INCEPTION WORKSHOP REPORT

CLIMATE CHANGE ADAPTATION IN AFRICA: EXPLORING URBAN-RURAL INTERDEPENDENCE AND THE IMPACT OF CLIMATE CHANGE IN TANZANIA AND MALAWI

23-27 SEPTEMBER, 2009
BLANTYRE, MALAWI

Preface

Africa is rapidly urbanizing. Whilst in 2007 Africa was still the least urbanized region in the world (39% of population residing in cities), projections show that by 2030 there will be over 759 million African urban dwellers. The rapid urbanization in Africa - an average rate of 3.5% per year - poses many challenges for the provision of infrastructure and services which are already notably lacking in many areas (Eriksen, 2008). Alongside this trend, climate change is posing a serious global threat. Africa is particularly vulnerable to climate change and climate variability (CC&CV). Regional climate projections for east, west, south and Sahelian Africa comparing the period 2080-2099 with 1980-1999 indicate that 'in all four regions and in all four seasons the median temperature increase lies between 3°C and 4°C, roughly 1.5 times higher than the global mean response' (Christensen *et al.*, 2007). This situation is exacerbated by the interaction of 'multiple stresses', occurring at various levels and low adaptive capacity (Boko *et al.*, 2007).

Rural and urban issues and planning have been typically seen as and dealt with separately. However, in recent years as urbanisation and inequality increase, more sophisticated analyses of the linkages and interdependencies between rural and urban areas have emerged. The flows of people, goods, services, information and money typically provide strong and dynamic linkages between rural and urban areas (Tacoli, 1998). In many places these interdependencies have deepened since the market liberalization of the 1980s due to increased price risk, rising input prices relative to output prices, detrimental HIV/AIDS effects on labour and other asset availability, environmental deterioration and continuing farm sub-division at inheritance (Bahilgwa *et al.*, 2005). One important outcome of this is that trends and stresses at global, national and local levels affecting livelihoods, food security and access to energy in urban areas have heightened implications for rural areas and *vice versa*. The impacts of CC&CV will also affect rural-urban linked areas in this way, and there is uncertainty as to how these changes will play out. Recent developments in resilience thinking emphasize the importance of understanding the connections and feedbacks within dynamic and complex social-ecological systems. The trend towards decentralization adds to the importance of building the capacity of urban and rural local governments to respond to these challenges.

This action research project will explore these issues in Tanzania and Malawi building on an existing CCAA funded project. We will explore the relationships and dynamics between rural localities where the CCAA project is already working and a range of settlement sizes of urban centres. However, our focal system will be on the links between urban and rural areas in relation to agriculture and food considering the full range of actors in the innovation systems. By innovation systems we mean networks of organizations and individuals focused on bringing new processes or products into use, together with the institutions and policies that affect their behaviour and performance. We will engage with key decision makers – particularly local people, urban/rural local government -and other stakeholders to strengthen *capacity with respect to* understanding the complex nature of these rural-urban interactions and to identify ways of *improving the resilience* of this focal system.

The project's general objective is: To strengthen the capacity of individuals, organizations and systems within the agriculture and food innovation systems connecting rural and urban communities in Tanzania and Malawi to adapt to the challenges and opportunities arising from CC&CV.

A key element of this project is how to improve sharing and learning of information and experiences. Early findings will be disseminated through working papers to facilitate exchange of ideas so as to maintain and better focus the project's activities.

For further information, please contact:

Dr Emma Liwenga, Dr. Amos Majule or Ms Madaka Tumbo, Institute of Resource Assessment (IRA), University of Dar Es Salaam, PO Box: 35097, Dar es Salaam, Tanzania. E-mails: liwenga@ira.udsm.ac.tz liwenga99@yahoo.com amajule@ira.udsm.ac.tz madaka.tumbo@ira.udsm.ac.tz

Miriam Joshua, Cosmo Ngongondo or Evance Mwathunga, Natural Resources & Environment Centre (NAREC), University of Malawi, Chancellor College, Chirunga Rd, P.O Box 280, Zomba, Malawi. E-mails: mjoshua@chanco.unima.mw cngongondo@chanco.unima.mw emwanthunga@chanco.unima.mw

Tanya Stathers or Richard Lamboll, Natural Resources Institute (NRI), University of Greenwich, Central Avenue, Chatham Maritime, Kent, ME4 4TB, UK. E-mails: T.E.Stathers@gre.ac.uk R.I.Lamboll@gre.ac.uk

Acronyms and Abbreviations

ARI	Agricultural Research Institute
BP	Boundary Partner
BT	Blantyre
CBO	Community Based Organisation
CC	Climate Change
CCAA	Climate Change Adaptation in Africa
CC & V	Climate change and variability
CDM	Clean Development Mechanism
CHANCO	Chancellor College
ChC	Chancellor College
CK	Chikwawa
CKS&L	Communication, Knowledge, Sharing and Learning
CURE	Coordination Unit for the Rehabilitation of the Environment
CZ	Central Zone, Tanzania
DEO	Department of Extension Office
DFID	Department for International Development
HEP	Hydro Electric Power
HH	Households
HIV/AIDS	Human Immunodeficiency Virus/ Acquired Immune Deficiency Syndrome
IDRC	International Development Research Centre
INADES	Institut Africain pour le Development Economique et Social
IPCC	Intergovernmental panel on Climate Change
IRA	Institute of Resource Assessment, University of Dar Es Salaam, Tanzania
IS	Innovation System
LF	Logical Framework
LL	Lilongwe
M	Men
M&E	Monitoring and Evaluation
Met.	Meteorological
MJ	Mulanje
Mw	Malawi
MZU	Mzuzu
NAPA	National Adaptation Programme of Action
NAREC	Natural Resources & Environment Centre, University of Malawi
NCG	National Consultation Group
NGO	Non Governmental Organisation
NRI	Natural Resources Institute, UK
OM	Outcome Mapping
PADEP	Participatory Agricultural Development and Empowerment Programme
PM&E	Participatory Monitoring and Evaluation
PRA	Participatory Rural Appraisal
SA	Situation Analysis
SGR	Strategic Grain Reserve
SHZ	Southern Highlands Zone (Tz)
SL	Sustainable Livelihoods
SSA	Sub-Saharan African
Tz	Tanzania
UNIMA	University of Malawi
URT	United Republic of Tanzania
W	Women
Yr	Year
ZA	Zomba

Acknowledgements

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CONTENTS

1. INTRODUCTION

The annual planning meeting of the CCAA Rural project ('Strengthening local agricultural innovation systems in less and more favoured areas of Tanzania and Malawi to adapt to the opportunities and challenges of climate change and variability', June 2007 - March 2011), was held in Blantyre from 21st - 23rd September 2009. As the CCAA Urban – Rural Project is linked to the CCAA Rural project, the team decided to combine the CCAA Rural project's Annual Planning Meeting and the CCAA Urban-Rural Inception workshop. This report covers just the CCAA Urban-Rural Inception workshop meeting.

The title of the new CCAA Urban-Rural project is '***Exploring urban-rural interdependence and the impacts of climate change in Tanzania and Malawi***'.

The project's general objective is '***To strengthen the capacity of individuals, organisations and systems within the agriculture and food innovation systems connecting rural and urban communities in Tanzania and Malawi to adapt to the challenges and opportunities arising from CC&CV***'.

The three specific objectives are:

Objective 1: To develop a collective understanding of the vulnerabilities, roles, climate-related risks and strategies among interdependent rural and urban communities, local government and other key stakeholders.

Objective 2: To collectively develop and test viable options and strategies for key interdependent rural- urban stakeholders in the agriculture and food innovation systems to adapt to CC&CV; and

Objective 3: To learn and share lessons (through process documentation) for scaling up successful strategies for strengthening capacity at individual, organizational and systems levels within the interdependent agriculture and food innovation systems in linked urban and rural settings to adapt to the challenges and opportunities brought about by CC&CV.

The aims of the Inception Workshop were:

i. To develop a common understanding of the project objectives amongst the project team

ii. To carry out detailed planning of the year one (Yr 1) activities, approaches/ tools and plans, including the urban linkage situation analysis, and the stakeholder consultation

iii. To decide on focal locations for the project activities

iv. To develop the draft project communication, knowledge sharing and learning (CKS&L) plan

The workshop programme that was followed and the participants' details are shown in Appendices 1 and 2. Chairing of different sessions was rotated.

OPENING SESSION

Dr. Liwenga started by welcoming workshop participants and thanking them all for their time and willingness to be part of this project and workshop. She then gave a short history regarding the exploring urban-rural linkages project. It was in October 2008, when Richard, Tanya and Emma were travelling from Dodoma to Dar during field work on the CCAA rural project. They discussed the CCAA Urban Vulnerabilities call in which Rural –Urban interdependence was one of the themes. They decided this was both interesting and highly relevant to the existing research work in Tanzania and Malawi and decided it would be good to develop some ideas linked to the on-going CCAA Rural Project activities. They developed the proposal and submitted it to IDRC at the end of November 2008. The proposal was short listed and the team was invited to defend it in Dakar, Senegal. Dr. Liwenga expressed gratitude and appreciated IDRC/DFID for recognizing our potential and the support for the new project.

After the opening remarks, project team members introduced themselves and their areas of interest.

Mr. Chitaukali (representing the NAREC coordinator of Chancellor College, University of Malawi) then officially opened the meeting. He acknowledged the presence of researchers from Tanzania (IRA, INADES, UYOLE and HOMBOLO) and United Kingdom (NRI). He explained that he was very happy to see NAREC's involvement in the initiative in exploring rural –urban interlinkages in the face of climate change. He envisaged that the outcomes of this research will help in policy making regards issues related to climate change and rural urban linkages. He also noted that a lot of countries are struggling in developing strategies to manage challenges and opportunities raised from climate change.

Dr Blessings Chisinga, who is studying climate change adaptation policy processes, gave a short presentation (summarised in section 12). His team will work closely with the CCAA Rural project helping promote the outputs in ways which will influence policy.

2. PROJECT OVERVIEW AND BACKGROUND

Dr. Liwenga was then invited to give a brief background/ overview of the project. Dr Liwenga started by stating the main objectives of the inception workshop which were:

- To develop a common understanding of the project objectives amongst the project team
- To share reconnaissance visit reports
- To carry out detailed planning of the Year 1 activities, approaches/ tools and plans; including the urban linkage situation analysis (SA) & stakeholder consultations
- To decide on focal locations for the project activities
- To develop the draft project communication, knowledge sharing and learning plan.

Out of the five objectives above, the project team members were expected to come up with the following outcomes by the end of the workshop.

- Shared and refined understanding of the project by the project by the team
- Detailed urban linkage situation analysis (SA), approach/tools, and a time plan of when/ where the situation analysis in each country and outline of the SA report
- Detailed stakeholder consultation approach/ tool and time bound plan
- Draft project communication knowledge sharing and learning plan
- Detailed way forward plan for Year 1
- Inception meeting report

After creating a common understanding regards the inception workshop and its objectives Dr. Liwenga gave background information on the project. She explained that recent analyses of the linkages and interdependencies between rural and urban areas highlighted the dynamic flows of people, goods, services, information and money. She also added that whilst the urban-rural linkages have been partially explored in Tanzania and Malawi, the impact of the changing climate on them has not been analyzed. These interdependencies have deepened since the 1980s and as a consequence, trends and stresses at global, national and local level affecting livelihoods of urban areas have heightened implications for rural communities and *vice versa*. Rural and urban issues and planning have been typically seen as and dealt with separately. This study intends to explore the linkages between rural localities and urban centres in Tanzania and Malawi, highlighting the resilience of and strengthening the capacity of actors in these innovation systems to respond to climate change and climate variability.

The proposed methodology and approach for the implementation of this project were briefly presented by describing the Participatory Action Research process building on the Sustainable Livelihood Analysis, Innovation Systems and Resilience Thinking approach, and the link with the existing CCAA rural project. However, the new focus is the linkages between urban and rural areas in relation to agriculture and food systems and the impact of climate change on them.

3. EXPLORING RURAL URBAN INTERDEPENDENCE: CONCEPTUAL FRAMEWORK AND PROJECT ACTIVITIES

Conceptual framework

Richard started by giving an overview of the sustainable livelihoods approach and innovations systems (IS) thinking which provide a conceptual frame for the project, whilst also introducing resilience theory which offers further insights into how to strengthen the capacity of individuals, organisations and systems within the agriculture and food innovation systems to adapt to the challenges and opportunities arising from CC&CV. He indicated that a learning alliance approach will guide our action research.

This was followed by a short presentation of the overall project activities followed by year one activities as per the project's activity plan (shown in Appendix 3), with time for associated discussions. This presentation also helped take forward our thinking on the approach to project implementation. A more detailed discussion on the projects approach and the methodology is provided in sections 5 and 6 below.

Project Activities

Objective 1: To develop a collective understanding of the vulnerabilities, roles, climate-related risks and strategies among interdependent rural and urban communities, local government and other key stakeholders.

