

**Supplementary materials: Who bears
the cost of forest conservation?**

**Survey instruments for phase two of
data collection: the agricultural survey**

We present the survey instruments
used (in English as well as Malagasy)



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Work Package 6: Agricultural Questionnaire Survey

Survey Information

Activity/Task	Date	Start Time	End Time	Person(s) Responsible	Remarks
Interview					
Checking Questionnaire					
Coding Questionnaire					
Data Entry					
Checking and Approving Data Entry					

A. Identification

[Note: All the information in the table below, except for the name & PID of the respondents should be filled prior to the survey based on the initial HH survey data from the respective HH.]

1. HH Name & Code		(name)	(HHID)
2. Village Name & Code		(name)	(VID)
3. Fokontany Name & Code		(name)	(FID)
4. Commune Name & Code		(name)	(CID)
5. District Name & Code		(name)	(DID)
6. Name & PID of primary respondent		(name)	(PID)
7. Name & PID of secondary respondent		(name)	(PID)
8. GPS Location of the HH		(Lat)	(Lon)
9. Distance of HH from village centre		(Minutes)	(Km)

Respondent (s)

[Note: the respondent should normally be the HH head, but important additional information could be gained from talking to other adult respondents (e.g. Previous users of the land if inherited)]

[If suitable respondents are too old/infirm to walk to the plot, area measurements and inputs/outputs for latest year should be undertaken at plot with younger HH member, and plot history completed in HH dwelling]

[Notes on respondents here (if not HH head) i.e. who gave what information]



B. Land Ownership; Land Access; and Land Use

1. Information about land use

[Some of these information will have been obtained from the HH survey, and can be reproduced here. Interviewer should double check that these are all of the plots owned or used by the respondent]

Field number	Site name	Distance from Dwelling	Estimated Size	Type	Ownership/Access [For 'savoka', ask if the plot belongs solely to the HH or it is commonly held within the larger family or lineage]	Rented/Bought/Borrowed from?	Cost/Payment details for rented and bought plots		Cultivated in most recent agricultural year?	Plot Age	Rotation Period
							Payment Type (Cash/Kind)	Amount			
				(1=hill tavy; 2=flat tavy; 3=tanimbary; 4=tanimboly; 5=savoka; 6=other (specify))	(1=inherited; 2=rented (specify); 3=bought (specify); 4=borrowed (specify); 5=cleared by the HH, 6=other (specify))	[If the plot is rented, bought, or borrowed, specify whether it is from the family or others] (1=family; 2=others)			(whether the plot was cultivated in 2013/2014) (1=YES; 0=NO)	[Fill this later based on the plot-specific survey information]	(time between most recent cultivation) [if currently fallow, ask & record how long it has been fallow for]

Remarks

2. Tavy System

[Note: Follow the pointers in each question carefully, especially on the 'YES/NO' questions as responses on those questions dictate which questions to ask and which ones to skip in this section.]

a. What limits the area of tavy land you cultivate each year?

[Prompt until no further factor is mentioned. Rank factors according to importance (top 3 only if more than 3 mentioned)]

List of factors	Mark 'X' if Mentioned	Rank [THREE most important]
Labour availability (HH labour/money to hire labour)		
Access to fertilizer		
Access to seed		
Fertility of existing land		
Cannot get fresh land through teviaala: customary restrictions		
Cannot get fresh land through teviaala: government restrictions		
Cannot get fresh land through teviaala: land scarcity/population pressure		

b. What limits the productivity of the tavy land that you farm?

[Prompt until no further factor is mentioned. Rank factors according to importance (top 3 only if more than 3 mentioned)]

List of factors	Mark 'X' if Mentioned	Rank [THREE most important]
Labour availability		
Access to fertilizer		
Access to seed		
Fertility of existing land		
Pests (mice, insects, birds)		
Weeds		
Rainfall		

c. Have you obtained additional land for tavy in the last 5 years?

[] YES >> go to '3.'

[] NO >> go to 'd.'

d. Have you considered obtaining additional land for tavy?

[] YES >> go to 'e.'

[] NO >> go to 'f.'

e. If YES, what are the main factors stopping you?

