

Fieldwork Document

Project Name: Sustainable Poverty Alleviation From Coastal Ecosystem (SPACES)

Project No. NE/K010484/1

Contact Person: Bjorn Schulte-Herbruggen

Email Address: bjorn.schulte-herbruggen@su.se

Training/Piloting process

The training of the enumeration teams, questionnaire translation and piloting took place in Mombasa, Kenya from 10 February until 13 March 2014 and in Pemba, Mozambique from 06 May until 03 June 2014. The training was led by Björn Schulte-Herbrüggen with help from Bernard Owuor and Tim Daw in Kenya and Eunice Ribeiro in Mozambique.

The training included an introductory session:

- what is the research project SPACES about
- basic social science skills (sampling, bias)
- enumeration skills
- basics of survey translation
- research ethics

And training throughout the translation and piloting process:

- basic maths
- writing skills (speed, spelling, legibility)
- reading skills (target language)

- understanding target languages and being able to translate and record in Portuguese quickly and accurately
- Critical engagement with questionnaire logic

Questionnaire translation

Translation of the questionnaire from English to Swahili and from Portuguese to Macua and Kimwani was an iterative process based on modified direct translation (one person translates and second person without knowledge of source text back-translates) with special attention paid to ease of understanding (ie understanding did not differ across respondents with different educational backgrounds) and ensuring semantic and conceptual equivalence.

As enumerators tended to translate word for word thus resulting in awkward sentence structure, people were encourage to first read a question and translate the meaning they attached to it. Despite this effort, many questions ended up too long for respondents to understand them well and after experimentation with different options, it was decided to break the questions into sections by introducing reading pauses. In the questionnaire this were shown as:

short pause (1 second): - -

longer pause (2 seconds): - - - -

It was also considered to highlight key words, such as reference points, for example time period question refers to or whether it related to the respondent only or the household as a whole. Below is an example of such a question:

Ukiangalia maisha yako kwa **jumla** - - kwa **jumla** - - - - je maisha yako unayoishi siku hizi yanakuridhisha **vipi**

Piloting

The piloting of the questionnaires took place at and around Pirate Beach in Mombasa and Paquiti, as suburb of Pemba. The initial piloting was part of the translation process and focused on checking that the original meaning of the question was preserved during the translation. For this people of different educational backgrounds were approached and asked to back-translate to English or a local language the meaning of the question. Subsequently, we initiated an iterative process of piloting questionnaire sections and revision to discover and solve logical mistakes in questions, question order and the way responses were recorded.

Specific details for the Kenyan pilot. The pilot in Kenya lasted from 17/03/2014 until 20/03/2014. From 17 until 19 March both male and female household heads were asked all the sections including food section. On 20 March 2014, we started to interviewing only the female spouse on food items. We also started interviewing additional household members on income but only income question starting from 21 March should be included in analyses.

During pilot phase, we were not asking for permission from the husband prior to interviewing the wife (or children 16 years and above). If we went to a house and found a wife, we would request them for an interview and go ahead with it if they agreed, and later come back to interview the husband. From 21st March 2014 onwards, this was changed and we first had to get permission from

the husband before interviewing the wife and children 16 years and above.

During the pilot phase, the livelihood section was done with the household head only and activities for all household members recorded that the household head mentioned.

From 21st March onwards, the livelihood section was done with the household head as well as with the spouse. Consequently, from 21st March onwards, the livelihood section is complete (with activities mentioned by the household head and spouse) and the income section has detailed information for all income or food generating activities.

Process for entering a community

Below are the details of people contacted for the initial community meetings.

	Designation
Mkwiro	Assist. Chief (stays at Wasini)
	Village chairman
	BMU leader
	Religious leaders
	Boat operator
Vanga	Chief
	Assist. Chief
	Village chairman
	BMU leader
	Community group
	Government fisheries officers around
Tsunza	Area chief
	Assistant chief
	Tyda Village chairman
	BMU chair
	Community group-Contact)
	Religious leaders
	Influential person
	BMU official
Kongowea	Village chairman
	BMU leader
	Kongowea Bmu official
	Mkomani vilage chairperson
	Mkomani fishermen chairperson
	Ratna village chair
	Ziwa la Ngombe fishermen official
	Kidogo basi village chairperson

Mkwiro

Entry into the village involved first contacting the local administration (chief) and requesting for an appointment for a meeting. As the chief and his assistant were on leave, the chief gave permission

to contact the village chairperson. Following this, an appointment was made with the village chairperson. During the meeting, the village chair was informed about the SPACES project and its objectives. In essence, the village chair was informed that the SPACES is a research project aimed at finding out how coastal communities benefit from natural resources and how the natural resources contribute to their wellbeing. He was further informed that the research project is led by Stockholm University in Sweden in collaboration with research organizations in Kenya and Mozambique. He was further informed that the project has different researchers working on different components and that in Kenya household surveys are planned to take place in Mkwirow, Shimoni, Vanga, Tsunza and Mombasa areas. He was also informed that a workshop will be held at the end of the research to inform communities about the research results.

The village chair was given all the opportunity to ask questions and make clarification. After this meeting, he was requested to arrange for another meeting between the SPACES team and the village leaders including religious leaders, government officials, NGOs and community-based organization officials based in the village. Contact details of all the leaders in the village were also collated and these were separately used to request them to attend the follow-up meeting. During the follow-up meeting, the village leaders were informed about the project as well as its objectives, partners and the plan to stay and undertake household surveys in their community. Permission was then sought from the village leaders to undertake household surveys in their village. Once granted, the village chairperson was requested to organize for a community meeting and invite as many members of the community as possible. The chair and all the village leaders were also requested to be present during the community meeting where the project and its objectives were introduced to a wider section of the community. During this meeting, all the team members were present and the community members were given an opportunity to ask questions and seek clarification. The community members present were then informed about the sampling design (that the team would talk to as many people as possible but not everybody will be interviewed).

In Mkwirow, the village meeting was attended by seven community leaders and took place on 16 March 2014. People present were:

1) Mchasavuyaa (BMU member), 2) Harun Seif (resident), 3) Ropa Mohamed (religious leader), 4) Mwalola Hemedi (village chair), 5) Suleiman Neema (BMU member), 6) Mwinyihajji Abdalla (BMU official), 7) Mwanambu Aly (resident). Further twelve community members attended the community meeting as many were away at sea. Based on the reception the team received afterwards and the small size of the village, the team felt that participants gave a good representation of the village.