Outcome 1: Focal urban & rural communities and other key stakeholders better understand the interdependencies, relative resilience and respective vulnerabilities of their agriculture and food systems to CC&CV.

Activity 1.1. Project Inception workshop (done)
Activity 1.2. Contracts and sub-contacts (done)
Activity 1.3. Situation Analysis (started with reconnaissance)
Activity 1.4. Stakeholders consultations

Objective 2: To collectively develop and test viable options and strategies for key interdependent rural-urban stakeholders in the agriculture and food innovation systems to adapt to CC&CV;

Outcome 2: Information, training and product demands of interdependent urban and rural communities and other key stakeholders for strengthening their agriculture and food security strategies to adapt to CC&CV are identified and shared.

Outcome 3: Interdependent urban and rural communities have enhanced capacity to adapt their agriculture and food security strategies through experiential learning and testing of alternative strategies (including improved access to information; linkages with other stakeholders; understanding of potential impacts of CC&CV and resilience of system in question).

Outcome 4: Local governments & other key stakeholders have co-developed and started to practice strategies for reducing their vulnerability by addressing the climate-related risks of interdependent urban and rural agricultural and food system

Objective 3: To learn and share lessons (through process documentation) for scaling up successful strategies for strengthening capacity at individual, organizational and systems levels within the interdependent agriculture and food innovation systems in linked urban and rural settings to adapt to the challenges and opportunities brought about by CC&CV.

Outcome 5. Meaningful communication, knowledge sharing and learning by project stakeholders.

Outcome 6. Understanding of and evidence for behavioural change amongst key stakeholders in the interdependent urban and rural agriculture and food innovation systems.

4. THE INCEPTION WORKSHOP APPROACH

Tanya led a discussion and brainstorming on the approaches to be used in this inception workshop to help achieve the workshop's planned aims and outcomes (which were presented and are shown in Introduction and Section 2 of this report). The outcomes of the team's brainstorming on suggested approaches against each workshop aim are shown in Table 1 below. The approaches were then used to revise the workshop programme.

Table 1: Proposed Inception workshop approach

Inception Workshop Aims		Suggested Approach
i.	To develop a common understanding of the project objectives amongst the project team	• Presentation of work plan followed by group discussion
ii.	To carry out detailed planning of the Yr 1 activities approaches/ tools and plans, including the urban linkage situation analysis (Act 1.3), the stakeholder consultation (Act 1.4)	• Collective familiarity with the project objectives • Reconnaissance survey feedback will provide us with evidence of the urban linkages of our focal rural sites • Mapping of the potential focal system (linkages with urban centres of different scales; what are the different flows, at what scales, is there seasonality, uni/bi/ or multi directional) • What are the key research questions we want to answer? • How can we answer these questions using the situation analysis and stakeholder consultations, with whom, how, and with what tools and then we need to develop these tools

iii.	To decide on focal locations for the project activities	• Reconnaissance survey feedback and mapping of what we know about the interdependence and linkage of some urban-rural systems in Tanzania and Malawi • Group work on identifying the criteria for the selection of the focal locations • Decisions
iv.	To develop the draft project communication, knowledge sharing and learning (CKS&L) plan (Act 5.1)	• Key issues will relate to: clarity regards target partners, understanding of target partners' relevant knowledge, attitudes and practices in order to enhance, change and improve them respectively; careful processing of research products and tailoring of communication media and pathways to the aims of the strategy and target audience • Why, who, what, how, when and where • CKS&L will be continuously evolving, multi-directional • What are the aims of the CKSL strategy, who are the key actors • Then focus in on the internal (project team) CKS&L plan

Discussion

- The team agreed that there was need to consider the following: Need to agree on a project definition of 'urban' and 'rural', and explain what we are considering in differentiating the two (e.g. activities, resources, number of people/population)
- Need to define focal areas and study area (village/rural and their related urban locations)
- Need to consider distance from village to the urban centre. This matters a lot in selecting villages.
- Diversity of resources is also important.
- Linkages/interactions we do not have to consider big cities/capital cities.
- There is need to understand which centres selected villages interact with and the level of interaction.

5. FINDINGS FROM RECONNAISANCE VISITS IN TANZANIA AND MALAWI

We knew we needed to develop a clearer understanding of the flows/ inter-relationships between our existing focal rural sites and urban centres. It is beyond the scope and resources of the CCAA Urban-Rural project to work in eight rural communities and their associated urban centres in both countries. We needed, therefore, to select which of our existing sites to focus on. The reconnaissance visits aimed to help do this by providing the information to make a preliminary characterization of linkages between our current rural sites and urban centres to inform the project's activity planning and selection of rural and urban sites.

The anticipated outcomes of the reconnaissance visit were a more detailed (and locally verified) knowledge of:

- What the main urban-rural flows are eg: food staple crop (seasonal, only in bad years elsewhere); other crops (e.g. tomatoes, sunflower); labour migration, charcoal; income; remittances; agricultural input etc.
- Where the urban centres most closely associated with the rural communities are located.
- Who are the main stakeholders most closely associated with the rural communities.

The approach used was based on work by Gete et al., 2007[1], where four types of flows were considered:

- Natural resource flow eg water, sediment, nutrient, energy (hydro, biomass, wind, solar)
- Product flow (value chain) eg crop, livestock, forest products (eg charcoal) , agri inputs, manufactured goods,
- Labour/ People flow – rural- urban, urban-rural, rural-rural, urban-urban, cross-border.
- Knowledge and information flow eg market information, services

A fifth type of flow that could be considered is financial flow. In the Gete et al., 2007 framework this is included as a sub box under labour, but this is just remittances, might not cover loans, government salaries project funds etc.

Each flow has an associated stock eg the flow of charcoal from a rural community to an urban centre will be at least partially determined by the forests to which the community has access.

The checklist developed and used for the reconnaissance visits is shown in Appendix 4. It was deemed important to carry out the reconnaissance visit prior to the inception workshop to ensure the project planning at the workshop was based on locally verified understandings of the urban-rural linkages of the potential focal communities. Separate reports detailing the full reconnaissance visit findings for Malawi and Tanzania have been produced.

The reconnaissance visit selected four villages per country and investigated the spatial linkages of these villages with urban and other rural centres. In Malawi, Mphampha (Chikwawa district), Magombo (Zomba district), Nessa (Mulanje district) and Nauma (Zomba district) villages were selected for this exercise. Chikwawa and Nauma villages represented the less favoured areas in terms of agricultural potential; while Nessa and Magombo; representing the more favoured areas. In Tanzania, Nyombo (in Njombe District) and Mtula (in Mufindi District) in Southern Highland zone; representing the high agricultural potential areas and Laikala (in Kongwa District) and Mpunguzi (in Dodoma Municipal) in Central zone; representing the less favoured areas were selected.

Presentations on the reconnaissance visit findings from Malawi and Tanzania were given during the inception workshop by Miriam Joshua and Dr. Emma Liwenga respectively. The results shared were on the rural urban linkages and flows from our rural focal areas.

Presentation 1: Sharing findings from reconnaissance visits in Malawi -Miriam Joshua

As part of the initial project activities, a reconnaissance survey to two existing sites (eg CCAA Rural project focal villages) and one proposed study site in Malawi was conducted in early September 2009. The aim was to make a preliminary characterization of linkages between the current rural sites and urban centres to inform the projects planning and selection of rural and urban centres. The survey mainly involved visits to the existing study sites in Mulanje district (Nessa Village) and Chikwawa district (Mphampha village) in Southern Malawi. Information was collected and included natural resource flow, product flow, labour /people flow and knowledge and information flow exercises. The District Agricultural officers pre-arranged and facilitated village level focus group discussions and key informant interviews. Two new potential study sites in the district of Zomba were also identified. The team, with the assistance of the Zomba District

[1] Gete, Z., P. Trutmann, and Aster, D. (eds.), 2007. Fostering New Development Pathways: Harnessing Rural-urban Linkages (RUL) to Reduce Poverty and Improve Environment in the Highlands of Ethiopia. Proceedings of a planning workshop on Thematic Research Area of the Global Mountain Program (GMP) held in Addis Ababa, Ethiopia, August 29-30, 2006. Global Mountain Programme. pp 235. http://www.globalmountainprogram.org/RUL_Proceeding.pdf

Agriculture Development Office selected two potential study sites: Nauma Village to represent low rainfall areas and Magombo Village representing high rainfall areas. Preliminary results indicate that people's livelihoods in these rural sites are largely dependent on agricultural activities. Most of these agricultural activities are rain fed and most of the crops are grown once in a year.

The rural-urban, urban-rural, and rural-rural flows described by the communities are presented below as maps in Section 6 and described in Section 7. The Malawi project team have created GIS maps showing all of the flows mentioned for each village, Figures 5 and 6 shows the GIS flow map for Mphampha and Nessa villages. Due to the large file size of each of these maps, the other villages are presented in a separate document which will accompany this inception workshop report. By zooming in electronically the different labels on each flow can be viewed.

Presentation 2: Sharing findings from reconnaissance visits in Tanzania- Emma Liwenga

The main aim of the reconnaissance visit was to make preliminary characterization of linkages between our current rural sites and urban centres to inform the project's activity planning. The visits were conducted in four villages, two of the villages were involved in the CCAA Rural project and two were new villages. The visits were conducted in Laikala and Mpunguzi (in Dodoma Region) and Nyombo and Mtula (in Iringa Region). The new villages explored were thus Mpunguzi and Mtula. PRA methods were employed using the reconnaissance visit checklist (see Appendix 4) through group discussions (8 -15 people per village) for data collection. Preliminary results showed that the main rural-urban flows are: food staple crop, other crops, labour migration, forest products, sediments, livestock, income, remittances, and agricultural input etc. The urban centres most closely associated with the rural communities were identified, as were some of the main stakeholders linking these rural and urban areas.

The information collected during the reconnaissance visits was then mapped using flip charts and symbols. These maps are shown in Section 6, followed by the key which was used for constructing the maps. A description of the findings is given in Section 7.

6. MAPPING THE SYSTEMS DESCRIBED IN THE RECONNAISSANCE SURVEYS

TANZANIA

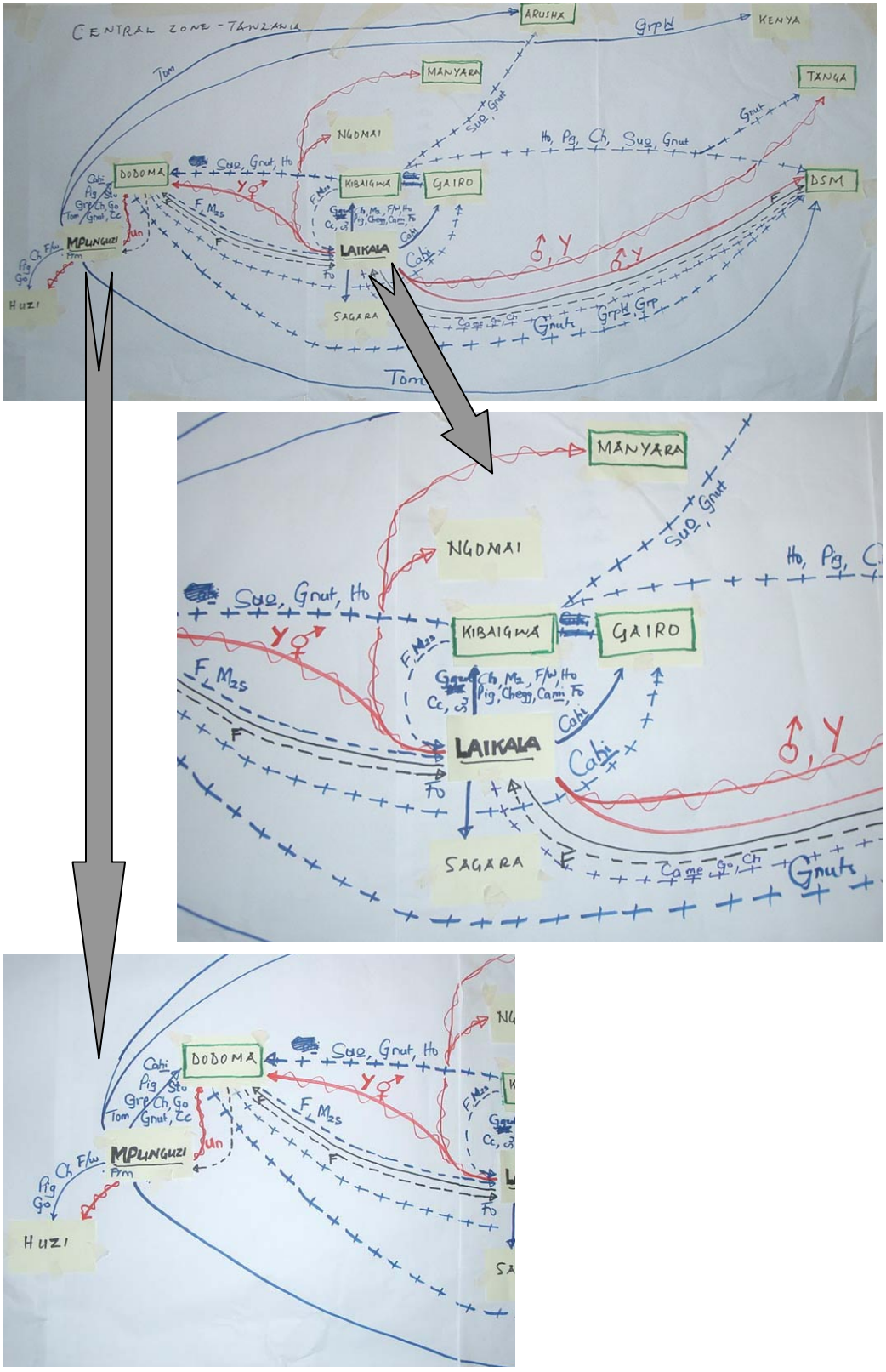


Figure 1. Map of Urban-Rural Interdependency from the perspective of Laikala and Mpunguzi villages (two low potential agro-ecological villages) in Central Zone, Tanzania: product, people, natural resource, and information and knowledge flows.