[Prompt until no further factor is mentioned. Rank factors according to importance (top 3 only if more than 3 mentioned)]

List of factors	Mark 'X' if Mentioned	Rank [THREE most important]
There is no land for sale		
Theer is no land to rent		
I don't have enough labour to farm more land		
I don't have enough capital (money to buy/rent land)		
I cannot do teviaala to obtain new land		
Immigrants are using land		
Population of village is growing too much		

f. If NO, why are you not considering obtaining additional land for tavy?

[Prompt until no further factor is mentioned. Rank factors according to importance (top 3 only if more than 3 mentioned)]

List of factors	Mark 'X' if Mentioned	Rank [THREE most important]
There is no land for sale		
Theer is no land to rent		
I don't have enough labour to farm more land		
I don't have enough capital (money to buy/rent land)		
I cannot do teviaala to obtain new land		

3. Tanimbary

[Note: Follow the pointers in each question carefully, especially on the 'YES/NO' questions as responses to those questions dictate which questions to ask and which ones to skip in this section.]

a. Do you have tanimbary plot(s)?

[] YES >> go to 'b.' [] NO >> go to 'l.'

b. Did you establish any of your Tanimbary plots within the last THREE years?

[] YES >> go to 'c.' [] NO >> go to 'e.'

c. If 'YES', which year? [Tick as appropriate]

[] 2012 [] 2013 [] 2014

d. What were the main one-off costs to your household in establishing this Tanimbary? >> go to 'h.'

Categories	Costs	
	Labour [total mandays]	Monetary
Land acquisition		
Land preparation (building bunds, terracing etc)		
Infrastructure (building canals, locks for water diversions etc.)		
Other costs (specify)		
Other costs (specify)		
Other costs (specify)		
Other costs (specify)		

e. Have you recently increased the amount of tanimbary you have?

[] YES >> go to 'h.' [] NO >> go to 'f.'

f. Have you considered increasing it in the future?

[] YES >> go to 'h.' [] NO >> go to 'g.'

g. What are the main factors stopping you from increasing the area of tanimbary?

[prompt until no further factor is mentioned. Rank factors according to importance (top 3 only if more than 3 mentioned)]

List of factors	Mark 'X' if Mentioned	Rank [THREE most important]
Land availability		
Labour availability		
Capital (money to buy/rent land)		
Too much water (flooding)		
Too little water (drought)		
Investment in barrages/irrigation		
Skill/knowledge (fahaizana)		

h. What crops do you plant in your tanimbary?

[For multiple tanimbary plots, mark all that apply]

[] A single rice crop

[] 2 rice crops

[] 3 rice crops

[] rice & a contra-season crop (name)

[] other combination(s) (specify)

i. Have you considered planting more crops per year?

[] YES >> go to 'j.'

[] NO

j. If 'YES', what are the main reasons for not planting multiple crops per year?

[prompt until no further factor is mentioned. Rank factors according to importance (top 3 only if more than 3 mentioned)]

List of factors	Mark 'X' if Mentioned	Rank [THREE most important]
Labour availability		
Too much water (flooding)		
Too little water (drought)		
Access to fertilizer		
Temperature		

k. What limits the productivity of the tanimbary you have?

[prompt until no further factor is mentioned. Rank factors according to importance (top 3 only if more than 3 mentioned)]

List of factors	Mark 'X' if Mentioned	Rank [THREE most important]
Labour availability		
Too much water (flooding)		
Too little water (drought)		
Access to fertilizer		
Irrigation infrastructure (barrages etc)		
Pests		
Weed		

l. What are the main reasons why you don't have tanimbary?

[prompt until no further factor is mentioned. Rank factors according to importance (top 3 only if more than 3 mentioned)]

List of factors	Mark 'X' if Mentioned	Rank [THREE most important]
Land availability		
Labour availability		
Capital (money to buy/rent land)		
Too much water (flooding)		
Too little water (drought)		
Investment in barrages/irrigation		
Skill/knowledge (fahaizana)		

m. Have you considered farming in tanimbary in the future?

[] YES >> go to sub-section '4.' [] NO >> go to 'n.'

n. What are the main factors stopping you?

