.0	0.0	0.0	266	0.0	18000.0	28.9	1188
Law enforcement and security	0	0	0	1455	0.0	0.0	0.0	266	0.0	0.0	0.0	1188
Construction	0	18000	25	1455	0.0	4000.0	20.7	266	0.0	18000.0	25.5	1188
Mining labour	0	20000	17	1455	0.0	0.0	0.0	266	0.0	20000.0	21.2	1188
Forestry labour	0	0	0	1455	0.0	0.0	0.0	266	0.0	0.0	0.0	1188
Agricultural labour	0	53000	155	1455	0.0	9000.0	94.7	266	0.0	53000.0	168.4	1188
Buying agent	0	21000	49	1455	0.0	6200.0	44.0	266	0.0	21000.0	50.0	1188
Other	0	4008	14	1454	0.0	2200.0	9.8	266	0.0	4008.0	15.5	1187
Income other	0	8000	41	1454	0.0	3600.0	32.4	266	0.0	8000.0	43.1	1187
Average income from salaried work			**462**				**426**				**521**	

Table 7: Yearly cash income by category for the 12 months prior to interview (March 2016)

e. Income sufficiency

When the surveyed population (**figure 25a**) were asked if their households' income had been sufficient to cover their needs in terms of food, shelter and clothing in the past year, a large percentage (56%) responded "no", a lesser percentage answered "almost" (28%) and much smaller percentage answered "yes" (16%). For CREMA members (**figure 25b**), 64% of this group answered "no, income had not been sufficient" to this question, 26% answered "almost" and only 10% answered "yes". Interestingly, amongst non-CREMA members (**figure 25c)**, more respondents answered "yes" (16%) and fewer no (56%). This suggests that CREMA households are slightly worse of than non-CREMA households. On the other hand, this finding does not match above-shown findings on land ownership and total farm income amongst CREMA versus non-CREMA households. It could therefore imply that CREMA members are more 'concerned' or demanding in terms of their overall quality of life. That could also explain why they have decided to join a CREMA.

Has the household's income been sufficient to cover the household needs in terms of food, shelter and clothing in the past year?

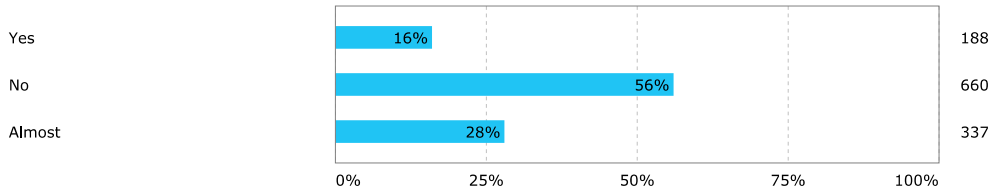

Figure 25a: Perception of income sufficiency – whole sample

Filter: Have you registered as a member of the CREMA? = YES

Has the household's income been sufficient to cover the household needs in terms of food, shelter, and clothing in the past year?

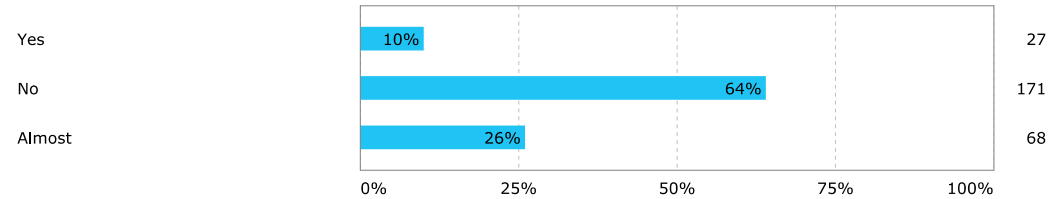

Figure 25b: Perception of income sufficiency – CREMA members

Filter: Have you registered as a member of the CREMA? = NO

Has the household's income been sufficient to cover the household needs in terms of food, shelter, and clothing in the past year?