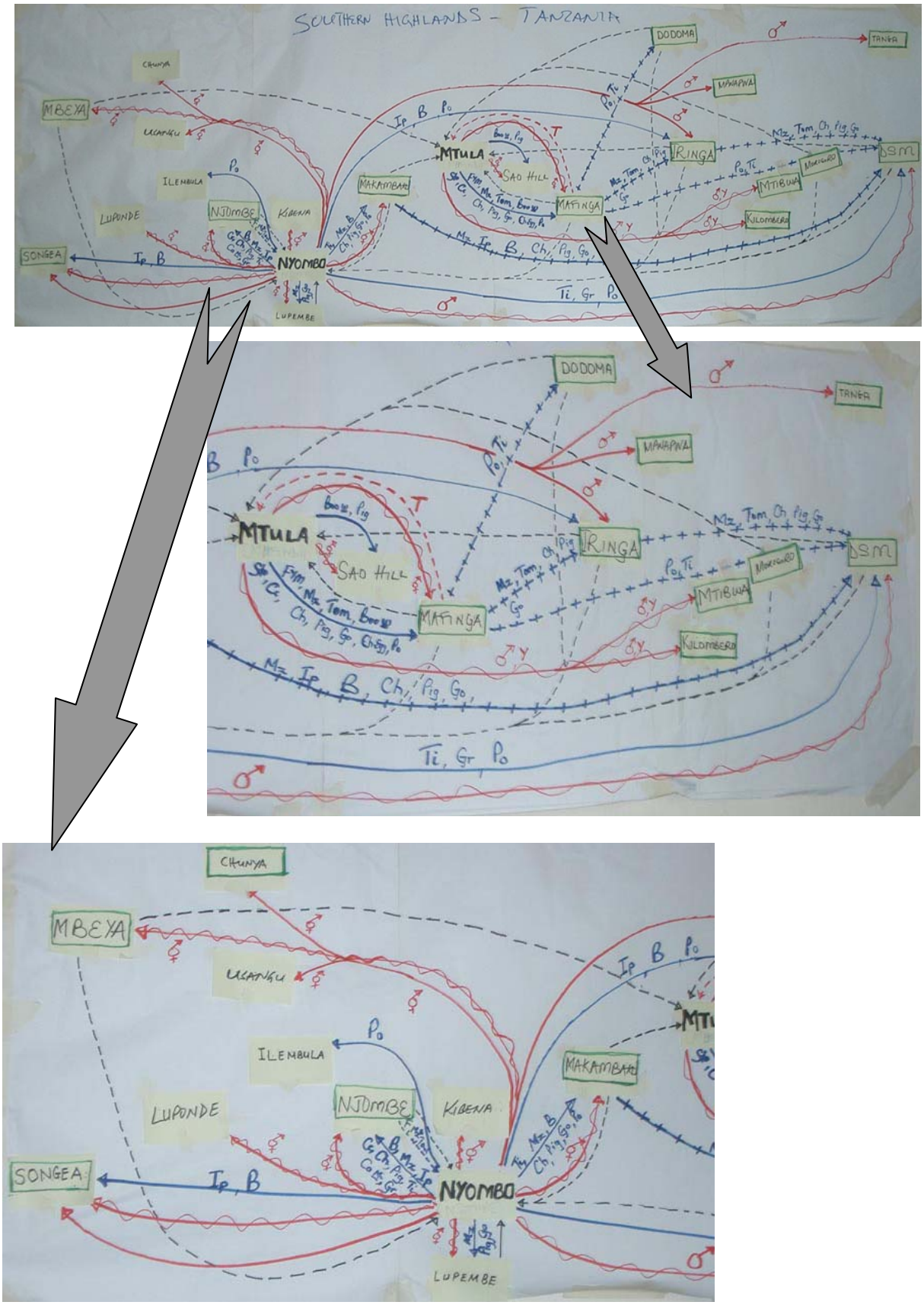


Figure 2. Map of Urban-Rural Interdependency from the perspective of Nyombo and Mtula villages (two high potential agro-ecological villages) in Southern Highlands: product, people, natural resource, and information and knowledge flows.

MALAWI

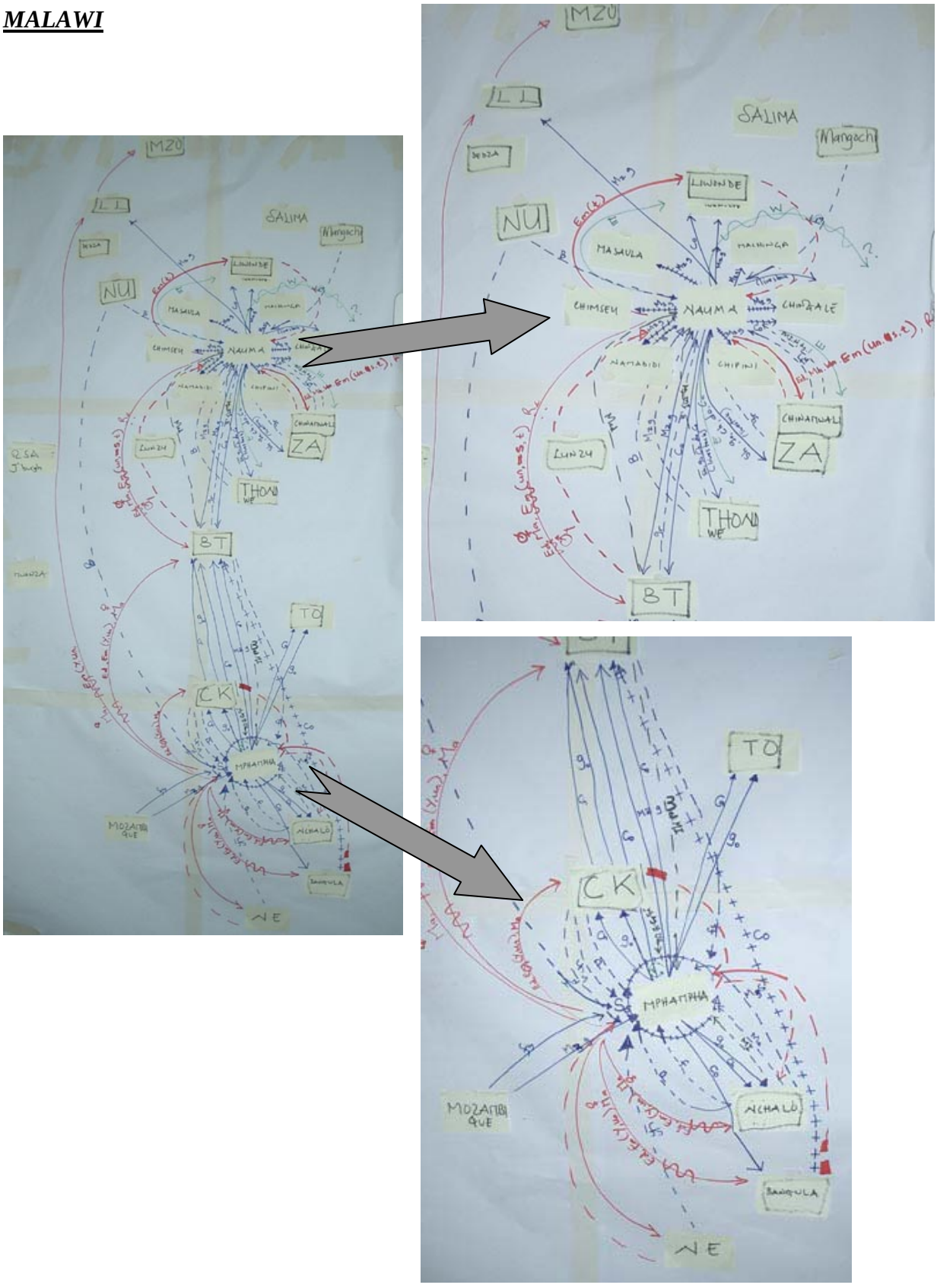


Figure 3. Map of Urban-Rural Interdependency from the perspective of Mphampha and Nauma villages (two low potential agro-ecological villages) in Southern Malawi: product, people, natural resource, and information and knowledge flows.

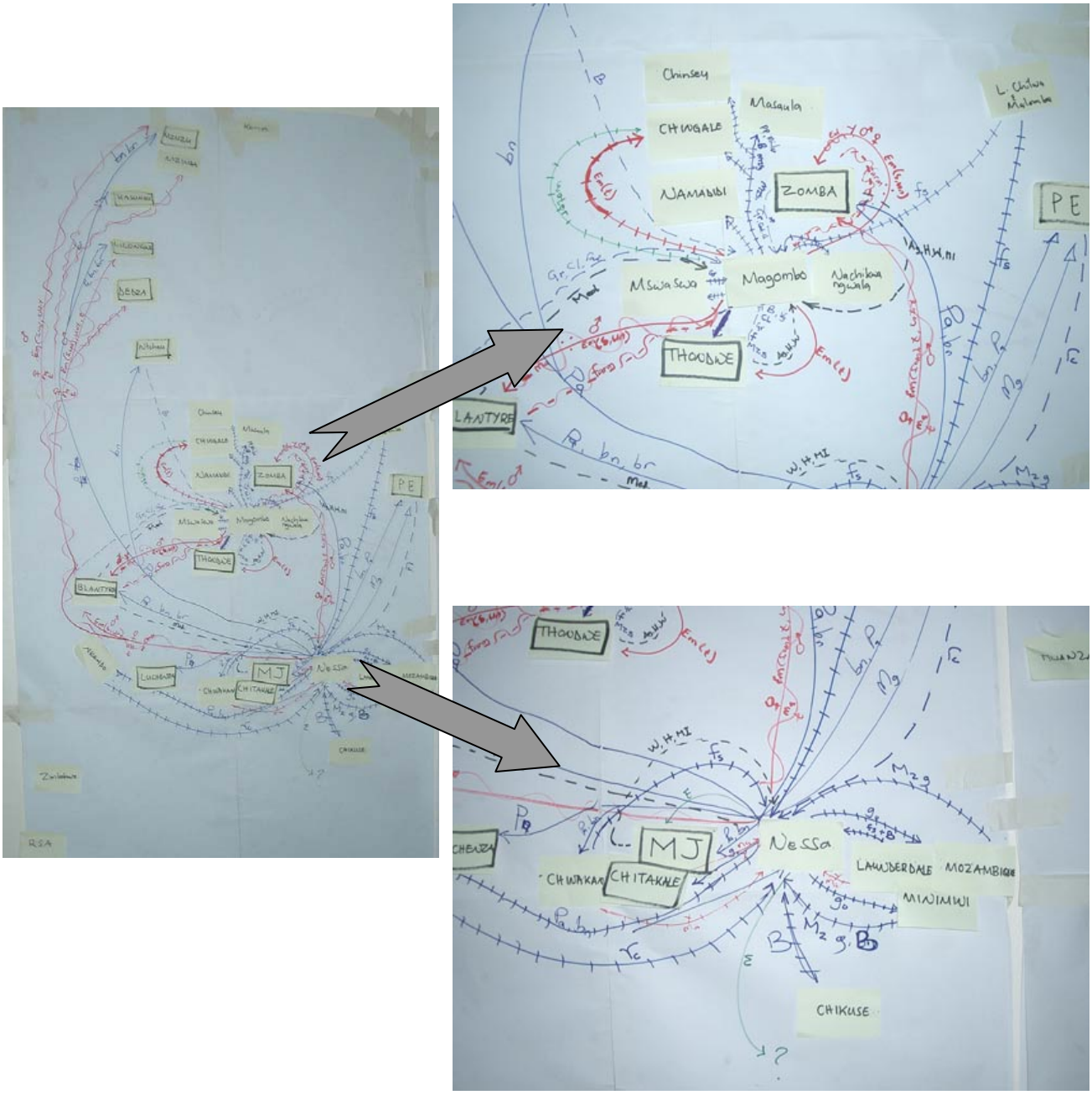


Figure 4. Map of Urban-Rural Interdependency from the perspective of Magombo and Nessa villages (two high potential agro-ecological villages) in Southern Malawi: product, people, natural resource, and information and knowledge flows.