[prompt until no further factor is mentioned. Rank factors according to importance (top 3 only if more than 3 mentioned)]

List of factors	Mark 'X' if Mentioned	Rank [THREE most important]
Land availability		
Labour availability		
Capital (money to buy/rent land)		
Too much water (flooding)		
Too little water (drought)		
Investment in barrages/irrigation		
Skill/knowledge (fahaizana)		

4. Productivity: Tavy vs Tanimbary

a. Which type of agriculture is more productive (value of crop per unit area)?

[] Tavy (from forest) [] Tavy (land which has been long cleared) [] Tanimbary

b. Which type of agriculture is more productive (value of crop per effort needed in an agricultural season)?

[] Tavy (from forest) [] Tavy (land which has been long cleared) [] Tanimbary

C. Livestock inputs and outputs

1. Livestock [Input/Output]

	Current Number [double check against HH survey]		Inputs [during the past 12 months or period specified for the survey]				Output [during the past 12 months or period specified for the survey]		
	From 1st HH survey	Verification	Where pastured?	Feed	Medicine	Other costs [specify]	Consumption	Sale (animals)	Sale (Produce)
Omby									
Kisoa									
Akoho									
Gana									
Gisa									
Ondry									
Bee hives									
Fish tanks/ponds									
Hafa [inona]									
Hafa [inona]									
Hafa [inona]									

D. Off-farm Income

1. Apart from farming, what were the main sources of income in your household during the last farming year (2013/2014)? What period did those income flow and how much?

Persons Involved	Sources*	Directly or indirectly related to park or protected area?	Total time involved [specify days or months]	Rate [specify daily, weekly or monthly rate]	Total Income
[Identify the persons involved as HH head or in relation to HH head, and indicate whether the person is an adult (M or F) or a child]	[Specify the source using the code below the table. If a person earns income from more than one source, use a separate row to record information for each source of income.]	[Record with 'YES' or 'NO' whether the source of income in the previous column is directly or indirectly influenced by park or protected area, including any environmental/conservation-related interventions]	[Calculate and record the total number of days worked here for the work that are paid by day. For salaried jobs or jobs paid by months, record total number of months worked.]	[Record the daily wage rate or monthly salary as appropriate clearly specifying the timeframe. For example, ___MGA/day; ___MGA/month]	[If respondents directly report this, for example for 'Remittance', record the figure; for others calculate from the previous two columns and record here.]

* Some key sources: 1=Daily wage (agricultural); 2=Daily wage (other in-village labour, e.g., cleaning, house building); 3=Daily wage (outside village); 4=Logging (lumberjack); 5=Artisan; 6=Service (govt. or private sector job); 7=Remittance, 8=others (specify).
 1=spouse (legally married or co-habiting); 2=son/daughter; 3=son/daughter in-law; 4=grandchild; 5=mother/father; 6=mother/father in-law; 7=brother/sister; 8=brother/sister in-law; 9=uncle/aunt; 10=nephew/neice; 11=step/foster child; 12=other family; 13=not related

E. Questions about teviaala

[Note: best to ask these questions at the end of the day? Avoid if overly sensitive?]

1. Do you or your HH have the rights to do Teviaala in this area?

[] YES >> go to Q 2. [] NO >> go to Q 3.

2. Are these rights limited to specific areas on forest?

[] YES [] NO

3. If Teviaala is being practised or used to be practised in this area, what insitutions regulate, or used to regulate, where, and when HH could do teviaala (e.g. Tangalamena, head of lineage)? [Record any additional information in the box below the table]

Teviala practices	Regulating Institution(s)	Where one could ddo teviaala?	When one could do teviaala?	If cannot practice now, why not?
[Record whether 'currently practised' OR 'previously practised']	[ask & list relevant institutions, both formal & informal]	[ask & record both location and types of land in terms of tenure situation	[ask & record timing as well as conditions that would have to be met to be able to do teviaala]	[ask & record about the restrictions in place and the authorities involved in setting/enforcing the restrictions]

[Record any additional information about Teviaala practices in the box below]



[Start a new sheet for each field]

A. Basic info about the field and interviews

[If some of these information already recorded from the HH survey, try to verify here]