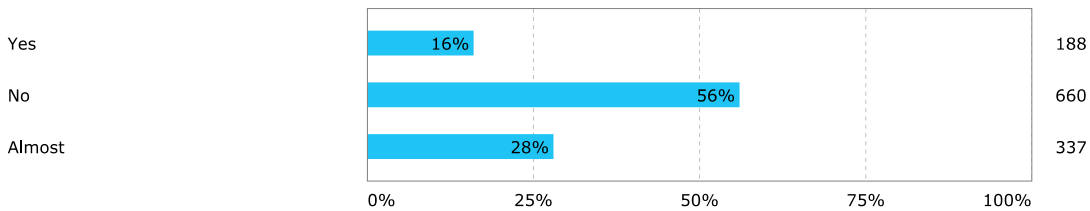

Figure 25c: Perception of income sufficiency – non-CREMA members

6. Gender differences in the survey

The following analyses consider the how key household and farm characteristics vary amongst female headed and male-headed households.

a. Control of land by gender

In terms of land under the control, it can be seen that male-headed households have more land – on average 2.8 acres more land - under their control relative to female-headed households **(table 8)**

How many acres of land does your household have control over or manage?				
Households headed by	Minimum	Maximum	Average	Respondents
Males	0	105	12.2	1161
Females	0	108	9.4	294

Table 8: Land ownership by gender

b. Acquisition of land by gender

In terms of how land was acquired, female-headed household have inherited a larger share of land (60%) relative to men (50%), but have acquired a smaller percentage (23%) from Abunu sharecropping relative to male-headed households (38%) Both male and female-headed households have acquired the same share of land from freehold (2%) and purchase (8%). Amongst women however, there is a larger share of land whose acquisition cannot be identified (N/A)

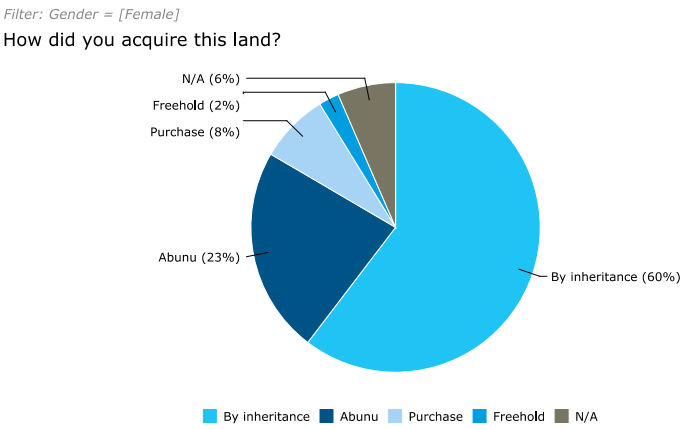

Figure 26a: Acquisition of land - Women

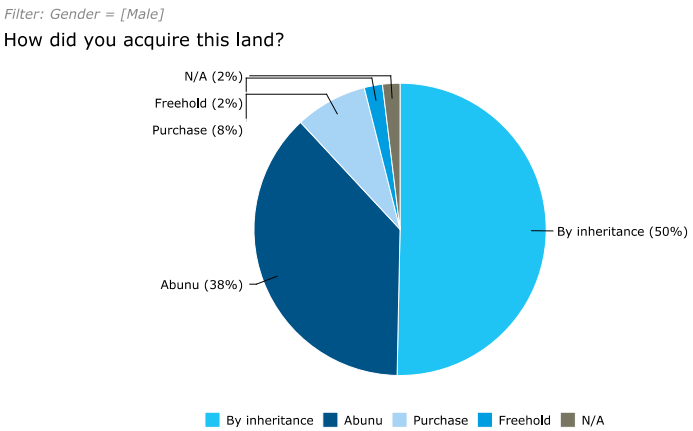

Figure 26b: Acquisition of land - Males

c. Land registration with OASL

As for land registration, figure 27a and 27b shows that only 31% of female-headed households have registered their land with the OASL vis-à-vis 41% amongst male-headed households.

Filter: Gender = [Female]

Has the land been registered or documented at the OASL?

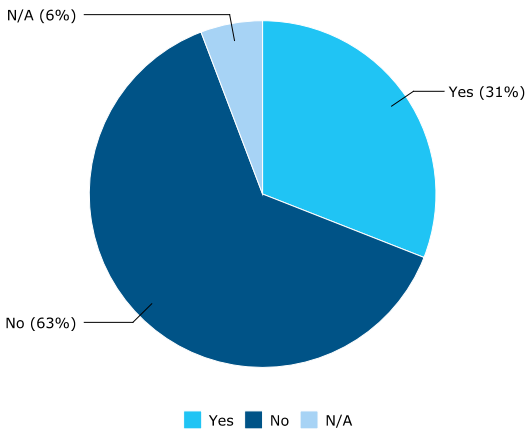

Figure 27a: Registration of land - Women

Filter: Gender = [Male]

Has the land been registered or documented at the OASL?