The team then proceeded to settle in and plan to start surveys.

Vanga

- **Meeting with chief:** contacting the local administration (chief) and requesting for an appointment to see him. During the meeting, the chief was informed about the SPACES project, its objectives and the areas (countries) the project is working in. In essence, the chief was informed that the SPACES is a research project aimed at finding out how coastal communities benefit from natural resources and how the natural resources contribute to their wellbeing. He was further informed that the research project is led by Stockholm University in Sweden in collaboration with research

organizations in Kenya and Mozambique. He was further informed that the project has different researchers working on different components and that in Kenya household surveys are planned to take place in Mkwiro, Shimoni, Vanga, Tsunza and Mombasa areas. He was also informed that a workshop will be held at the end of the research to inform communities about the research results. The chief was given all the opportunity to ask questions and make clarification.

- **Meeting with local leaders:** After this meeting, the chief was requested to arrange for another meeting between the project team/representative (s) and all village leaders including religious leaders, government officials, NGOs and community based organization officials based in the village. Contact details of all the leaders in the village had already been collected and these were also used to request other leaders based in the village to attend the follow-up meeting. During the follow-up meeting, which took place on the same day the team met the chief (there was a public meeting organized by the chief so all were in the village) the village leaders were informed about the project as well as its objectives, partners and the plan to stay and undertake household surveys in their community. Permission was then sought from the chief and village leaders to undertake household surveys in their village.

Vanga	Chief		
	Assist. Chief		
	Village chairman		
	BMU leader		
	Community group		
	Government fisheries officers around		

- **Meeting the community:** Since the chief was planning to address a community meeting the same day (and community member had already gathered), the chief was requested to allow the SPACES team to introduce the project to the community. Consequently, the project and its objectives were introduced to a wider section of the community. During this meeting, two team members were present and the community members were given an opportunity to ask questions and seek clarification. The community members present were then informed about the sampling design (that the team would talk to as many people as possible but not everybody will be interviewed). The team then arranged to settle in and plan to start surveys.

The village meeting was attended by nine community leaders on 4th of April 2014.

People present were:

1) Kama Abdalla (village chief), 2) Sherrif Mohamed (county peace chairman), 3) Ronald Cheche (Fisheries Officer), 4) Mohamed Mwakirau (BMU acting secretary), 5) Mwanaisha Bandika (Secretary Mwambieje Women Group), 6) Mohamed Hassan (BMU Chairman), 7) Athman Hamadi (BMU Vice-chairman), 8) Hassan Mousud (madrassa teacher), 9) Ali Rashid (Village chairman)

The community meeting was further attended by over 200 residents people who had assembled to meet the village leaders and government officials to discuss a development project on the same day.

Questions/concerns from community members raised during meeting

There was concern on how sampling will be done and who qualifies to be interviewed. In response it was said that the sampling will be random from the list of households in the village. There was contention that due to the dense population this may not be representative of Vanga but only a

selected group may be at an advantage over the others to be sampled. In response it was said that all sampling techniques have limitations but there was need to use a standard method for all sample areas for the best analysis.

There was concern from the leaders that the survey team needed local guides who have a good command of English and Kiswahili, social, well known and with a good reputation in the area. The area chief asked the B.M.U chairman to get two young men who fit the criteria.

A leader also raised concern that many surveys are always biased against women and there was need for this survey to ensure gender balance in sampling. In reply it was said that the survey aims at talking to more than one person in the household hence gender balance representation.

The research team was also asked to be honest in their pledge to give the community feedback as many past research surveys had promised the same but dishonoured it. The survey team replied that this is a concern everywhere and promised to give feedback later in the year.

Another concern was that there are many documentations online about Vanga but few residents can access internet and get this information. There was need to distribute research findings print outs and hold training. This will be addressed to the relevant structures.

The chief ended the meeting by ensuring all support to the research team and led the team to the village meeting that had been attended by hundreds of villagers.

Tsunza

- **Meeting with chief:** Entry into the village involved first contacting the local administration (chief) and requesting for an appointment to see him. Since he was unavailable, he gave us permission to seek assistance for the assistant chief. Therefore upon meeting the assistant chief, she was informed about the SPACES project and its objectives (see details above). The assistant chief was given all the opportunity to ask questions and make clarification.

- **Meeting the community:** After this meeting, she was requested to arrange for another meeting between the project team/representative (s) and all village leaders including religious leaders, government officials, NGOs and community based organization officials based in the village. Contact details of all the leaders in the village had already been collated. However, many community members and leaders were having a meeting the same day. The SPACES team was therefore given an opportunity to introduce the project to the village leaders and community members. After this, the assistant chief and village leaders gave the project permission to undertake household surveys in their village. During this meeting, only one team member was present and the community members were given an opportunity to ask questions and seek clarification. The community members present were also informed about the sampling design (that the team would talk to as many people as possible but not everybody will be interviewed). After this, the team arranged to settle in and plan to start surveys.

Village meeting participants

1. Assistant Chief
2. Mikanjuni B Village Chairman

3. Tsunza Center Village Chairlady
4. Community group representative: Community Touch (Comtouch)
5. Opinion leader

The meeting started with a welcoming statement from the area Assistant Chief who said she was speaking on behalf of the Chief who was unable to attend but welcomed the initiative. SPACES was then introduced as a research project aimed at understanding how people use and benefit from natural resources. It was mentioned that the research is led by Stockholm University in Sweden in collaboration with Kenyan and Mozambique research institutions. It was also mentioned that unlike other surveys that mainly entirely on fishing activities, this one looks at life in general. The study areas in Kenya are Mkwiro, Shimoni, Vanga, Tsunza and Kongowea. It was also emphasized that feedback is important and a workshop will be held later in the year to inform communities about the research results.