1. Field number (from previous sheet)	
2. Field location (local toponym or description of site/location)	
3. Does the HH have formal tenure rights (<i>vita borne</i>)?	
4. Specify the kind of tenure rights you have over this plot (e.g., owned in common, private ownership, customary use rights)	
5. Was this field cultivated by HH in most recent (2013/2014) agricultural year?	
6. If not, might any other HH have rights to use this field?	
7. If 'YES', who?	
[Note: if not cultivated in most recent year, only measure/estimate size and collect clearance/cultivation history]	
8. Field visited by researcher and respondent(s)? (1=YES; 0=NO)	
9. Field visited but too overgrown to measure? (1=YES; 0=NO)	

B. Location and Area

1. GPS boundary waypoints (all plots)

GPS make and number	Waypoints of field boundary (e.g. 37-43, or 37, 39-43)

2. deducted reckoning details (small plots only) [Add/remove extra lines as necessary]

	magnetic compass bearing	Distance (with wheel or pacing)
Start point		
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
end point back to start		

3. Estimated relative size (for fields not visited)

[If a field is too far away to visit, or too overgrown to measure, size can be estimated by the respondents (if not visited) or the researcher and respondents (if overgrown) relative to fields which have been measured]

Comparator Field Number	Relative size of this field to comparator (in %)

C. Plot history

1. *First clearance & cultivation history: when was this plot first cleared from the forest (ala velona) and by whom? [Use key events (cyclones, presidents, French colonisation etc)]*

[(Non-)response codes: -98=respondent did not know; -99=respondent did not want to answer; -100=did not ask (specify why)]	[use multiple columns to record additional details if reported]		
a. When did the HH start farming this plot?			
b. Was the plot cleared by members of the HH? (If 'YES', who?)			
c. If not, who cleared the plot?			
d. Relation of original clearer to HH head			
e. How did the household acquire the plot?	[This information should already be available from the main agricultural HH survey sheet (section B.). Use this opportunity to verify/correct the information in the main agricultural survey sheet.]		
f. Year of first clearance (best guess)			
g. Range of uncertainty (if respondent is uncertain, give range of possible years)			
h. Did the clearer have a permit from the Foret, or have to pay a bribe			
i. If 'YES', give details			

2. *Any other details about the plot & cultivation history*

[use the space below to record any additional information about the plot that is important/relevant to our survey]

3. *Crops planted & cropping frequency*

a. Starting with the most recent farming year on this plot, please tell us which years have you cultivated in this plot and the crops you have grown, for as far back as you can remember.

	Latest farming season (AD)	AD	AD	AD	AD		
What crops were planted (when cultivated by the respondent)							

b. How many more times do you think this plot was cultivated before your household started farming in this plot and/or before you can remember?

c. In your knowledge/experience, has there been any change in the number of years this plot is usually left to fallow between cultivated years since this plot was first cleared? If 'YES', could you tell us the usual fallow length in early years and now?

Fallow length in early years	
Fallow length now	

D. Agricultural Inputs and Outputs

1. Agricultural Inputs - Labour: tell us about the labour used to cultivate this plot during the 2013/2014 agricultural year.

[Note: Use the space under ONE from 'Tavy System', 'Tanimboly' OR 'Tanimbary' as appropriate for this plot, and ignore the other two.]