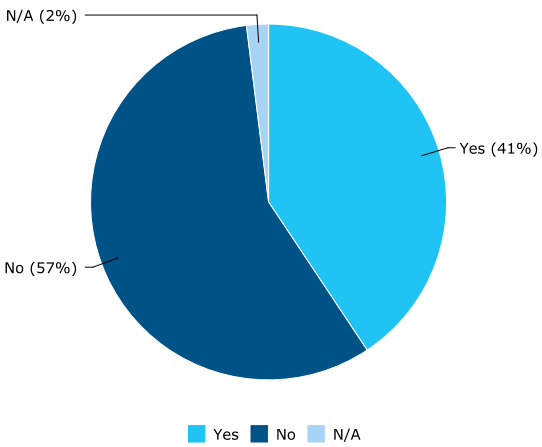

Figure 27b: Registration of land - Males

d. Tree planting and registration by gender

On the tree planting side of matters, 78% of male-headed households have planted trees (**figure 28b),** whereas only 67% of female-headed households have planted trees (**figure 28c**).

In terms of tree registration there is scope for significant scale-up of tree registration amongst both household groups. 8% of all male-headed households have registered trees with the FSD, and 7% of female-headed households have registered trees **(29b and 29c**). Considering only those who responded "yes" or "no" to tree registration, the share of household that have registered their trees amongst male-headed households is 12% (105 HHs/907 HHs) and 9% amongst female headed households (17/ 196).

Have you planted trees?

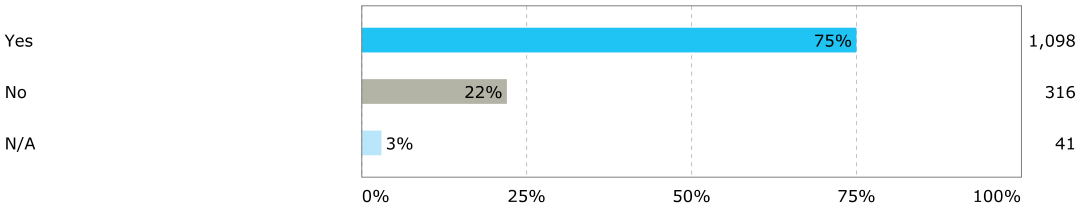

Figure 28a: Planting of trees

Filter: Gender = [Male]

Have you planted trees?

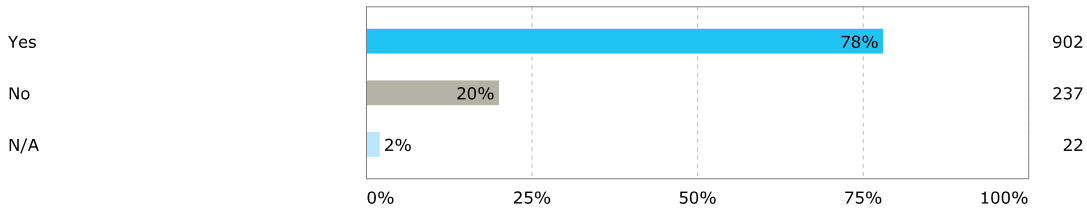

Figure 28b: Planting of trees - Men

Filter: Gender = [Female]

Have you planted trees?

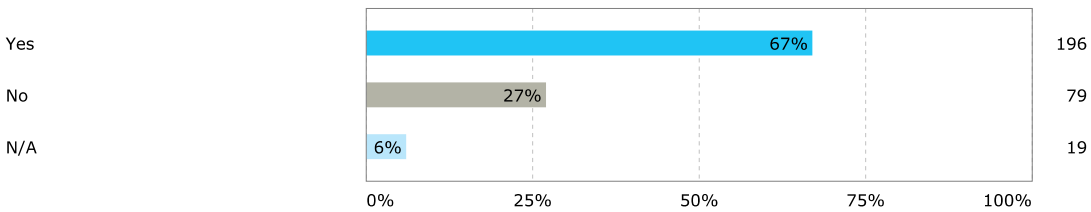

Figure 28c: Planting of trees - Women

Have you registered the trees with the FSD

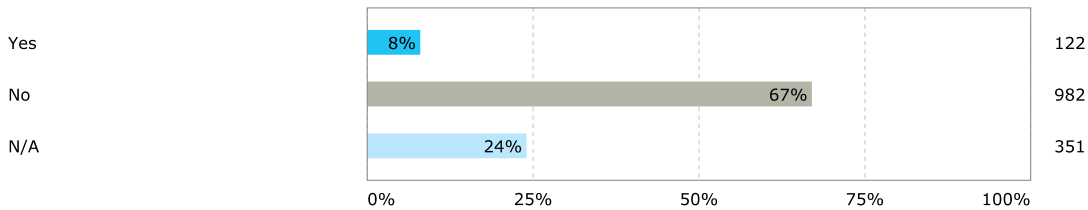

Figure 29a: Registration of trees

Filter: Gender = [Male]