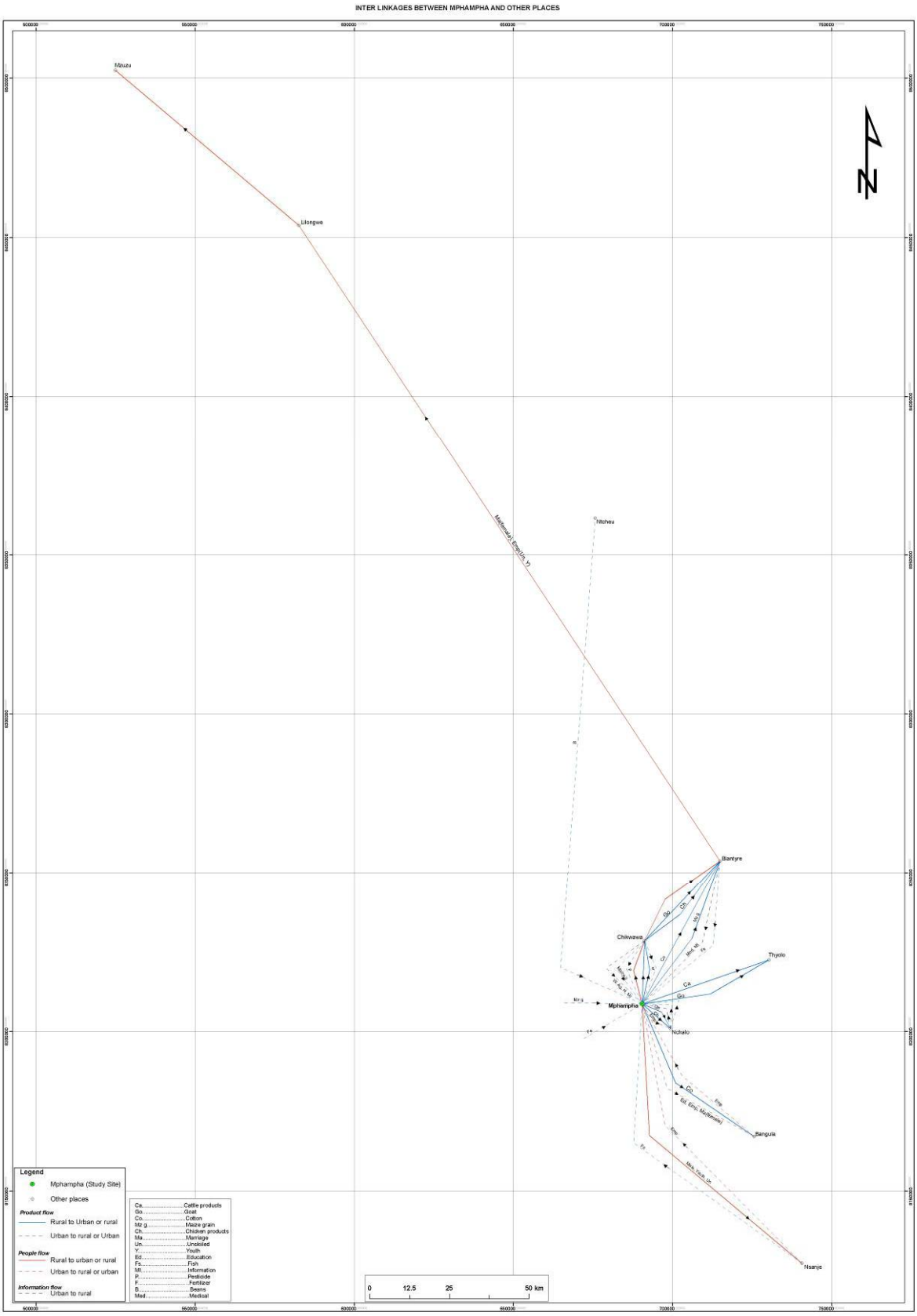


Figure 5. GIS map showing product, people, natural resource and information flows to and from Mphampha village, Southern Malawi.

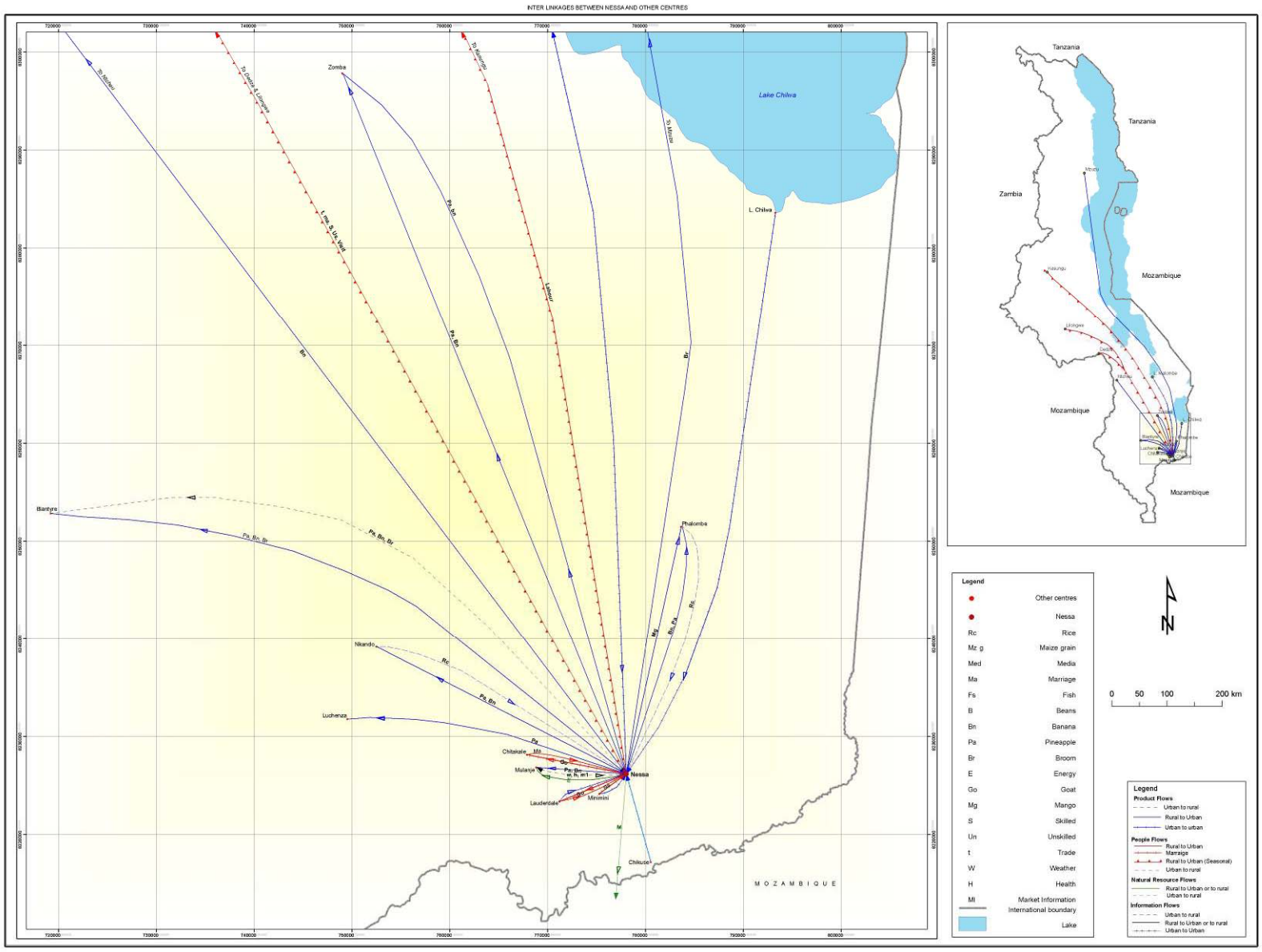


Figure 6. GIS map showing product, people, natural resource and information flows to and from Mphampha village, Southern Malawi.

The **KEYS** to the maps are shown below.

PRODUCT FLOWS: Crops, Livestock, Natural Resources, Agro-inputs
[Colour = blue]

Rural to urban or rural flows = solid line ——————▶
Urban to rural flow = dotted line - - - - - - - - - - - - - ▶
Urban to urban ++++++++++▶
N.B. In the Malawian maps Rural to rural flows are shown as ++++++++++▶
E.g.
Mzg ——————▶ Maize grain going from rural to urban
Mzs - - - - - - - - ▶ Maize seed going from urban to rural

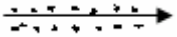
Crops	Symbol	Livestock	Symbol	Natural resources	Symbol	Agro-inputs & manufactured goods	Symbol
Maize	Mz	Cattle meet	Cam	Charcoal	Cc	Maize seed	Mzs
Maize grain	Mzg	Cattle milk	Cami	Timber	Ti	Fertilizer	F
Cotton	Co	Cattle hides	Cahi	Weaving grass	Gr	Herbicide	H
Beans	B	Goats		Thatching grass	Th	Pesticides	P
Sweet potatoes	Sp	Chicken meat	Chm	Forest fruits	Ff	Tools/implement	Tool
Irish potatoes	IP	Chicken eggs	Cheg	Sand	Sa	Salt	Sa
Millet	Mi	Pig meat	Pigm	Stones	Sto	Plastic bowls/buckets	P/b
Sorghum	So	Guinea pig meat g	G/p	Firewood	f/w		
Bananas	Ba	Rabbits meat	Rb	Forest vegetable	Fv		
Sunflower	Suo	Manure	Fym	Bush meat	B/m		
Bamboo wine	Boow			Poles	Po		
Tomatoes	Tom			Honey	Ho		
Mango	Mg			Fodder	Fo		
Watermelon	Wm			Fish	Fs		
Hibiscus	Hib						
Groundnuts	G'nut						
Grapes	Grp						

NATURAL RESOURCES FLOWS: Water, sediment, nutrient
[Colour = green]

Natural resources flow	Symbol
Rural to urban	——————▶
Rural to rural	++++++++++▶
Urban to rural	- - - - - - - - - - ▶
Periodicity - Permanent	——————▶
Periodicity - Seasonal	~~~~~~~~~~▶
Periodicity - Occasional	▪ ▪ ▪ ▪ ▪ ▪ ▪ ▪ ▪ ▪ ▶
Water	W
Sediment	S
Nutrient	N
Energy	E

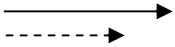
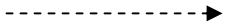
PEOPLE FLOWS

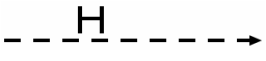
[Colour=red]

People flows (Red colour)	**Symbol**
Rural to urban or rural flows = solid line (Out flow)	
Urban to rural dashed line (In flow)	
e.g. male, youth, going from rural to urban for Un skilled (e.g. night guard)	
Gender: men	♂
Gender: women	♀
Gender: youth	Y
Time: permanent	
Time: seasonal	
Time: Occasional	
Reason employment: professional (teacher, doctor, lawyer, extension)	P
Reason employment: traders	T
Reason employment: skilled (carpenter, tailor, driver)	S
Reason employment: unskilled (guard, house girl, casual labour)	Un
Education	ED
Marriage	Ma
Unfavourable climate (drought)	Cd
Remittance collection	Rc

KNOWLEDGE AND INFORMATION FLOWS

[Colour= black]

Rural to urban or rural flows = solid line 
Urban to rural flow = doted line 
Urban to urban ++++++++++▶

E.g.  Health services going from urban to rural

Type of information	**Symbol**
Market	MI
Services: media	Med
Services: legal	Le
Services: financial	F
Services: administration/government	Ad
Services: education	Ed
Services: weather	W
Services: agriculture, livestock	Ag
Services: health	H
Services: repair/maintenance	R

7. SUMMARY OF THE MAPPING OF THE URBAN-RURAL FLOWS

7.1 Tanzanian Resource Flow Maps - *Mr. Alphonce Katunzi*

The presentation reflected on the maps (Figs. 1 and 2), which aim to visually present the information collected during the reconnaissance visits. The teams tried to map the different centres and flows of products (crops, livestock), people, natural resources and knowledge and information.

Southern Highland Zone – High agro-ecological potential
From this exercise it was seen that there were a lot of product flows from Nyombo village to Njombe and Mtula village to Mafinga and Makambako, which are mainly rural to urban flows. Nyombo being more linked to its nearby urban centres. There are people flows from rural to rural and rural to urban. Moreover, there is an apparent uni-direction flow to Dar es Salaam (the major city in Tanzania).