Questions/concerns from community members

- There was concern that surveys are usually done but there is never any significant positive impact to the society.
- There was concern on how sampling will be done and the criteria used to avoid bias. In response that the sampling would be random from the list of households in the village to ensure everyone has a chance to be interviewed.
- A concern was raised that Tsunza has four main scattered villages and there was need to ensure equitable representation of all villages in Tsunza. In response it was emphasized that all villages will be given an equal chance from the random selection without any bias for or against any of them.
- There was a request that the community must benefit from the survey. In response it was stated that benefit from the project was not direct but that success of the project relies entirely on support from the community. The villagers acknowledged they would be supportive.
- Some villagers were storming out of the meeting as it went on saying it is non-consequential but changed their mind after the SPACES representative pointed out that issues remain unresolved because many people never listen first before deciding on issues but rather jump into conclusions that may be regrettable in future. Following this and the intervention of a community elder, community members came back and listened to the SPACES representative. The SPACES representative thanked the community, having explained the project objectives and the plan to work it Tsunza and answered questions as explained above left the villagers to continue with their meeting.

Further questions raised:

Q: Are the community allowed to follow up with the team after the research?

A: Yes

Q: Most of the household heads are fishermen and we are likely to only find women. Can we only interview women?

A: We will interview a household head (at their convenience), spouse and if possible a third person from the same household

Q: Why were religious leaders called upon to attend the meeting?

A: The project involves all stakeholders and religious leaders and an important component of stakeholders

Q: What happens in case a prospective respondent refuses to be

interviewed A: Such a person will not be forced to be interviewed

A participant requested to be given a questionnaire in advance. He was however informed that the enumerators who have undergone a rigorous training will visit him and administer the questionnaire.

There was a request that future projects involve local communities during proposal writing stage so that such projects addressed their needs. Leaders advised the team (particularly ladies) to cover their heads with a scarf and not to wear mini skirts

Kongowea

Entry into the Kongowea villages involved visiting the area assistant chief (as the chief was away) and informing her about the SPACES project, its objectives, the areas (countries) the project is working in. She was informed that the SPACES project is a research project aimed at finding out how coastal communities benefit from natural resources and how the natural resources contribute to their wellbeing. She was further informed that the research project is led by Stockholm University in Sweden in collaboration with research organization in Kenya and Mozambique. She was further informed that the project has different researchers working on different components and that in Kenya, the plan was to undertake household surveys in Mkwiro, Shimoni, Vanga, Tsunza and Kongowea areas. She was informed that in Kongowea, the project would undertake household surveys in Ziwa la Ngombe, Kidogo Basi, Ratna and Mkomani. She was also informed that a workshop will be held at the end of the research to inform communities about the research results. The chief was also given an opportunity to ask questions and make clarification. After this meeting, the chief was asked about the possibility of arranging for another meeting between the project team/representative (s) and all village leaders including village chairpersons, religious leaders, government officials, NGOs and community based organization officials available in the village. However, the chief advised that such a meeting would be logistically challenging to plan for. She advised that she could pass over such information to other leaders during the regular meetings but that the only thing we needed to start working in Kongowea was an authorization letter from the District Commissioner. The entry into and start working in Kongowea therefore did not involve meeting with other village leaders and community members but only with the area chief and after securing an authorization letter from the District commissioner. Once authority was sorted the team recruited two local guides (in each of the villages) following advice of the chief and local village chairpersons and started household surveys.

Sampling

Sites

Site name	Sub-sites	Coral/ Mangrove	Rural/ Urban	Coordinates
Kenya				
Mkwiro		Coral	Rural	Lat: -4° 39' 48.6606" (-4.663517) Long: 39° 23' 44.466" (39.395685)
Vanga		Mangrove	Rural	Lat: -4° 39' 35.0742" (-4.659743) Long: 39° 13' 6.3228" (39.218423)
Tsunza	Mkungi: -4.052295, 39.562494 Tsunza Center: -4.055372, 39.563221 Mkanjuni A: everything south of road leading to center Mkanjuni B: everything north road leading to center	Mangrove	Peri-urban	-4.051830, 39.562411 -4.055982, 39.569192 -4.063687, 39.569793 -4.071114, 39.547724 -4.062457, 39.545835 -4.059599, 39.554322
Kongowea	Kidogo Basi	Coral	Urban	-4.033368, 39.696093 -4.033935, 39.695835 -4.34663, 39.695867 -4.035455, 39.696414 -4.035562, 39.697305 -4.033785, 39.698635 -4.033164, 39.698507
Kongowea	Ziwa la Ngombe	Coral	Urban	-4.025127, 39.700856 -4.025962, 39.700813 -4.028273, 39.702165 -4.027524, 39.703925 -4.026112, 39.703603 -4.024656, 39.703345
Kongowea	Ratna	Coral	Urban	-4.045697, 39.685723 -4.04757, 39.685192 -4.049796, 39.686694 -4.049988, 39.688797 -4.047671, 39.690514 -4.047366, 39.690605 -4.04682, 39.688545 -4.046125, 39.688566
Kongowea	Mkomani	Coral	Urban	-4.046382, 39.683282 -4.048287, 39.682081 -4.053274, 39.682724 -4.055114, 39.683647 -4.055565, 39.685471

				-4.055286, 39.687402
Mozambique				
Maringanha		Coral	Peri-urban	Lat: -12°58'11.2" (-12.969776) Long: 40°34'44.0" (40.578881)
Lalane			Rural	Lat: -11° 7'55.78" (-11.132161) Long: 40°29'55.51" (40.498753)
Vamizi	Kivuri Village		Rural	Lat: -11°02'14.6" (-11.037384) Long: 40°38'06.2" (40.635043)
Vamizi	Aldeia village		Rural	Lat: -11°02'06.3" (-11.035094) Long: 40°36'51.9" (40.614406)
Vamizi	Lance village		Rural	Lat: -11°01'31.2" (-11.025321) Long: 40°35'54.5" (40.598457)

Sampling effort

	Total population	Sample	
Site	# Households	# Households	# Interviews
Kenya			
Mkwiro	126	84 (after pilot), 39 (pilot surveys, not all responses may be usable)	176 (after pilot), 81 (pilot surveys, not all responses may be usable)
Vanga	641	150	287
Tsunza	480	190	415
Kongowea	???	316 (random sample), 47 (non-randomly sampled fishers)	600 (random sample), 77 (non-randomly sampled fishers)
Mozambique			
Maringanha	403	149	358
Lalane	152	82	168
Vamizi	???	69	120
Mieze	???	51	124

Sample selection

Definition of a household

The units selected for sampling were households. We basically followed the definition used by the Poverty Environment Network (PEN) (see PEN guidelines version 4 - May 2007, available from: <http://www1.cifor.org/fileadmin/fileupload/PEN/pubs/PEN%20Technical%20Guidelines%20-%20version%204%20-%20May%202007.zip>).