Have you registered the trees with the FSD

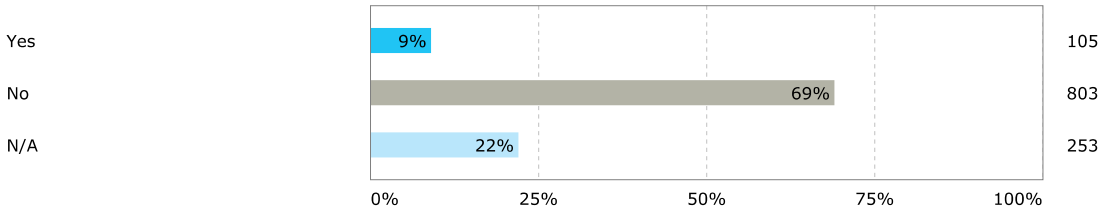

Figure 29b: Registration of trees - Men

Filter: Gender = [Female]

Have you registered the trees with the FSD

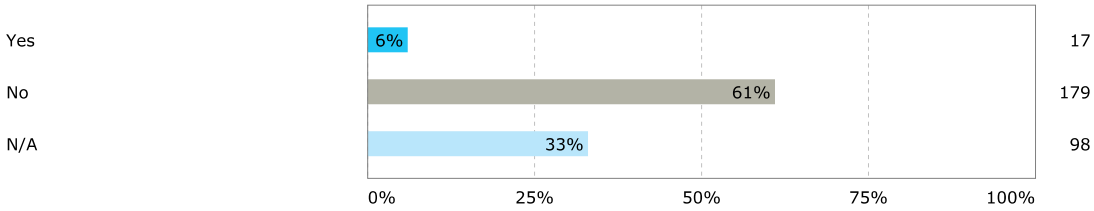

Figure 29c: Registration of trees - Women

7. Conclusions

a. CREMA versus non-CREMA socio-demographic and economic household analysis

A total of 1455 household were surveyed out of a total household population of 1606 in the selected communities. With an average household size of 6.5 across the 28 core and satellite communities, it is estimated that the total CREMA community population is 10311 within a margin of error of 0.2% (plus minus 175 individuals).

Within the sample, 266 households have registered as CREMA household members and 1030 households have not registered. On the positive side, a large number - 1030 households - are aware of the existence of CREMAs and the majority of non-CREMA households (935 in total) plan to register.

On the basis of the data elicited through the survey, it is found that CREMA households have a higher living standard than non-CREMA households. They own more land, have a higher agricultural income and their children have a higher school attendance rate. In terms of other distinguishing factors, CREMA households have planted more trees and have a better track record with respect to both land registration and tree registration. Efforts remain to be done however with respect to raising awareness amongst both CREMA and non-CREMA members about the possibility and importance of registering.

Finally, there are less single and female-headed households amongst CREMA members relative to non-CREMA members. This could be explained by the fact that singles (and single women) have less time available on their hands to dedicate to social non-income generating activities.

b. Gender differences

Male-headed households have approximately 3 acres (23%) more land under their control than female-headed households. In terms of how that land was acquired, female-headed households have obtained more from inheritance and less from Abuno share-cropping arrangements relative to men. Female-headed households also have lower land registration, tree planting and tree-registration rates relative to male-headed households.