Central Zone – Low agro-ecological potential
The team found a different picture in central zone. There appeared to be fewer centres. Most of the flows are from villages to nearby urban centres. The main flow routes are from Mpunguzi village to Dodoma and Laikala village to Kibaigwa town. From Laikala and surrounding rural areas there is a large flow of people (particularly young men) to Kibaigwa, which is the major maize market and a small but growing urban centre. It was noted that some of the rural to urban linkages (such as links to Kibwaigwa market) were actually planned in advanced for product flows, whilst people flows are more ad-hoc. Product flows are often from villages to nearby small urban centres and then from there onto larger urban centres. From Laikala it was notable that very little flows West or South. People flows are often related to finding agricultural labouring opportunities with males going the longer distances. There are more livestock flows in the Central Zone than in the Southern Highlands.

A further analysis of the flows for each village is presented in Table 2. The flows have been categorized as outflows from the reconnaissance study site to an urban area and to another rural area; and inflows from urban areas to the study site and from other rural centre to the study site. The analysis also includes the reasons for the labour/ people flows, and describes the commodities involved in the product flows and the types of knowledge or information flowing to and from the study sites. This analysis provides a picture of the strength of interlinkages between the study sites and urban centres as well as with surrounding rural areas. A discussion of this information is presented after the table.

Summary of discussion points raised in the inception workshop following the presentations

- Some rural urban linkages are planned and some are not planned, most flows involve products and people. We have very little information regarding knowledge flows at present.
- Regarding people flows most men migrate to distant urban centres but migrations from rural to nearby urban centres is done by both men and women.
- Products and people are more easily captured as they are more tangible than knowledge and information.
- More flows of livestock in Central zone than Southern Highlands zone.

Table 2. An analysis of the rural and urban interdependent flows, Tanzania

		OUTFLOWS				INFLOWS			
		RURAL to URBAN		RURAL to RURAL		URBAN to RURAL		RURAL to RURAL	
VILLAGE	FLOW TYPE	Description	Flowing to:	Description	Flowing to:	Description	Flowing in from:	Description	Flowing from:
Nyombo *(High potential)*	PRODUCTS – DOMINANT ONES	Maize, Irish potatoes, beans & millet	Songea, Njombe, Makambako, Mbeya, Iringa, Lupembe and Dar es Salaam	Maize Goats, Pigs	Lupembe	Domestic utensils, packed food items such as salt, tea bags, sugar cooking oils etc	Njombe, Makambako and Dar es Salaam	Charcoal	
		Livestock: Cattle, Goats, Chickens, Pigs, Timber and poles		Timber, poles and Firewood	Nearby villages				
	PEOPLE/ LABOUR	Temporarily for Lumbering (Men), Charcoal making (Men), House keeping/ maids (Young women),	Songea, Njombe, Makambako, Mbeya, Iringa, Lupembe and Dar es Salaam	Working in tea plantation (M&W), Security guards (Young Men), Cultivation (M&W)	Kibena, Lupembe, Luponde and Kidegebye	Both men & women come into the village for business and searching for timber trees.	Njombe, Makambako, Lupembe and other areas		
	KNOWLEDGE & INFO.					Media and information	Njombe, Lupembe, Mafinga, Makete, Makambako Mbeya, Iringa, and Morogoro		
						Marketing, Heath, Agriculture & Weather information	Njombe, Lupembe, Mafinga, and Makambako Mbeya, Iringa & Morogoro		Kidegebye
Mtula *(High potential)*	PRODUCTS	Maize, Beans, round potatoes, tomatoes and bamboo	Mafinga and Iringa	Bamboo, Livestock (goats, chicken, and pigs)	Saohil, Matanana, Makongomi and Isalavanu	Groceries, Clothes and radios	Makambako, Mafinga and Iringa		Changalawe
	PEOPLE/ LABOUR	Employment (trade & unskilled labour) and education for the youth	Mafinga, and Mtibwa; For casual labour	Casual labour for men and youth, small business	Changalawe and Saohil	Seasonal farming and trading	Mafinga	Seasonal farming and trading	Changalawe
	KNOWLEDGE & INFO.					Media and information	Mbeya, Iringa, Morogoro and Dar es Salaam		
						Agricultural, Health, Weather & marketing info.	Mafinga, Makambako		Changalawe

Laikala *(Low Potential)*	PRODUCTS	Sunflower, groundnuts & maize. Others: cassava, legumes, sorghum.	Kibaigwa Dodoma	Firewood and charcoal	Nearby villages	Foods, Clothes, Utensils and Agricultural inputs	Kibaigwa Dodoma	Groceries	Nearby villages
		Livestock: Cattle, goats, sheep and chicken	Kibaigwa, Dodoma and Dar es Salaam						
		Charcoal	Kibaigwa						
	PEOPLE/ LABOUR	Temporarily for casual labour. ~70% of men are involved in casual labour migration especially from Aug to Dec & in bad yrs	Kibaigwa Dodoma, Morogoro, Manyara, Dar es Salaam and Tanga	Casual agricultural labour	Ngomai and other nearby villages	Business men for: grain milling, selling various utensils. Remittances from family members in towns play important role in supporting their rural families.	Kibaigwa Dodoma		
	KNOWLEDGE & INFO.					Media and information	Kongwa, Kibaigwa, Dodoma, Dar and Morogoro		Ngomai
						Agricultural, Health, Weather & marketing info.	Kongwa, Kibaigwa and Dodoma,		Ngomai
Mpunguzi *(Low potential)*	PRODUCTS - DOMINANT	Maize, grapes, bulrush millet, sesame, sweet tomatoes, onions, pepper, watermelon, chicken and goats	Dodoma, Arusha, Dar es Salaam, Kenya			Groceries, clothes, maize seed, fish, fertilizer & pesticides	Dodoma	Food	Huzi
	PEOPLE/ LABOUR	Selling horticultural products & in construction work	Dodoma	Casual labour in farming activities	Huzi			Businesses (charcoal & food) & casual labour esp. during drought	nearby villages
	KNOWLEDGE & INFO.					Media and information	Dodoma, Dar, Arusha, Morogoro and Iringa		Huzi
						Agricultural, Health, Weather & marketing info	Dodoma		

Livelihoods in the surveyed reconnaissance villages are largely dependent on agricultural activities and natural resources. Most of these agricultural activities are rain fed and vulnerable to drought or changes in rainfall patterns. In Mpunguzi they have introduced valley bottom irrigation agriculture as a strategy to supplement household food, income and reduce hunger as the village is in a low agricultural potential area with low rainfall and prone to drought. In-migration from neighbouring villages during drought years is common in this village. In Laikala the general situation is becoming worse and out-migration is common during the annual food shortage periods and drought years when most people migrate to search for casual labour and food stuff. This people out-flow affects on-farm productivity and is among the causes of longer term food insecurity in many households, although it is done as a coping strategy. Part of the small amount harvested is often sold to get basic needs and farm inputs as there is very limited access to other sustainable sources of income.

In terms of rural urban interlinkages, the survey found a close dependence of the rural areas on urban areas for crop markets, consumer goods, employment opportunities and input supplies. Rural to urban flows are mainly: food staple crops, other crops, labour migration, forest products, sediments, livestock and income.

The main urban to rural flows are clothes (e.g. clothes for all gender groups, bed sheets), utensils (e.g. cooking tools, building materials/tools), agricultural inputs (e.g. chemical fertilizers, pesticides), remittances, income and foods (e.g. rice, beans, fish, groundnuts, bananas, cowpeas, cooking oil, sugar, salt, and soap).

Migration to urban areas is viewed mainly as a temporary measure, mostly for selling produce and searching for employment. The majority of the people involved in the rural to urban labour/people flow are men: the youth mainly for education, and the middle aged mainly for trade especially in agricultural commodities, and employment (working especially as casual labourers). Many young men migrate to work as guards and domestic workers in town. Very few migrate for skilled employment. The men travel longer distances than women. The middle aged men regularly come back to their villages cater for their family. The few women involved in rural to urban migration tend to do so for: agricultural trade, migrating to work as house maids, often following their husbands who have already migrated.

Intermediate urban centers have considerable significance in the rural - urban interlinkages. In all the study sites they serve as centres for marketing of agricultural products, supply of non agricultural commodities, sources of employment and sources of information especially in relation to market and inputs. The study established that all these intermediate centers are linked to bigger centers and to the commercial city of Dar es Salaam which is the centre for information, marketing and products. Most of the urban areas also depend on the rural areas mainly for consumer goods, energy (mostly charcoal), building poles and timber which are sourced from the villages by middlemen or ferried to the urban areas by the farmers themselves for example Nyombo village has direct and indirect links to Dar es Salaam commercial city.

There are also rural to rural interlinkages existing between the study sites and other surrounding villages in marketing and provisioning of food as well as other agricultural related products and casual labour. In Mtula village there are many more product and labour flows to the surrounding villages than to Mafinga town, suggesting that in Mtula village rural to rural interlinkages may be stronger than rural – urban interlinkages. A similar situation was observed in Mpunguzi village which is strongly interlinked to Huzi rural areas as well as Dodoma city. Nyombo village has direct and indirect linkages to most of towns and cities and a few linkages to other surrounding

villages particularly for casual labour on tea plantations, and it would therefore be an interesting focal site for the project

Radio and cell-phones were the most frequently used means of sourcing information. At local level, the village leaders and agricultural extension workers play a big role in information sharing hence their significance should be recognized. The identified key stakeholder in information sharing and dissemination include politicians and village governments in all villages, Civil Society Organization and NGOs e.g. CARITAS (in Nyombo) and INADES (in Mpunguzi and Laikala) and Government extension officers (Nyombo: 1 Agricultural Extension Officer; Mtula: 1 Agric. field officer and 1 Health extn officer; Laikala: 1 Agric Extn Officer; and Mpunguzi: 1 Agric Extn officer and 1 Health extn. officer).

7.2 Malawi's Resource Flow Maps - *Mr. Evance Mwathunga*

Nessa and Magombo villages – High agro-ecological potential areas
There are major product outflows of bananas, pineapples and brooms from Nessa to Blantyre, Lilongwe, Zomba and to the Northern parts of Malawi such as Dedza, Kasungu, Mzuzuz. There are product inflows from nearby areas, and one of the main products flowing in is fish from the Lake Shores and maize from Phalombe and Mozambique. People who have migrated to nearby urban centres and more northerly parts of Malawi (Lilongwe, Zomba) return to their rural areas during the farming season for the agricultural activities. There are also some inflows of products and services /market information from nearby urban centres (e.g Mulanje).

In Magombo, there are rural-rural and rural-urban inflows and outflows to surrounding regions. Products outflows include pigeon peas, pearl millet and cattle, with most being to the nearest villages. Major urban centres are Zomba, Thondwe and Blantyre, inflows from them include groceries and clothes. People flow from Magombo to Blantyre in search of jobs during the off season.

Mphampha (Lower Shire) and Nauma (Zomba) – Low agro-ecological potential areas
Mphampha village - There are a lot of product outflows from Mphampha to urban centres. The main outflow is livestock. Identified inflows include fertilizers from Nchalo and fish from Blantyre. There is migration of people from Mphampha to Blantyre, Mzuzu and Lilongwe.

Nauma village - There are many outflows from Nauma to Lilongwe, Thondwe, Zomba and some to Blantyre. Major product outflows are maize, cotton and livestock to Thondwe. In Nauma maize grain is the major product. People migrate to Lilongwe and Zomba for educational and marriage reasons. Inflows include people who migrate back from urban areas to the villages for farming reasons, this is mainly seasonal to help with the agricultural work. Women typically follow their husbands who migrate for work, but the flow is very seasonal. Market information and health services flow from Zomba to Nauma and nearby urban centres. Media information flows in from Blantyre, most of the knowledge and information flows recorded were urban to rural and none from rural areas. There is less land pressure in Nauma than in Mphampha so it is easier in Nauma to get food locally from inside the village or from nearby villages.

An analysis of the flows for each of the villages is shown in Table 3 below. The flows have been categorized as out or inflows from urban or rural areas. The analysis also includes the reasons for the people/ labour flows, commodities involved with regard to product flows and type of knowledge or information flowing to and from the study site. This analysis provides a picture of the interlinkages between the study sites and urban centres as well as surrounding rural areas.