The guidance and training enumerators received on households included the following information. A household is defined as a group of people (normally family members) living under the same roof, and pooling resources (labour and income). Labour pooling means that household members exchange labour time without any payment, e.g., on the farm. Income pooling means that they “eat from the same pot”, although some income may be kept by the household member who earns it. It is possible to have household members who are not blood relatives of the family, e.g., a household servant, an in-law, or someone taken into the household because they have been orphaned or otherwise destitute (adapted from)

In most cases, members of a household are easily identified, but you may encounter difficult cases:

1. Polygamy: If a man has several wives, each living in separate houses, then each of the houses of the wives should be treated as a separate household. The man's contribution to the particular household selected should be included. (Note: if the sampling is based on selecting household head, and a man with two households is included in the sample, one should include both households and register them as two separate ones.)
2. Several families living together in one house: If there is resource pooling, they should be treated as one household, otherwise not. An example: A married son still lives in the house of the parents. If his family's economy is separated from the one of his parents (no income pooling, and they only occasionally eat together), they should be treated as two separate households.
3. Family members living away parts of the time, e.g., working or going to schools: Include if they are more or less fully integrated in the household economy (e.g., school children living away during the week, but parents paying for their expenses). In other cases where children have left the house to work and take care of themselves, but contribute some income to the remaining household, they should *not* be included in the household. But, the money contributed should be recorded under remittances.
4. In some situations an extended family may be living in different houses, but sharing the same land and income, and eat most of their meals together. Again, following the household definition of “resource pooling”, the extended family should be treated as one household, although they don't sleep under the same roof.
5. One may have single person households, e.g., a widow living alone.

Household head

The household head is a member of the household who makes the final decision on household related issues. The person might be a man or a woman. The person might be young or old. The

household head is normally well defined by customary and/or official rules. In most cases this would be the husband, but this might be more complicated if several generations are living together in the same household. But, simply asking “who is the head of the household?” would normally solve the problem. In some contexts the customary head is not the same as the official one, in which case one may choose to follow the customary rules.

Relationship to household head

How is the person in question relates to the household head (not how the household head relates to the person in question).

Coding:

- hh head (household head)
- spouse (wife, husband or partner of household head)
- son/daughter (son or daughter of household head)
- father/mother (father or mother of household head)
- other relative (person related to household head but none of the above)
- unrelated (person unrelated to the household head)

Mozambique

Maringanha: Initially due to an error of perception about the number of questionnaires to be done, we began sampling in the neighborhood, with the intent to sample all residents and spent a week, After this time, we got a list of household were prepared by the village chairman. The list indicated a total of about 403 households. Verification was taken by walking through the village with local guides and comparing names of households whose list was prepared by the village chairperson, and a total of 403 households were identified. From this list a random sample was taken and used in houseohld survey sample.

Lalane: In the case of Lalane a household list recently elaborated by OSOL project (about 4 months before) were given. The list was verified by walking through the village with local two guides and confirmed the presence 152 households. From this list a random sample was taken and used in household survey sample.

Vamizi: Here the village chairman had no list of inhabitants and the reason was that the residents were not fixed, ie, they spent a period in the village and other outside the village. Sampling was carried out in three neighborhoods respectively Lance, Aldeia and Kivuri. In each neighborhood we started numbering the houses from the west to the east with lines starting from south to north side. Following this orientation we randomly sampled the houses in each neighborhood.

Kenya

Mkwiro: Two lists of household heads were prepared independently: 1) The first was prepared by two local field guides, and 2) the second was a list of households previously prepared by the village chairman. Both lists indicated a total of about 150 households. However, independent verification by walking through the village with local guides and comparing names of households against those independently prepared by the village chairperson and field guides indicated that only 126 households were present at the time of the survey. From this list a random sample was taken and used in household survey sample.

Vanga: A list of household heads was populated by the team with the assistance of two local guides. This involved knocking on each household and recording the number of households and respective names of household heads. The resulting list was then presented to the area village chairman and the county BMU representative to verify and ensure that all households and household heads were captured. It was not possible to verify the list with the 'area chief' and the assistant area chief as both had travelled at the time. Following this verification, a total of 641 households were identified and a random sample was taken and used in household survey sample.

Tsunza: There are four small villages that make up Tsunza: 1) Mikanjuni A, 2) Mikanjuni B, 3) Mission (Tsunza center) and 4) Mkunguni. In the absence of an existing household list the survey team developed a list of households in Tsunza by knocking on the door of every house (Tsunza being a rural village where one household lives in one house) and recording the name of the household head. To do this, the team was divided into four groups that walked through one village each recording the names of household heads. An existing list of household heads prepared by the local administrative could not be obtained during the fieldwork. Following this method a total of 480 households were recorded. These were distributed in each of the villages as: Mikanjuni A (125), Mikanjuni B (176), Tunza center (112), and Mkunguni (67). From this list a random sample was taken and used in household survey sample.