Annex: Demographic data by community

COMMUNITY	Aboagyekrom	Achichire	Adoboakrom	Akakpokrom	Appiahkrom	Asante Akyem	Ataase	Attobrakrom	Ayensukrom	Betemaso
Number of respondents	14	367	32	6	19	12	27	134	13	12
Pct. of respondents (out of whole sample)	1	25.2	2.2	0.4	1.3	0.8	1.9	9.2	0.9	0.8
Average household size per village	7.1	6.4	7.4	6.7	7.9	5.9	6.4	6.8	4.8	6.3
Number of adults in the household - men	1.1	1.6	2.1	1.5	2.6	1.8	1.9	1.7	1.1	1.7
Number of adults in the household - woman	1.4	1.8	1.8	2.0	2.4	1.3	2.1	1.7	1.2	1.4
Number of children in the household - boys	2.1	1.4	1.7	1.3	1.5	1.4	1.4	1.7	1.3	1.8
Number of children in the household - girls	2.4	1.4	1.9	1.8	1.5	1.5	1.2	1.7	1.2	1.4
Male headed households in %	93%	74%	81%	83%	95%	100%	89%	80%	92%	92%
Women headed households in %	7%	26%	19%	17%	5%	0%	11%	20%	8%	8%
Awareness of the CREMA or its existence	**57%**	**70%**	**75%**	**17%**	**90%**	**50%**	**89%**	**84%**	**46%**	**75%**
No Awareness of the CREMA or its existence	43%	30%	25%	83%	11%	50%	11%	16%	54%	25%
Registered as a member of a CREMA	**0%**	**11%**	**22%**	**22%**	**21%**	**17%**	**22%**	**34%**	**0%**	**25%**
Not Registered as a member of a CREMA	100%	89%	78%	78%	79%	83%	78%	66%	100%	75%

COMMUNITY	Bogyakrom	Camp	Donkokrom	Essandohkrom	Gonukrom	Kamaboi	Kamaso	Kansakrom	Koduakrom	Kwame Donkorkron
Number of respondents	16	4	52	1	93	37	68	4	76	8
Pct. of respondents (out of whole sample)	1.1	0.3	3.6	0.1	6.4	2.5	4.7	0.3	5.2	0.6
Average household size per village	5.7	5.5	6.3	16.0	6.3	5.5	7.1	6.3	5.9	8.5
Number of adults in the household - men	1.8	1.3	1.6	5.0	1.6	1.1	1.6	2.0	1.4	2.1
Number of adults in the household - woman	1.4	2.3	1.7	7.0	1.6	1.4	1.6	1.3	1.5	2.0
Number of children in the household - boys	1.4	1.5	1.5	2.0	1.7	1.5	1.3	1.0	1.6	2.1
Number of children in the household - girls	1.1	0.8	1.6	2.0	1.4	1.4	1.2	2.0	1.6	2.3
Male headed households in %	100%	75%	87%	100%	80%	70%	75%	75%	84%	100%
Women headed households in %	0%	25%	14%	0%	20%	30%	25%	25%	16%	0%
Awareness of the CREMA or its existence	**44%**	**100%**	**83%**	**100%**	**83%**	**89%**	**84%**	**84%**	**55%**	**38%**
No Awareness of the CREMA or its existence	56%	0%	17%	0%	17%	11%	16%	16%	45%	63%
Registered as a member of a CREMA	**0%**	**0%**	**39%**	**0%**	**19%**	**8%**	**41%**	**0%**	**1%**	**0%**
Not Registered as a member of a CREMA	100%	100%	62%	100%	81%	92%	59%	100%	99%	100%

COMMUNITY	Kyikyiresua	Meteameba	Nkrankrom	Owuyawkrom	Sika Nti	Supanso	Sureso	Yehweadze
Number of respondents	6	7	66	14	49	113	192	10
Pct. of respondents (out of whole sample)	0.4	0.5	4.5	1	3.4	7.8	13.2	0.7
Average household size per village	6.8	8.6	8.6	8.3	6.5	6.5	6.2	5.7
Number of adults in the household - men	1.8	2.1	1.8	2.8	2.0	1.7	1.5	1.2
Number of adults in the household - woman	2.5	2.0	1.8	2.4	1.7	1.6	1.7	1.2
Number of children in the household - boys	1.3	2.6	1.6	1.9	1.6	1.6	1.5	1.5
Number of children in the household - girls	1.2	1.9	1.5	1.3	1.2	1.6	1.5	1.8
Male headed households in %	100%	100%	83%	93%	96%	81%	72%	100%
Women headed households in %	0%	0%	17%	7%	4%	20%	28%	0%
Awareness of the CREMA or its existence	**100%**	**57%**	**85%**	**79%**	**76%**	**74%**	**46%**	**70%**
No Awareness of the CREMA or its existence	0%	43%	15%	21%	25%	26%	54%	30%
Registered as a member of a CREMA	**17%**	**14%**	**42%**	**14%**	**37%**	**22%**	**8%**	**0%**
Not Registered as a member of a CREMA	83%	86%	58%	86%	63%	78%	92%	100%

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