Tavy System	Period	HH Labour			External Labour			Other Expenditure
		Men	Women	Children	Labour	Payment Type [Record whether in-kind/Cash/ Exchange]	How much? [Record the quantity & uni- ty for 'in- kind'; amount for 'cash']	
Kapakapa (Slash)		No / ___ days	No / ___ days	No / ___ days	No / ___ days			
Mandoro (Burn)		No / ___ days	No / ___ days	No / ___ days	No / ___ days			
Mamboly		No / ___ days	No / ___ days	No / ___ days	No / ___ days			
Miava [1]		No / ___ days	No / ___ days	No / ___ days	No / ___ days			
Miava [2]		No / ___ days	No / ___ days	No / ___ days	No / ___ days			
Miava [3]		No / ___ days	No / ___ days	No / ___ days	No / ___ days			
Miandry Fody		No / ___ days	No / ___ days	No / ___ days	No / ___ days			
Misangom-bary		No / ___ days	No / ___ days	No / ___ days	No / ___ days			
Mitango katsaka		No / ___ days	No / ___ days	No / ___ days	No / ___ days			
Mitango tsaramaso		No / ___ days	No / ___ days	No / ___ days	No / ___ days			
Mitaona vary		No / ___ days	No / ___ days	No / ___ days	No / ___ days			
Mively vary		No / ___ days	No / ___ days	No / ___ days	No / ___ days			
Hafa (inona)		No / ___ days	No / ___ days	No / ___ days	No / ___ days			
Hafa (inona)		No / ___ days	No / ___ days	No / ___ days	No / ___ days			
Hafa (inona)		No / ___ days	No / ___ days	No / ___ days	No / ___ days			
Hafa (inona)		No / ___ days	No / ___ days	No / ___ days	No / ___ days			
Tanimboly								
Miava		No / ___ days	No / ___ days	No / ___ days	No / ___ days			
Taillage		No / ___ days	No / ___ days	No / ___ days	No / ___ days			
Maka vokatra [_____]		No / ___ days	No / ___ days	No / ___ days	No / ___ days			
Maka vokatra [_____]		No / ___ days	No / ___ days	No / ___ days	No / ___ days			
Tanimbary								
Mamadika bainga/ benja		No / ___ days	No / ___ days	No / ___ days	No / ___ days			
Mampiditra rano		No / ___ days	No / ___ days	No / ___ days	No / ___ days			
Miosy/Mamakivaky		No / ___ days	No / ___ days	No / ___ days	No / ___ days			
Planage		No / ___ days	No / ___ days	No / ___ days	No / ___ days			
Manetsa		No / ___ days	No / ___ days	No / ___ days	No / ___ days			
Miava [1]		No / ___ days	No / ___ days	No / ___ days	No / ___ days			
Miava [2]		No / ___ days	No / ___ days	No / ___ days	No / ___ days			
Miandry Fody		No / ___ days	No / ___ days	No / ___ days	No / ___ days			
Mijinja		No / ___ days	No / ___ days	No / ___ days	No / ___ days			
Mitaona vary		No / ___ days	No / ___ days	No / ___ days	No / ___ days			
Mively vary		No / ___ days	No / ___ days	No / ___ days	No / ___ days			
Hafa (inona)		No / ___ days	No / ___ days	No / ___ days	No / ___ days			
Hafa (inona)		No / ___ days	No / ___ days	No / ___ days	No / ___ days			
Hafa (inona)		No / ___ days	No / ___ days	No / ___ days	No / ___ days			

2. Agricultural Inputs - Materials & Other Inputs

Main Crops	Inputs										
	Seed		Manure		Fertilizer		Pesticide		Animals	Hired equipment	Other materials
	Quantity & Unit [Ask and record Quantity & Unit]	Price [Ask and record price/unit if bought]	Use manure? [Record 'YES' or 'NO']	If 'YES' was there sufficient manure from the live-stock owned?	Quantity & Unit [Ask and record Quantity & Unit]	Price [Ask and record price/unit]	Quantity & Unit [Ask and record Quantity & Unit]	Price [Ask and record price/unit]	[If hired draught animals were used in land preparation, ploughing, ask and record the cost of renting them]	[If other machinery/equipment were hired, ask and record the cost involved here]	[Ask and record any other cost associated with the farming of this plot here]

3. Agricultural Outputs - Yield, Consumption, Sale

Main crops	Outputs								Others (Specify)
	Total yield	How would you rate this yield compared to typical yield from this plot?	If the yield has not been typical, how much would be the typical yield in this plot relative to this yield?	HH consumption	Sale	In-kind Payment	Seed		
	[Record Reported Quantity & Unit]	[Get the respondents to rate the yield on 5-points scale: 1=very low, 2=low, 3=typical, 4=high, 5=very high]	[Record the relative variation in yield from the typical yield as %]	[Record reported Quantity & Unit]	Quantity [Ask and record Quantity Sold & Unit]	Time & Price [Ask and record when the produce was sold and the price/kg when sold]	[Ask and record Quantity & Unit]	[Ask and record Quantity & Unit]	

4. *Agricultural Outputs - secondary yield*

a. Did you get any secondary yield from this field in addition to the crops listed above?

[Give examples of 'secondary yields' such as straw that might be used as feed for livestock]

[] YES

[] NO

b. If 'YES', how much did you obtain in the last farming year?

[Ask and record quantity & unit - OR if sold income from it]

Quantity	Unit	Income [if sold]

5. *Additional information about the field*

[Use this space to record any additional information relevant to this field that are not captured in earlier sections]