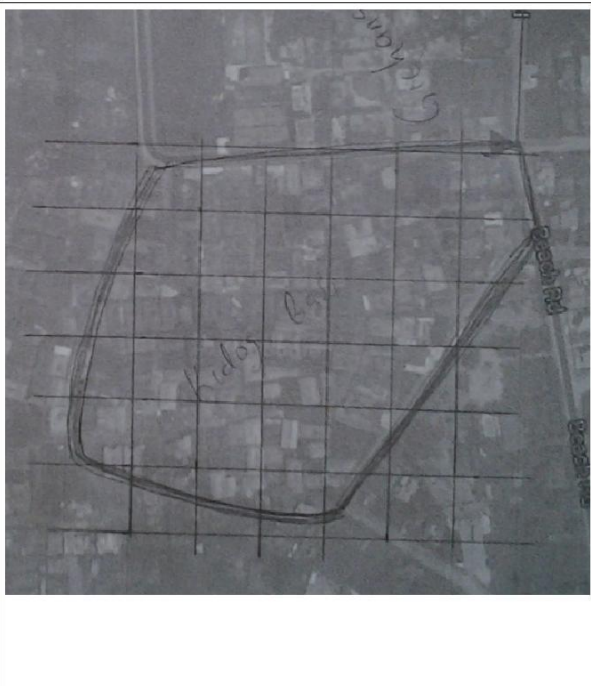

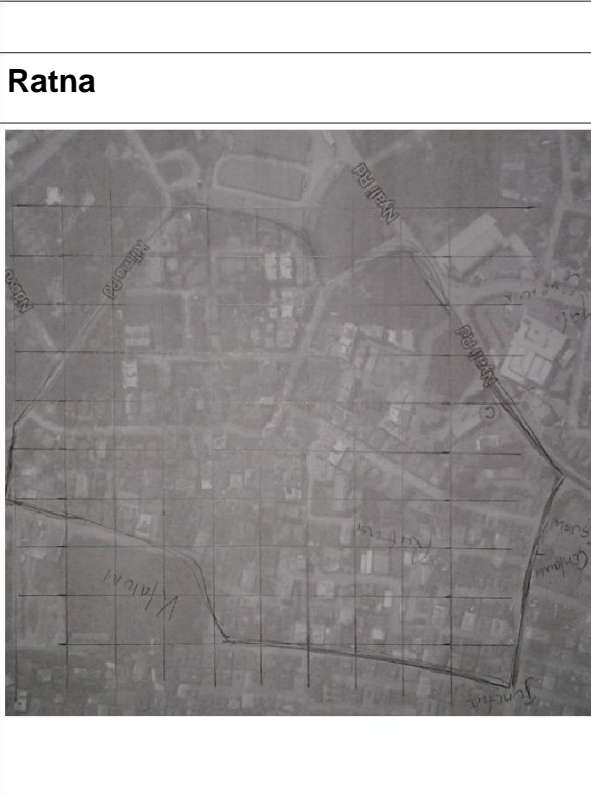
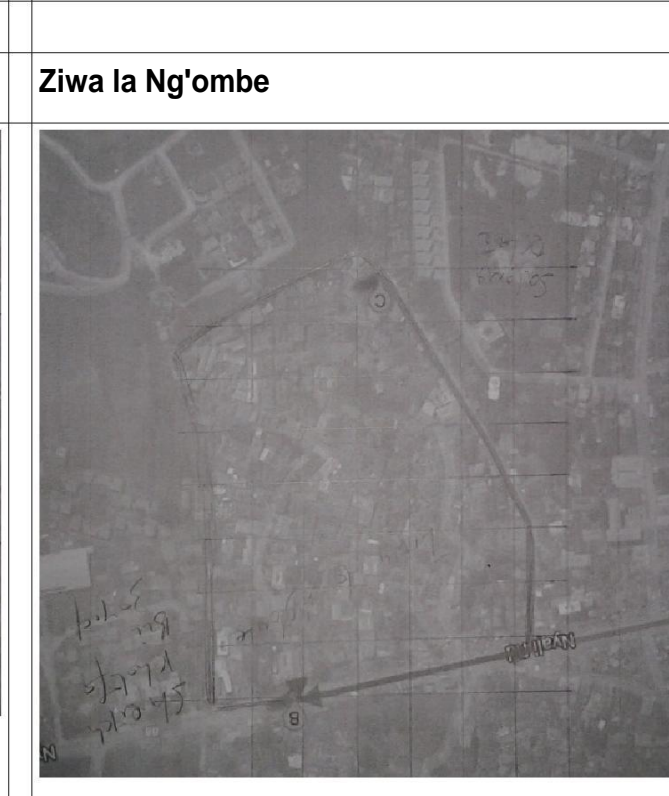
Kongowea

Kongowa being a large urban site, the sample selected differed from the smaller rural sites.

Identifying boundaries for study villages

Four villages were sampled in Kongowea: 1) Kidogo Basi, 2) Ziwa la Ng'ombe, 3) Ratna and 4) Mkomani. The boundaries of each village were identified with the help of village chairpersons and one additional key informant (proposed by the chairpersons). The boundaries were based on landmarks that consisted of joining roads, neighbouring estates, adjacent school or nearby mosque. A satellite image (google map) of each village was printed and the village boundaries confirmed on the satellite image by the village chairpersons and key informants in each village. On the satellite images, each village was divided into equal sizes squares sizes (Figure 1) and the number of houses counted for each square by systematically walking through each area. Using this method a total of 250 houses in Kidogo Basi, 456 in Ziwa la Ng'ombe, 150 in Ratna and 225 in Mkomani were counted.

Figure 1: Maps of Kongowea villages sampled

<p>Kidogo Basi</p> 	<p>Mkomani</p> 
<p>Ratna</p> 	<p>Ziwa la Ng'ombe</p> 

Sampling

From 05 June until 13 June households were selected based on “window/door counting” method (only applied in Kido Basi). This means, the team entered every 8th house and interviewed first person willing to participate in interview.

Every 8th household was decided using the following methods:

- established boundaries
- counted houses on satellite map: 250 (in Kidogo Basi)
- went to 20 randomly houses (in Kidogo Basi) and asked for the number of households residing in the house. This resulted in an average of 7.8 households per house (used 8)
- After some calculations it was decided to enter every 8th house and interview the first person willing to be interview. However, then a logical mistake was found and the method revised.
- IMPORTANT: interviewing every 8th house can be judged as random! Interviewing first willing person is NOT random and problematic. HENCE need to check if many non-responses occurred. IF NOT, use data. IF YES, find solution.

SECOND method used from and including 14 June onwards.

- knowing the total number of houses per village and the average number of households per house per village enabled us to calculate total number of households per site, total number of households in all four villages and the proportion of total households coming from each village. Multiplying the proportion of households coming from each site with the total aimed sample size of 250 households, gave us the number of households to be sampled per village. Dividing the actual number of households by the number of households to be sampled gave the nth household to be interviewed (26th household in each site).
- team entered a house and started counting doors (after confirming that someone lived there). This was done until the 26th household was found. Hence at times the team entered a house and left without conducting interviews if the count did not reach 26.