Table 3. An analysis of the rural and urban interdependent flows, Malawi

VILLAGE	FLOW TYPE	OUTFLOWS				INFLOWS			
		RURAL to URBAN		RURAL to RURAL		URBAN to RURAL		RURAL to RURAL	
		Description	Flowing to:	Description	Flowing to:	Description	Flowing in from:	Description	Flowing from
Nessa *(High potential)*	PRODUCTS – dominant ones	Pineapples, Bananas and Brooms Mangoes to Phalombe	Blantyre, Phalombe, Mulanje, Zomba, Luchenza, Mzuzu, Lilongwe, Kasungu	Goats	Launderdale, Nkando, Minimini, Chinakanaka	Maize grain	Mozambique	Rice	Nkando
						Groceries etc	Mulanje and Blantyre	Fish	L. Malombe & Chilwa
	PEOPLE/ LABOUR	Marriage and Trade (Employment) for women Employment (Trade, skilled & unskilled) for men Visits for both genders (Seasonal flows for both gender)	Zomba, Blantyre, Mzimba, Mzuzu and Dedza						
	KNOWLEDGE					Media	Blantyre		
						Marketing, Heath, Agriculture & Weather information	Mulanje		
Magombo *(High pot.)*	PRODUCT	Beans, Millet, Pigeon peas, Maize grain, Livestock (goats, chicken, doves, ducks and pigs)	Thondwe	Beans, Millet, Pigeon peas, Maize grain, Livestock (goats, chicken, doves, ducks and pigs)	Namadidi, Mswaswa, Nachikwangwala Chingale, Masaula, Chinseu (More connections to rural markets than urban)	Groceries, Clothes and radios	Blantyre	Fish	L. Chilwa & Malombe
						Beans	Ntcheu		
						Groceries, clothes, maize seed and radio	Zomba		
						Beans, clothes, fertilizer, maize seeds, groceries & vegetable	Thondwe		
	PEOPLE/ LABOUR	Employment (trade & unskilled labour) & marriage for women Employment (skilled & unskilled) for men Education for the youth (seasonal flows)	Thondwe, Blantyre and Zomba	Employment (trade) for both men & women Casual labour for men and youth	Chingale Thondwe estates	Seasonal farming	Blantyre, Zomba		

	KNOWLEDGE					Media	Blantyre		
						Agricultural, Health, Weather & marketing information	Thondwe and Zomba		
Nauma *(Low Potential)*	PRODUCT	Maize grain and cotton	Blantyre	Maize grain	Chingale, Masaula, Chinseu, Chipini & Namadidi	Seasonal farming	Blantyre, Zomba & Liwonde	Groceries	Chingale, Masaula, Chinseu, Chipini & Namadidi
		Livestock (chicken, goats etc)	Thondwe & Zomba						
		Cotton, maize grain	Liwonde						
	PEOPLE/ LABOUR	Employment (skilled & unskilled) Training for youth	Zomba, Blantyre and Liwonde						
	KNOWLEGDE					Media	Blantyre		
						Agricultural, Health, Weather & marketing information	Thondwe, Blantyre and Zomba		
Mphampha *(Low potential)*	PRODUCT - DORMINANT	Goats & chicken	Chikwawa	Sorghum	Surrounding villages	Maize seed, fish, fertilizer & pesticides	Nchalo		
		Goats, cotton, maize grain & cattle	Blantyre						
		Cattle &goats	Thyolo & Nchalo			Beans	Ntcheu		
		Cotton	Bangula						
	PEOPLE/ LABOUR	Employment (unskilled & skilled) for men and marriage for women (seasonal flow)	Blantyre, Nchalo, Bangula, Lilongwe, Mzuzu. Chikwawa & Nsanje						
	KNOWLEDGE					Media	Blantyre		
						Agricultural, Health, Weather & marketing information	Chikwawa		

Product, labour/people and knowledge/information flows occur in all the reconnaissance study sites, with clear rural urban interlinkages (Table 3). The rural areas are dependent on the linked urban areas for crop markets, consumer goods, employment opportunities and input supplies. The spheres of influence for all the villages extend into urban areas as far as Lilongwe and Mzuzu in Central and Northern regions respectively. For example, people in Nauma and Magombo villages mostly mentioned Thondwe market located in a peri-urban area of Zomba city as their main market where they sell produce and source their basic needs. People in Nessa travel to as far as Mzuzu with their products. The study established that Blantyre commercial city is the centre which is important for all the study sites for marketing of agricultural products, supply of non agricultural commodities, source of employment and source of information especially in relation to media. Most of the urban areas depend on the rural areas mainly for consumer goods (maize grain, beans, pigeon peas, fruits, meat) and energy (mostly charcoal and firewood) which are sourced from the villages by middlemen or ferried to the urban areas by the farmers themselves.

However, it should noted that these rural to urban interlinkages are stronger in Nessa and Mphampha villages. The important rural to rural interlinkages in Magombo and Nauma villages outweigh the rural-urban interdependencies. This factor in addition to the fact Nessa and Mphampha villages are already involved in the CCAA rural project formed the basis for the decision that Nessa and Mphampha should become the focal urban project study sites.

Intermediate or smaller urban centres are also important in the flows in addition to the major cities, and hence urban centre of different settlement sizes have been selected as the focal urban sites. For example, Nessa village in Mulanje and Mphampha in Chikwawa are also linked to other smaller towns such as Chitakale and Luchenza for Nessa and Nchalo and Chikwawa for Mphampha village, in addition to major towns. This is probably because these towns provide short distance demand and supply of the flows involved.

Migration to urban areas seems to be a temporary measure at a low scale. In most cases, the major purpose behind these seasonal movements is to sell local produce although there was also mention of people moving to towns and urban areas in search of employment. Migration is mostly selective in terms of sex and age, a common trend in developing countries. The majority of the people involved in the labour/people flow are men: the youth mainly for education, while the middle aged flows are mainly for trade especially in agricultural commodities and employment (working especially as casual labourers). Many migrate to work in unskilled jobs such as guards, drivers in construction industries and housekeepers. Very few migrate for skilled employment. The men cover longer distances than women. The few women involved in the migration are involved in agricultural trade, migrating to work as house maids and mostly following their husbands. The women mostly come back to their villages during farming season and harvesting period for food production.

Out migration from rural areas is common during the hunger period (December to February) and in drought years when most people migrate in search of food stuff. This movement can affect on-farm productivity as December to February is a critical period for farming activities, and so can compound longer term food insecurity problems although the migration strategy itself is part of a short-term household food security coping strategy. Despite harvesting little for household consumption, farmers still sell some products to buy basic needs because of limited access to other sustainable sources of livelihoods. The peak season for selling of agricultural products is August to November when farmers sell to get money for farm inputs. The seasonal pattern of employees returning to rural areas for farming activities is felt by some urban industries. However, others such as construction have less work during the rainy season which fits well with this seasonal migration pattern.

Summary Discussion

- *Q*: The link between Magombo and Zomba is not clearly shown in the map. *Ans:* Thondwe is closer to Zomba, and most products flow from Thondwe to Zomba. Magombo is more close to Thondwe than Zomba. Thondwe is the food product shopping town for those living in Zomba town, which explains why many of the product flows stop at Thondwe, although the consumption of those products is often actually happening in Zomba town.
- *Q:* Low potential side: maize is main product what is the main product from Mphampha. *Ans*: Mainly cotton and livestock.
- There is a high demand for the higher value perishable horticultural products in the mega-cities eg pineapple (Malawi), tomatoes (Tanzania) and grapes (Tanzania). Does that demand make the flow more organised and pre-arranged for these high value products which are travelling long distances versus the lower value staple crops which are flowing in a much small radius. Mulanje is one of the few places where pineapples are grown in Malawi because of the climate, hence why they flow such long distances from there.
- Natural resources flow and information and knowledge flows are likely to be under represented on our maps compared to product flows. This may be because we are not sure of the direction of the natural resource flows. There must be some other methods to help explore knowledge and information and natural resources flows, we need to access them and explore these issues more. Knowledge may be better represented by the idea of networks than flows, and there are issues of formal and informal knowledge. Informal knowledge is very important in agricultural systems and we will need to make sure we capture it.
- Where do we think the reasons described in the table lie and what is the scale of these drivers (are they local or global drivers). This will be important for influencing policy issues related to rural and urban centre. It may be easier to influence local or perhaps national decision makers as opposed to those behind global drivers and flows.

8. TOWARDS DEFINING OUR FOCAL SYSTEM

This session involved discussions on the definition of a focal system and identification of criteria for selection of the focal systems that involves food and agriculture. This discussion was followed by decisions on locations for the project activities.

The discussion started by brainstorming on what are the interesting focal systems based on the mapping exercise. But it was thought that before continuing, it would be good to have a clear definition on focal system. Defining the focal system is part of the process of identifying focal system. We are trying to understand what the system is made of, what are the attributes, connections and boundaries of the system. One of the flows in the mapping diagrams could be taken as a focal system. But we cannot take the whole map and manage to work on it. The main issue is to think on how we are going to analyse, understand and link it with issues related to climate change and variability. Everyone was given an opportunity to suggest preliminary ideas for focal systems for the project. These ideas were then grouped, and the result is shown in Table 4 below. The issue of whether we want the system to have either a geographical or a commodity focus or both was raised. The concept of the focal system was then developed further by the team and the resulting thinking is shown in diagrammatic form in Figure 7 below.

The team then developed a list of criteria which should be used to help select the focal system. These are shown after Figure 7. Then criteria for the rural and urban sites were discussed, and the

fact that our approach to understanding the Focal Systems needs to be comparable across countries and needs to target women and youth. A table of the potential sites was then developed, for Tanzania some decisions still need to be made, but for Malawi the sites were selected (Table 5). In Malawi the high potential selected rural site was Nessa and the linked urban centres were Blantyre, Mulanje (Chitakale) and Luchenza; the low potential selected rural site was Mphampha and the linked urban centres were Blantyre, Nchalo and Chikwawa.

Table 4: Grouping of the brainstorming on preliminary ideas for focal systems

A few suggestions for our focal system	• Agricultural based system linking rural and urban centres • Food and agriculture system of …… district(s) and its key associated urban centres. *Why – because local government are a key decision maker and local partner* • Resilience of the urban food staple (eg Maize now), - what will CC mean in urban food and rural agriculture (tz &mw)
Flows and the interaction within the systems	• Agriculture, labour/ people & information focal system • Communication system – *knowledge effects opportunities* • Product climate related linkages • Product and knowledge for both areas – *they are directly and indirectly linked* • Understanding the geographies of agriculture and communication within the interdependent urban and rural geographical spaces –*there are linkages between urban and rural spaces* • Products movement from rural to near urban
Possible product focus to the systems	• Pineapple system - *economic gains, transportation* • Understanding the potato industry – *it is important for rural and urban* • Maize system for high and low potential areas for Iringa and Dodoma regions • Implications of horticultural crop production on urban food security and rural livelihoods (tz & mw) • The flow of horticultural product from rural to urban
Possible actors to focus on	• Target: rural-rural, rural-urban • Impact of drought on **women's** roles in product and people flows and the social implications (tz & mw) • Seasonality of **unskilled labour** flows and the impacts in urban & rural areas – how will CC increased or decrease these (mw & tz)
Spatial and other criteria to delimit the system	• Boundaries: Centres-Rural & Urban within specific regions • Rural-Urban; CC related; agriculture & food • Rural-rural interlinkages in terms of flows of people – *because this affects the agricultural potential of areas*

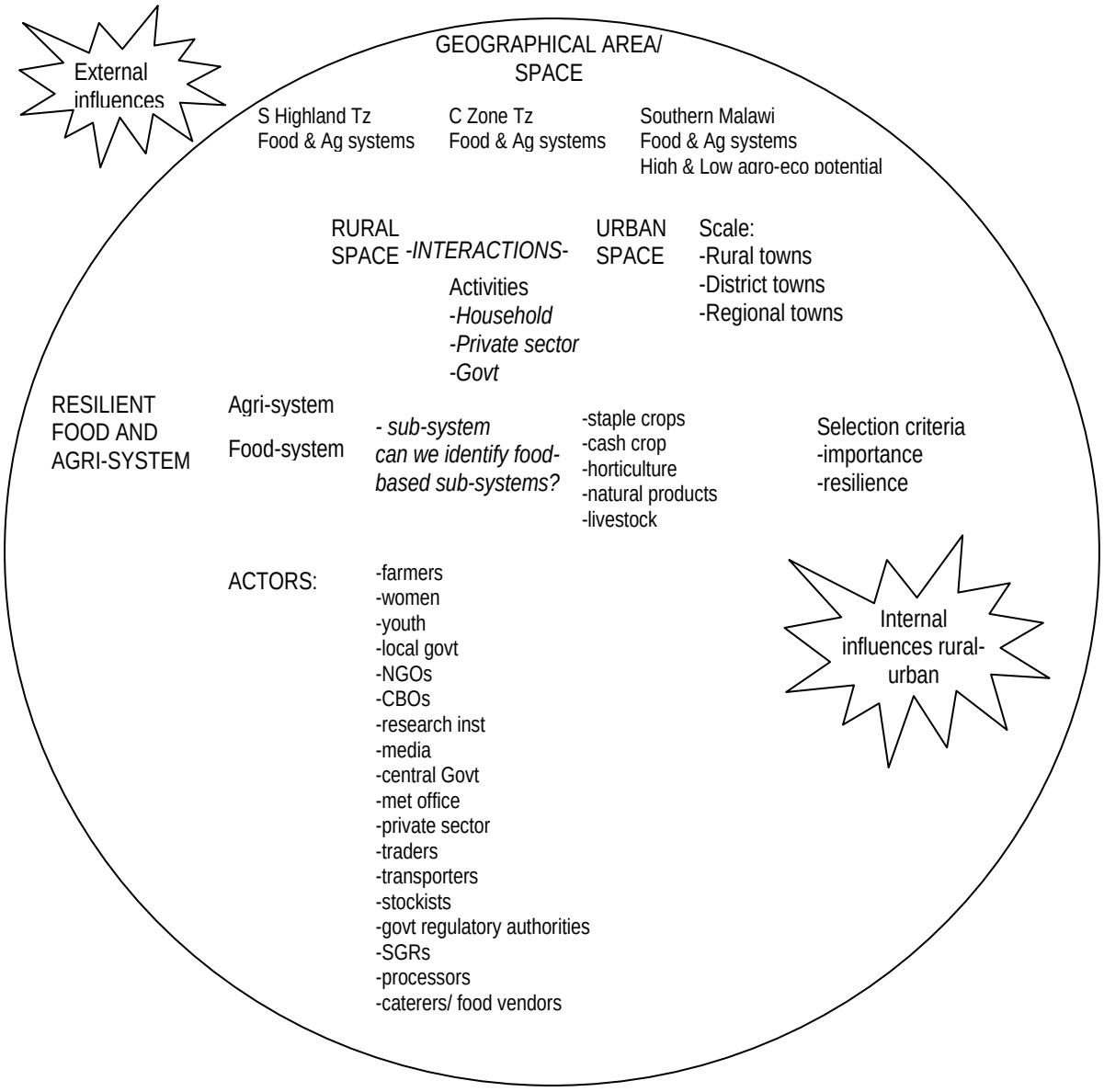


Figure 7. Characterizing the potential focal systems

Criteria for selection of the focal system

- Rural-Urban
- Climate change related
- Agriculture and food
- Take in the major flows (natural, product, people, information & knowledge)
- Include range of scales of urban centres
- Systems in low potential and high potential areas
- Our approach to understanding focal systems to be comparable across countries
- Targeting women and youth
- Project resources and cost implications of distances etc

Criteria for the Focal Sites
This session concentrated in identifying criteria for selecting locations. Suggested CRITERIA for selecting locations for rural and urban locations are;

Rural (Village)
- Potential for food and agricultural flows
- Building on existing CCAA - because of the depth of information already collected in those sites, and the relationships that have already been built up over the last 2 years
- Accessibility and high interaction/ connection to urban areas
- Comparison of a high and a low potential area

Urban
- Intermediary size
- Range of sizes (small, big) hierarchical

Our approach to understand the Focal Systems needs to:
- be comparable across countries;
- target women and youth.

After using the above criteria to select potential locations, the plan is to select one rural community in a high agro-ecological potential area, and a range of sizes of urban centres which are linked to that rural community. The small town is likely to be in same district as the rural village and then the regional town. The same will be done for the low agro-ecological potential area.

For Malawi the sites were selected, but in Tanzania there was debate as regards whether Banyibanyi or Laikala village should be selected in Central Zone. Laikala is one of the CCAA Rural project villages and typical of a less favoured semi-arid village, while Banyibanyi is a larger maize producing village with stronger product flow connections to Kibaigwa but perhaps less of a typical less favoured semi-arid village.

Table 5: Proposed list of potential sites

Zones	Rural	Linked Urban Centres
Tanzania		
SHZ (High potential)	Nyombo (Njombe district)	Njombe, Makambako, Iringa
	Mwitikilwa (Mufindi district)	Mafinga and Iringa
Central Zone (Low potential)	Laikala (Kongwa district)	Kibaigwa and Dodoma
	Banyibanyi (Kongwa district)	Kibaigwa and Dodoma
Malawi		
High Potential	Nessa (Mulanje district)	Blantyre, Mulanje (Chitakale) and Luchenza
Low Potential	Mphampha (Chikwawa district)	Blantyre, Nchalo and Chikwawa

9. RESEARCH QUESTIONS AND APPROACH

We felt that we needed to think about and share the research questions that the project should be answering. Another brainstorming exercise was done, with all team members being asked to think about two research questions that the project should answer bearing in mind the focal system options. These research questions were then grouped into five main themes: Characteristics of Rural-Urban Linkages; Factors/ Drivers of Change; Perceptions on CC&CV; Impact of CC&CV on Rural-Urban Linkages; Adaptation strategies. The full list of the questions generated are shown in Table 6, and these will be used to develop the situation analysis method and approach.

Table 6: Brainstorming on Research Questions - Which we think the project should be answering

Themes	Research Questions
1. Characteristics of Rural-Urban Linkages	• What is the magnitude or strength of these rural urban linkages? • What are the roles played by intermediate cities to rural livelihoods? • How is information and knowledge shared within Rural Urban Food/ Agricultural systems? • How does urban agriculture affect interdependence between urban and rural agriculture and food systems • Who are the key actors? • How does urban food price and demand affect rural food systems? • What characterizes rural and urban governance in these areas? • What are the roles played by the nearby urban centres to rural product flows? • How does the rural food system affect interdependence between rural agricultural and urban food systems? • Which agricultural enterprises are of importance in your interdependency with the rural urban centres, and how? • What are characterising the key rural urban linkages?
1.1 Urban Food Systems	• Urban food systems: Build up a picture of the staple meals eaten during the year. Is there seasonality in the food systems or quantities? • Urban food systems: Build up a picture of where urban communities obtain their food from throughout the year, do they use raw products and prepare at home, if so where purchased, or do they eat already prepared food e.g. bread, mama tilia (small-scale informal caterers and vendors)? • How do urban dwellers cope/adapt to challenges arising from CC & V with regard to food systems? • How are the urban food systems being affected by migration? • What are the factors influencing urban food systems?
2. Factors/ Drivers of change	• What are the factors influencing rural urban linkages? • What is the role of CC and vulnerability on the rural urban linkages? • What factors are influencing the resilience of food and agricultural systems? • What are the driving forces influencing the trends? • What are the trends, nature and intensity of rural urban interactions?

3. Perceptions on CC&V	• If CC increases, how do they see this affecting their urban livelihood in 10 years time? How might they and other urban dwellers adapt? Which actors will be key in helping activate these urban adaptation strategies? • What do different urban groups know about climate change? How have they learnt about this? • What impacts will CC have on their urban lives? • How do urban dwellers perceive CC&V?
4. Impact of CC&V on Rural-Urban Linkages	• How are the existing agro-based food systems linking focal rural urban centre influenced by CC & V? • How is and how will CC&V influence rural urban interactions and what are the implications for vulnerable groups in food and agricultural systems? • What is the implication of CC&V on livestock production and enterprises? • Does the impact of CC on agriculture and food systems contribute to urban vulnerability? • Impact of CC&V on urban flows • In what ways does CC&V affect your interdependency with the rural urban community with respect to food and agriculture? • What is the effect of CC on the rural urban linkages? • What are the impacts of climate change on product flows?
5. Adaptation strategies	• How to strengthen capacity of highly mobile groups? • What are the potential strategies to be adopted by the various actors to increase the resilience of the agricultural food linking these areas for better adapting to CC&V? • Which interdependencies between rural and urban in agriculture and food, which give high chances for the project to have an impact? • What could be some challenges for key rural-urban stakeholders in agricultural focal system to adapt to CC&CV? • How can your interdependency with rural urban in terms of your livelihood be improved, taking into consideration the CC&V?
5.1 Resilience of systems	• How can resilience of horticultural crops be improved?
5.2 Opportunities from CC&V	• What are the opportunities raised from CC in terms of product flows to rural areas? • What are the opportunities raised from climate change in rural areas?

10. COMMUNICATION STRATEGY

Although in the original workshop aims we had hoped to develop the draft project communication, knowledge sharing and learning (CKS&L) plan, the flow mapping exercise took much longer than originally anticipated, so time constraints meant it made better sense just to focus on developing the Project's Internal Communication Strategy. This session explored acceptable means of communication to ensure the smooth implementation of the project. Mrs. Stella Ndau led the team in preparing a communication strategy by identifying the main objectives of the strategy and these were

- To enable smooth running of the project
- Systematic reporting, planning, monitoring of project
- Sharing of information
- Having a common understanding of the project

The draft internal communication plan for the project team members is shown in Table 7. It starts by identifying responsible person, the kind of information that needs to be communicated, when and how that information's is required, and the channel of communication.

Table 7: Project Communication Plan

Who	What	How	When	Channel
Team leader	Progress report	Report writing	Bi-annual January and July Annually July	E-mail, phone, face to face
Country	Administrative, coordination, contracts	Regular		E-mail, phone, face to face
				Website
All member	Discussion	D-list		E-mail list
	Random information			
Team leader, Country and zonal leaders	Financial information			
Country team leader	Regular update	Writing	Monthly	E-mail

While preparing the communication strategy the team felt it was important to have an overview of the project team and responsibilities for each team member as presented below in table 8, and depicted in Figure 8. Contact details of all the team members are included in Appendix 2.

Table 8: Overview of the project team

Role	Who
Overall project team leader:	Emma Liwenga (IRA)
Communication Country leader/ manager:	Tanzania: Madaka Tumbo (IRA) Malawi: Miriam Joshua (ChC)/ Cosmo Ngongondo/ Evance Mwathunga(ChC) UK: Richard Lamboll, Tanya Stathers (NRI)
Zonal coordinators:	Tz: SHZ, Nsemwa (Uyole ARI); Central Zone, Katunzi (INADES)
Team members	Tz: Swai (Hombolo ARI), Mwanga (Hombolo Local Govt), Majule (IRA), Gwambene (IRA) Mw: Cosmo (ChC), Evance (ChC), Stella (ChC), Joseph (CURE) UK: Valerie (NRI)

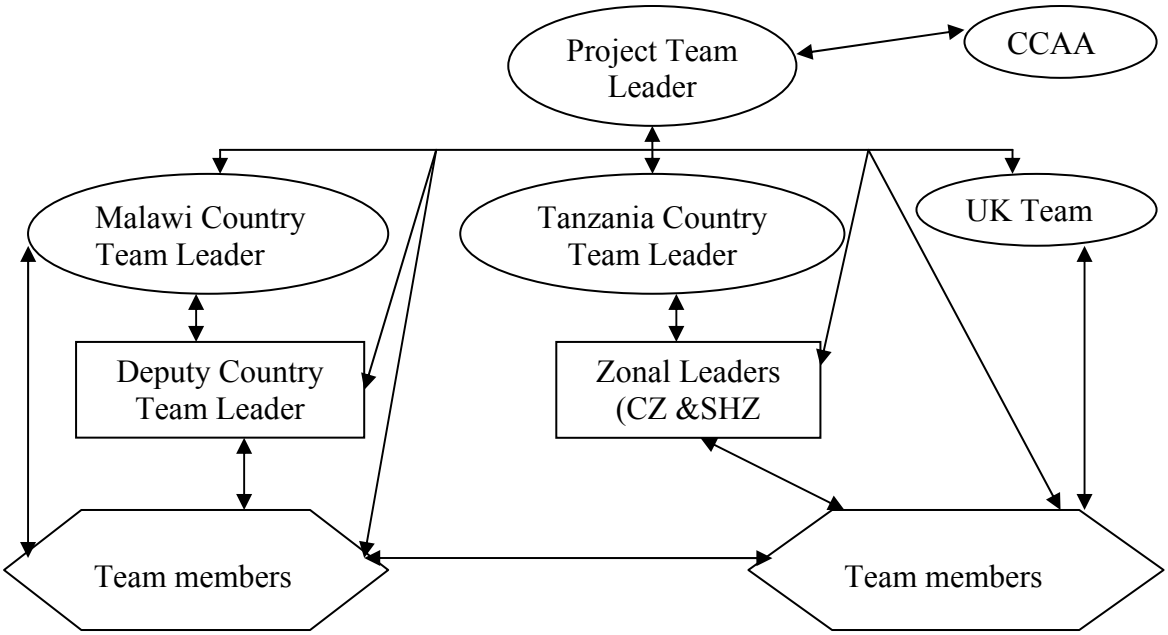


Figure 8. Overview of project team

11. WAY FORWARD

The team then listed the project activities that needed doing during the next 6 months and put them into a workplan as shown in Table 9.

Table 9: Workplan for October to March 2009

Activity	Months						Responsible Person
	Oct 2009	Nov 2009	Dec 2009	Jan 2010	Feb 2010	Mar 2010	
Creating and sharing the inception workshop report							Team leaders
Briefing workshops in the study sites							Country team leaders/ zonal team leaders
D-group							Richard
Create project brochure/ flyer							Tanya & Stella
Creating the project website							Project team leader
Situation Analysis Tz*							Country team leaders
Situation Analysis Mw*							Country team leaders
Brainstorming and sharing regards stakeholders							Whole project team
Progress report for the project's first six months							Emma/ Madaka Tanya/Richard Evance/Miriam
Send next financial invoice							Emma
Participatory video training for Malawi							Miriam, Richard
Draft knowledge sharing and communication plan							Stella
Development of project outcome mapping							Emma/ Tanya/ Stella/Evance, Nsemwa
Continuous literature review and method for updating and sharing information from it							??