Kongowea census – data not used for informing sampling design

- team went to every house and asked inhabitants about the number of households residing in the house. Someone was always encountered. (file: /home/bjorn/Dropbox_Decrypted/Postdoc/Household Survey/Data/maps from study sites/Kongowea Households)

Type of dwelling	counted no. of windows	No. household so obtained counting method
Swahili house	12	10 windows
Swahili house	8	10 windows
Swahili house	10	10 windows
Swahili house	4	4 windows
Swahili house	4	4 windows
Swahili house	12	10 windows
Giriama house	1	1 door
Swahili house	10	9 windows
Swahili house	8	3 windows
Swahili house	23	23 windows
Bungalow	1	3 door
Bungalow	4	3 door
Swahili house	4	3 door
Swahili house	12	12 windows
Swahili house	8	7 windows
Swahili house	10	9 windows
Swahili house	9	8 door
Swahili house	10	9 windows
Swahili house	10	8 windows
Swahili house	10	10 windows

Based on the house counts and the target sample of 150 households for the four Kongowea villages in total,

we started by interviewing a household member (head, spouse and any eligible member) found in every 8th house in Kidogo Basi. We followed this system and interviewed a household member (head, spouse and any eligible member) we found in house number 13th in Ziwa la Ng'ombe until 12th June 2014. After this date, the sampling changed.

The change involved randomly selecting 20 houses in each of the villages to estimate (based on the number of windows in each house which is supposed to reflect a household in a Swahili house, i.e. a window represents a household) the number of households in each house. Besides counting, we verified this by asking a resident of each house to confirm the number of households. Therefore from 14th June 2014, sampling involved counting and interviewing every 26th household (based on sampling strategy for Kongowea_20140614.ods attached). This method was thus not based on counting windows (an assumption that in a Swahili house, a window represents a household) but rather physically counting households in each house to identify the ith household eligible for interview (based on Kongowea_20140614.ods).

Ensuring that the whole of Kongowea area was covered

Houses in these villages are not well organized. However, there are small streets running between houses or joining other streets. To ensure that the whole area was covered and that houses were not skipped, we (together with a local field guide recommended by the village chairperson) started

counting households in each house between two streets running parallel to each other until where such streets met/intersect (and after this moved to the next cluster) or to the boundary of the village (at a time), if such streets ran till the boundary of the village. Upon reaching the boundary, we moved to the next cluster of houses between two streets and continued the same process.

Dealing with non-responses

Where respondents could not be encountered, enumerators asked the neighbour for the contact details of the prospective respondent. If these were not available, enumerators asked for permission to slip a flier with explanation of research and contact details under the door. This way the enumerator could remember the house when an appointment was arranged as the enumerator was required to note this detail in the non-response form. We also left the neighbour with a mobile number to pass over if they agree. One qualified to be a neighbour if we found him/her in the house/or next door (most people do not leave houses open unless there is someone around. This person normally would come to inquire in case they spotted a visitor at the door. Therefore, if such persons agreed being neighbours and indicated that they knew who lived in the house, we asked them the contact detail (mobile phone number of households leaving in target the house (and recorded the same on a form-see attached) and proceeded counting and recording the number of households in each house until arrived at the 26th household (eligible for interview). This ensured that in all these cases including where a prospective respondent was not available, declined to be interviewed, the building was a shop or a school etc, the detail was recorded. The method of recording the number of households in each house started on 19th June 2014 in Ziwa la Ng'ombe.

In incidences where a house was locked (no one at home) and there was no neighbour to confirm the number of households, the team proceeded with counting (if a Swahili house, using the number of windows) even if the household to be sampled fell in that house (in which case this detail was recorded) and an arrangement made for enumerators to come back later. In the case where an appointment was made with a spouse but later the household head refuses to give consent for an interview, then the details was also recorded in the non-response form.

Intra-household respondent selection

The intrahousehold sampling strategy was to interview the 1) household head, 2) spouse of the household head, and 3) a randomly selected household member (we had generated a random number between 1 and 10 for each day of the week. If an interview was conducted on a eg Monday we counted through the names of household members listed in the household head's census information until we reached the tenth person or continued counting until ten again if the person was not eligible). For a household with no spouse present, a second and third household member were randomly selected. For a household with a total of three or less household members we aimed to interview all household members.

Eligibility criteria

- person of age 16 or above unless it was a married woman who was considered mature in the local context
- verbal consent was provided by husband to interview wife
- verbal consent was provided by household head to interview children with age 16 or above

- people encountered drunk were excluded from sample as they were considered unable to provide informed consent and therefore were not interviewed
- mentally challenged people were considered unable to give informed consent and therefore were not interviewed

Questionnaire

Acknowledging that different sections of the questionnaire required different types of knowledge or reflected personal circumstances, we duplicated some sections, ie multiple household members were asked the same questions, and interviewed only one person from the household on other questions. Below it is explained which household members were asked which questions.

A male household head was asked all questionnaire sections except the food section. In the context of this study, women generally prepared the food and are therefore considered to provide more reliable information. This acknowledges that not asking the household head about food and especially animal protein consumption might miss eg fish consumed by the household head that was not shared with other household members. However the food section's aim was to understand food procurement and consumption at the household level, ie food shared among household members.

Spouse: All questionnaire sections were administered except household composition and assets, these were only conducted with the household head as these applied to the household as a whole. The livelihood section was repeated to ensure that predominantly female activities were not missed out. Enumerators compared notes after their first interview to decide on who to interview next and also ensured all livelihood activities mentioned by the hh head and the spouse were followed up on.

Random person: All questionnaire sections except household composition, livelihoods, food and assets were administered.

	Male hh head	Female spouse	Random person
1) Wellbeing	Yes	Yes	Yes
2) Vulnerability	Yes	Yes	Yes
3) Basic needs	Yes	Yes	Yes
4) Cult service	Yes	Yes	Yes
5) HH census	Yes	No	No
6) Livelihood	Yes	Yes	No
7) Income	Yes	Yes	Yes
10) Food	No	Yes	No
11) Assets	Yes	No	No

When interviewing a female-headed household the above terminology does not match and the following applied.

Household head: All sections of the questionnaire were administered, including the food section.

Spouse: All sections of the questionnaire except hh composition, food and assets were administered.

Random person: Same as male-headed household

	Female hh head	Male spouse	Random person
1) Wellbeing	Yes	Yes	Yes
2) Vulnerability	Yes	Yes	Yes
3) Basic needs	Yes	Yes	Yes
4) Cult service	Yes	Yes	Yes
5) HH census	Yes	No	No
6) Livelihood	Yes	Yes	No
7) Income	Yes	Yes	Yes
10) Food	Yes	No	No
11) Assets	Yes	No	No

Additional respondents

Household members that engaged in livelihood activities for income or food but that were not among the three selected household members were also interviewed to obtain information about the benefits they received from the livelihood activities. If the household head knew and was willing to provide details on how much a household member earned from a certain activity this information was recorded and checked against responses from the respective person. In cases where it was not possible to interview the additional person, the information provided by the household head was used. However it was clearly stated in the comment section that effort was made to interview the son and that it was not possible to track him down. If it was possible to interview the son, this additional 'interview' was recorded in the cover sheet section under 'Additional people interviewed for individual sections'.

Questionnaire ID

The objective of the questionnaire ID is to unambiguously identify households and group respondents into households. The questionnaire ID design needs to work in a scenario where more than one enumerator interviews household members, where enumerators operate independently from each other and at different times this includes visits to the same household and even the same person on different days.

1) Questionnaire ID design

Site / Date / EnumeratorID / Interview # / Respondent #

2) Household ID: Site / Date / Enumerator / Interview #

The household ID identifies the household and links all interviews done with members of a household. The household ID must be the same for all interviews done by any enumerator. Any enumerator interviewing any member of a particular household on any day must use the same Household ID.

3) Respondent identifier: Respondent #

The respondent identifier is a number between 1 and 3 that is used for the three main household respondents only. The three main respondents must have different respondent identifiers. Other household members interviewed, for example to obtain information about their livelihood activities, do NOT get their own respondent identifier but instead their responses are recorded in one of the questionnaires of one of the three main respondents.

Example

MK/21062014/AW/2/1 (Andrew conducts his second interview with a household head today in Mkwiro on 21 of June 2014.)

MK/21062014/AW/2/2 (any enumerator, including Andrew, who interviews the second person in the household. Note that even if the second household member not interviewed by Andrew the EnumeratorID stays the same!)

Section	Code	Description
Site	Kenya 1) Mkwiro (MKW) 2) Vanga (VAN) 3) Tsunza (TSU) 4) Kongowea (KON) Mozambique 1) Maringanha (MAR) 2) Lalane (LAL) 3) Vamizi (VAM)	Study site code
Date	DD-MM-YYYY 23 of May 2014 (23052014)	Date on which interview with household head was started. If the first interview was not done with the household head (as he was not present and is hence interviewed the following day) use the date of the first interview with the spouse.
EnumeratorID	Kenya 1) Andrew (AW) 2) Innocent (IM) 3) Stephen (SW) 4) Joaquim (JM) 5) Gudilla (GM) 6) Christopher (CC) 7) Jane (JN) 8) Rosebelle (RA) 9) Rose (RK) Mozambique 1) Anchinha Abdul (ANC) 2) Amisse Abel (AMI) 3) António Francisco de Sousa (AFS) 4) Hawa Pingalsi (HP) 5) Nhamo Macame (NM) 6) Lipana Júlio Ali (LA) 7) Atija Cassamo (AM)	ID of enumerator interviewing the household head. If the household head is not present at the start of the interview the EnumeratorID is the ID of the enumerator interviewing the spouse. IMPORTANT: two enumerators interviewing different household members must use the same EnumeratorID. Hence EnumeratorID does not state who did the interview but who did the interview with the household head or in his/her absence who did the interview with the spouse. (Note, should the person perceived to be the household head turn out not to be the household head the enumerator ID stays the same)
Interview#	Number (1 2 3 4)	<p>In case one enumerator interviews two household heads in one day using only the 'Date' and 'EnumeratorID' to distinguish households is not sufficient, as they would be identical and hence one could not distinguish the households.</p> <p>To create a unique identifier we add the InterviewID. The InterviewID is set by the enumerator interviewing the household head or in his/her absence the spouse. The question the enumerator has to ask is "how many household heads or in their absence spouses have I interviewed TODAY?". If it is the first household head you are interviewing TODAY, the Interview# is 1. If you have interviewed two household heads and are now interviewing a spouse whose husband is currently not available but will be interviewed later the Interview# is 3.</p> <p>If you are not interviewing a household head but your colleague is, ask him/her for the Interview# to be used. If you are interviewing a spouse and your colleague is interviewing the household head, ask him/her for the Interview# to be used.</p>
Respondent #	Number (1 2 3)	Number of respondent in household interviewed (hh head = 1; spouse = 2; random person = 3 BUT where no spouse enumerators need to discuss numbering)

Glossary Swahili

Developed during the questionnaire translation and considered useful to standardise questions.

English	Swahili
Ecosystem service	Manufaa ya rasilimali ya kiasili kwa watu (Benefits of natural resources to people). manufaa watu wanayopata kutokana na rasilimali (Benefits people obtain from resources)
household	Watu wanaoishi na kula pamoja katika nyumba (people who live together in a house and share meals). Short: wakaaji wa Nyumba
house	Nyumba
family	Familia
environment	Mazingira
resources	Rasilimali
Natural resources	Rasilimali za kiasili
access	Kufikia
savings	Akiba
Physical security (body)	Usalama wa mwili
Physical security (all physical)	Usalama
Source	Chanzo/Kiini
poverty	Umaskini
wealth	Utajiri
Wellbeing	Ustawi (feeling of satisfaction in all aspects)
Basic needs	Mahitaji ya kimsingi
Indicator	Kiashiria/Kigezo
Sufficient	Tosha
community	Jamii
village	Kijiji
Autonomy	Uhuru kimaamuzi
Chronic illness	Ugonjwa sugu (persistent illness)
satisfaction	Kuridhika
Place (physical)	Mahali
spiritual	Kiroho
cultural	Utamaduni
religious	Kidini
Household head	Kichwa cha nyumba (head of the house)
Leader	Kiongozi
Association	Chama
Village elder	Mzee wa kijiji

January	Muharram
February	Safar
March	Rabi' I
April	Rabi' II
May	Jumada I
June	Jumada II
July	Rajab
August	Sha'aban
September	Ramadan
October	Shawwal
November	Dhu al-Qi'dah
December	Dhu al-Hijja

Comments on questionnaire sections

Basic needs

Site specific basic needs indicators and thresholds for fulfilment of basic needs were developed and integrated into the questionnaire. For details see 'site profiles' and files:

- justification_for_needs_questions_kenya
- justification_for_needs_questions_mozambique
- linking_thresholds_to_questionnaire

Cultural services

On place attachment, we used statements in Kenya, as suggested by the literature, but had to turn the statements into question as respondents found statements confusing. For example, 'I miss' became 'Do you miss.....'.

We used a four-step Liker scale as piloting of the section showed that a clear dichotomous distinction between agree and disagree was easier for interviewees to respond to than a Likert scale with more than four steps.

Livelihoods section

The livelihood section, including ranking of livelihoods, was conducted with both household head and spouse to ensure that both predominantly male and female activities were recorded. The ranking was done to elicit the relative importance of livelihood activities for both food and income to indicate their overall importance to households and avoid difficulties with potentially artificial distinctions between an activity done purely for food provisioning, eg farming, and other activities that contribute to income and food in cases where this is purchased. We piloted the use of bean scoring for the ranking exercise but this was generally considered difficult by interviewees and hence we resorted to ranking from 1 to n number of livelihood activities.

Household income

The primary guidance used to elicit income data was the household livelihood section which was done with both the household head and the spouse to represent both a male and female perspective on livelihood activities.

Information was requested about all household incomes (cash and non-cash) from both the household head and the spouse even if they were not the people engaged in these activities, ie income earned by other household members. This was done to avoid missing any income sources. Additional respondents from the household were then sought to provide information about income that they had earned and the responses in the household head survey either verified or corrected. Enumerators also compared all responses after an interview deleted duplicate records to avoid double counting.

While the activities recorded in the livelihood section served as guidance for the income questions, each respondent was asked whether he/she was also involved in a) fishing, b) farming, c) natural resource harvest or d) any other activity for food or income. If livelihood activities were mentioned when going through the income sections that were not recorded in the livelihood section, these were added to the livelihood section. In case this happened, the ranking of the livelihood activities with the household head (and not spouse) was repeated. Results of both the first and second ranking were recorded.

Realising the difficulty of obtaining reliable income estimates for the last twelve months, we asked interviewees about income earned during a good time, a bad time and finally during a typical time. The rationale was that asking for good and bad times first established ceiling and bottom estimates and helped the respondent to think about “typical” earnings. To estimate net household income we structured the questionnaire to first find out the time spent earning income from activity in last twelve month, then elicited the income earned per unit time (here the respondent was free to choose a convenient unit reflecting actual income patterns) and finally elicited expenditure per unit time for each of the activities.

Household characteristics

The household characteristics included in the survey were based on Cinner et al 2012 and adapted to local settings through discussions with the local enumeration team during the pilot study.

Research ethics

The household survey applied for ethical approval to the Ethics Committee at the University of East Anglia and was granted the approval.

General guidance on research ethics and enumerator behaviour provided to the enumeration team are outlined below.

Visit a household, ask for the household head. If available, request for a moment to explain the purpose of your visit and objectives of the study. Ask if they have time for an interview. If yes, read to them the confidentiality statement and ask whether they agree to participate in the survey. Ask for permission from the households to interview other household members. Leave the confidentiality statement with them after completion of the survey. Do ask for permission to revisit the household in case clarifications are required. While it is not always possible, you should ensure that interviews are conducted without other people present to avoid interference and maintain some level of confidentiality. If a person is occupied do not urge the person to respond but instead ask to return at a different time.

Translation of 'Statement of confidentiality' included in questionnaire

You are free to decide if you want to answer these questions or not and if you are uncomfortable at any time you can choose not to answer to stop the interview at any time. There are no right or wrong answers, it is your own experiences and views that I am interested in. Anything that you tell me will be treated confidentially. We would like to ask your name and contact details, but this will be kept securely and in a different place from your answers to the questions so that no one will be able to identify you or your family from the information.

"Do you have any questions about this research? Are you willing to take part in this interview? If you say yes, I will tick this box to indicate that I have read this information to you, that you understand and that you are willing to take part."

If it is discovered that during the interview, there is a serious language problem (enumerator and respondent cannot understand each other), then request to reschedule the interview and get assistance from an enumerator who can speak the language.

In case a household could not be contacted (this was mainly an issue in urban sites), leave a note with a mobile number so the person can call the enumeration team. Should the person not get in touch enumerators should return to the house up to three times after which the household will be excluded from the survey.

Translation of note

Sustainable Poverty Alleviation from Coastal Ecosystem Services (SPACES)

About SPACES: SPACES is an international research project. SPACES is led by the University of Stockholm in Sweden in collaboration with local governmental and non-governmental partners. The project is carried out in Kenya and Mozambique. In Kenya we are working in the Mombasa

area, Shimoni area and Vanga. The aim of the project is to find out from the people about their lives and livelihoods. We are especially interested in learning from the people what you need to do well now and in the future. SPACES is a research project and not a development project. However, we hope that our findings will be useful to your community and the government to contribute to poverty alleviation in the future. We would like to have an interview with you at your convenience. Please let us know through the mobile number.....

We thank you for your cooperation. SPACES

Ethnicity is a sensitive subject in Kenya (less sensitive in Mozambique) that has to be treated with respect. Disrespecting the sensitivity of ethnicity could compromise data quality and in the worst case endanger members of the enumeration team. Hence, we recorded the name of the tribe and not the clan. If person does not want to state his/her tribe, record 'unwilling'.

Maintaining anonymity of responses

Full contact details were recorded on a separate sheet from the household survey questionnaire and kept separate while in the field. This was done to ensure a basic level of anonymity of respondents. However, the household survey questionnaire included detailed questions about household composition and livelihoods, allowing the identification of respondents with some effort and knowledge of the area.

Compensating respondents

Respondents were not compensated for participating in surveys despite questionnaires lasting up to two hours and putting a substantial demand on peoples' productive time. The decision to not compensate respondents for their time was made after discussion with the enumeration team, during which the following points were made reflecting past experiences:

- small presents, eg biscuits, have worked in the past and if interviews goes a bit long and children become hungry biscuits will keep them happy and mother time to answer questions
- something is expected by respondents
- paying is bad for future surveys as they will be required to pay as well but may not have the money
- KMFRI discourages incentives but pay local people as field guides, have sensitisation meeting to inform about research objectives
- people not being interviewed and hence not getting money may feel upset
- paying people may reduce data quality
- company gave people t-shirts as compensation. On return people refused to be interviewed unless they were given something again.
- people are poor so it is fair to give people something for their time if interview takes longer than 30mins
- people attend NGO meetings because they get money but people do not attend local village

meetings as they do not get money

- respondent had not eaten for several days, so I gave money to people to cook before I did interview.