***** NB: there is need to electronically share the checklist and approach (which will build on the Research Questions identified in this workshop) as we start to develop it

12. AFRICAN RESEARCHER BEHIND THE HELM OF ADAPTATION POLICY: IDENTIFYING POLICY SPACES

A presentation made by Blessings Chisinga, Chancellor College, University of Malawi

Blessing Chisinga is working on another CCAA funded project and he took the opportunity of our inception workshop to come and brief the team members on his project which will interact with our CCAA Rural Project. The following summarises his presentation.

Aim and objectives

The idea is to come up with a framework for investigating CC adaptation policy processes in Africa. Develop mutually learning relationships between various experts dealing with CC&CV in Africa. They plan to identify case studies in the CCAA Rural project and to assist in the promotion of the outputs to help them influence policy and ensure they are fed into policy processes in the host country. They are focusing on CCAA projects in Kenya, Malawi and Tanzania, and their project will finish in August 2010.

Understanding policy spaces

Policy spaces are opportunities, moments and channels where citizens can act to potentially affect policies, discourses and decisions and relationships that affect their lives and interests. Policy space is the key concept for this project. They are looking at what opportunities and challenges exist, and what can be done with them. And the main assumption is in making sure that the results are politically acceptable it is important to have expertise and channels of communication. He described 6 types of policy spaces

- Invited spaces e.g. stakeholder meeting, NAPA
- Popular spaces e.g. protests, demonstrations
- Practical spaces e.g. field based projects by NGO's/ field work providing opportunities for witnessing by policy makers
- Bureaucratic spaces e.g. formal
- Electoral /political spaces
- Conceptual spaces or discursive spaces e.g. places to introduce new ideas into debate

Justification

Understand how different stakeholders are engaged in policy processes. Not all stakeholders are involved in policy making processes and sometimes it is hard to understand policy making processes.

Conceptual framework

Policy - research processes are not linear and rational, they are dynamic two way processes. The project has three main themes;

1. Narratives and evidence: what are the key narratives, not all stakeholders looking at the same problem in the same way
2. Politics and interests:
3. Actors and institutions

Research Methodology

- Training on policy processes (methodology and conceptual framework)
- Literature review
- Case study design
- Learning event

Post-presentation discussion
Q Dr. Emma: When did the project start and which institutions are involved?
A: April 2009 ends August 2010 and the project is dealing with crop diversification issues in Malawi, and soil and water management conservation techniques in Tanzania. The project team will be meeting soon to look at modalities of engagement (stakeholder's engagement).

Q Tanya: Which are the selected case studies in Malawi and what kind of techniques will be used to interact with the project teams?
A: In Malawi we are concentrating on crop diversification, currently we do not have further details on where, but we have been in contact with various projects including CCAA Tanzania-Malawi project (Note: Blessings mentioned that in Tanzania for our CCAA rural project the case study focus was on soil and water conservation and he highlighted the spring jembe work).

APPENDICES

Appendix 1: Inception Workshop Programme

Date	***Day***		***Activity***	***Responsible***
23/ 9	Wednesday	12	Welcome by project leader Introductions Opening remarks from the NAREC Director Overview of workshop aims, outcomes and programme Background to the project	
		pm	Developing a common understanding of the project objectives -Overview of the action research project -Revisiting the proposed methodology (Sustainable Livelihoods Approach, Innovation Systems, Resilience Thinking, Learning Alliances, Action Research) -Aims and Approaches -Revising and agreeing the programme	
24/ 9	Thursday	8 am	Sharing of findings from the reconnaissance visit, regards the urban linkages and flows from our rural focal areas - Malawi -Tanzania	
		HEALTH BREAK		
			Mapping of the systems described in the reconnaissance surveys	
		LUNCH		
		pm	Mapping of the systems described in the reconnaissance surveys - continued	
25/9	Friday	am	Finishing off of the resource flow maps and presenting them	
		LUNCH		
		pm	Discuss, define and decide on criteria for selection of the focal systems (*have to involve agriculture and food*) and locations Decisions on focal systems	
			Decision on locations for the project activities	
26/ 9	Saturday	am	• What are the key research questions we want to answer? • *How can we answer these questions using the situation analysis and stakeholder consultations, with whom, how, and with what tools and then we need to develop these tools* • *Come up with an initial checklist of issues* • *Development of approaches/ tools and plan for the Urban linkages situation analysis*	
		pm	• Project internal communication, knowledge sharing and learning plan (project team) • Development of the Way forward year one (Yr 1) plan	
27/ 9	Sunday		Participants depart	

Appendix 2: List of Workshop Participants

S/ NO	NAME	POSITION/ ORGANISATION	EMAIL	ADDRESS/TELEPHONE
1.	Mr. Lebai T.H. Nsemwa	**Plant Pathologist** Agricultural Research Institute, Uyole	nsemwalth@yahoo.co.uk	Southern Highlands Zonal Agricultural Research and Development Centre P.O Box 400, Mbeya Tel/Fax: + 225-25-2510065 Mob: +255-754-895994
2.	Dr. Emma Liwenga	**Lecturer** Institute of Resource Assessment University of Dar es Salaam	liwenga@ira.udsm.ac.tz	P.O. Box 35097, University of Dar es Salaam Tel: +255-22-2410144 Fax: +255-22-2410393 Mob: +255-784-477091
3	Mr.Gwambene Brown	**Research Assistant** Institute of Resource Assessment Uni. of Dar es Salaam	gwambene@gmail.com	P.O. Box 35097, University of Dar es Salaam Tel: +255-22-2410144/2410492 Fax: +255-22-2410393
4	Ms. Madaka Tumbo	**Assistant Lecturer** Institute of Resource Assessment Uni. of Dar es Salaam	madaka.tumbo@ira.udsm.ac.tz	P.O. Box 35097, University of Dar es Salaam Tel: +255-22-2410144 Mob: +255-754-365644
5	Elirehema Y. Swai	**Principal Agri. Research Officer** ARI- Hombolo	eyswai@yahoo.com	ARI-Hombolo P.O Box 299, Dodoma Mob: +255-754 542340
6	Alphonce Katunzi	**Managing Director,** INADES Formation Tanzania	inadesfo@yahoo.com alphonce_katunzi@yahoo.com	P.O. Box 203, Dodoma Tel: +255-26-2354230 Fax: +255-26-2354722 Mob: +255-754-615941
7	Richard Lamboll	**Principal Researcher Livelihoods and Institutions Group** Natural Resource Institute (NRI)	r.i.lamboll@gre.ac.uk	Natural Resource Institute Central Avenue, Chatham Maritime, Kent, ME 4 4TB, U.K. Tel: +44 (0) 1634 883762 Fax: +44 (0) 1634 883377
8	Dr Tanya Stathers	**Senior Researcher, Enterprise, Trade & Food Management Group**,Natural Resource Institute	T.E.Stathers@gre.ac.uk <TStathers@aol.com>	NRI, Central Avenue, Chatham Maritime, Kent, ME4 4TB, U.K Tel : 0754-459409 (Tz Mob.) +255 726 409555 (Kenya) Fax : +44 (0) 1634 883567(UK)
9	Cosmo S. Ngongondo	**Lecturer in Earth Sciences** University of Malawi	cngongondo@chanco.unima.mw cosmongongondo@yahoo.co.uk	University of Malawi Chancellor College P.O. Box 280, Zomba, Tel: +265 8 339 202 +265 5 623 000
10	Mrs. Miriam Kalanda Joshua	**Lecturer in Rural Development** University of Malawi	mjoshua@chanco.unima.mw madalitsojoshua@yahoo.com	University of Malawi Chancellor College P.O. Box 280, Zomba, Tel: +265 1 524 222 Fax: +265 1 524 685
11	Evance Mwathunga	**Economic and Urban Geographer**, NAREC-CHANCO-UNIMA	emwathunga@yahoo.co.uk emwathunga@chanco.unima.mw	University of Malawi Chancellor College P.O. Box 280, Zomba, Tel: +265 1 524 222 Fax: +265 1 524 685
12	Mrs.Stella Ndau	**Communication specialist,** NAREC-CHANCO-UNIMA	scndau@chanco.unima.mw stellandau@yahoo.com	University of Malawi Chancellor College P.O. Box 280, Zomba, Tel: +265 1 524 222 Fax: +265 1 524 685

CONTACT DETAILS OF PROJECT TEAM MEMBERS WHO DID NOT PARTICIPATE IN THE INCEPTION WORKSHOP				
13	Mr Joseph Kamanga	**CURE** (Co-ordination Unit for the Rehabilitation of the Environment)	kjkamanga@yahoo.co.uk	P.O. Box 2916, Blantyre, MALAWI Tel: (265) 645 757 Fax: (265) 645 492
14	Valerie Nelson	**Principal Researcher Livelihoods and Institutions Group** Natural Resource Institute (NRI)	valairn@ntlworld.com	Natural Resource Institute Central Avenue, Chatham Maritime, Kent, ME 4 4TB, U.K.
15	Dr Amos Majule	**Assistant Director, IRA, UDSM**	amajule@gmail.com amajule@ira.udsm.ac.tz amajule2000@yahoo.co.uk	P.O. Box 35097, University of Dar es Salaam Tel: +255-22-2410144 Fax: +255-22-2410393 Mob: +255-754-365644
16	Judicate Mwanga	**Hombolo Local Government Training Institute**	mwangajudi@yahoo.com	Hombolo Local Government Training Institute, Dodoma Mob: +255 784 461354

Appendix 3: Project Workplan

Project Specific Objectives, Outcomes, *Outcome indicators*, Activities and *Milestones and Outputs*	**Responsible partner/s**	Year 1 (Y1) –Months												Y 2	Y 3
		1	2	3	4	5	6	7	8	9	10	11	12		
Objective 1. To develop a collective understanding of the vulnerabilities, roles, climate related risks and strategies among interdependent rural and urban communities, local government and other key stakeholders.															
Outcome 1: Focal urban and rural communities and other key stakeholders better understand the interdependencies, relative resilience and their respective vulnerabilities of their agriculture and food systems to CC & CV. *Outcome 1 indicator: Key stakeholders from focal urban and rural sites able to clearly articulate understanding of the interdependency of their agriculture and food strategies by month 18*															
Act 1.1 - Project inception & annual planning meetings. *Inception by month 3, & report by month 6. Annual planning meetings – month 14 & 26, and reported by month 16 & 28 respectively.*	IRA, NRI			X			O							X O	X O
Act 1.2 - Project contracts, subcontracts and financial arrangements agreement. *Subcontract with collaborating orgs by month 3, subcontract with partner orgs by month 8*	IRA	X	O				X	X	O						
Act. 1.3 – Situation analysis of focal urban and rural communities agriculture, food and energy interdependencies and their perceived vulnerability to CC and other drivers of change. *At least 4 studies per country completed by month 7, country reports ready by month 10.*	NRI, IRA, NAREC				X	X	X	X			O				
Act 1.4 – Stakeholder consultation with local government officers and other key stakeholders to learn about their: understanding of the interdependence of these urban and rural agriculture and food innovation systems; understanding and activities regarding CC adaptation and planning; linkages with other stakeholders; and ITP needs to enhance their capacity to adapt to CC&CV. *Identification of key stakeholders by month 7, method developed m7, undertaken m 7-10, report by end month 12.*	IRA (Tz), NAREC (Mw), NRI						X	X	X	X	X	X	O		
Objective 2. To collectively develop and test viable options and strategies for key interdependent rural-urban stakeholders in the agriculture and food innovation systems to adapt to CC&CV															
Outcome 2: Information, training and product demands of interdependent urban and rural communities and other key stakeholders for strengthening their agriculture and food security strategies to adapt to CC&CV are identified and shared. *Outcome 2 indicator: Action plans of strategies for strengthening capacity of interdependent urban and rural communities and other key stakeholders in relation to CC adaptation of their agricultural and food systems agreed on by end of month 12.*															
Activity 2.1 – Participatory analysis of urban and rural communities' information, training and product demands. *At least 4 participatory assessments of interdependent urban and rural communities' demands per country completed and reported on by month 10.*	IRA (Tz), NAREC (Mw)				X	X	X	X	X	X	O				
Activity 2.2 – Participatory development of action research strategies for strengthening interdependent urban and rural communities' agricultural, food and energy security strategies. *Method finalized by month 8, action research plans collaboratively developed and reported by month 12.*	IRA (Tz), NAREC (Mw), NRI								X	X	X	X	O		
Activity 2.3 – Participatory analysis of the opportunities and barriers to adaptation or system transformation; information, training and product demands of the different key stakeholders, and factors influencing behavioural change regarding their service provision. *Exploring and building scenarios of differing stakeholder groups and sharing these to identify action research strategies. Report – m12.*	IRA, NAREC										X	X	O		
Activity 2.4 – Participatory development of action research strategies for strengthening interdependent urban and rural stakeholders capacity to support community adaptation of their agriculture, food and energy innovation systems to CC&CV. *Analysis, workshop & report containing plans – m14.*	IRA, NAREC, NRI										X	X	X	O	
Outcome 3: Interdependent urban and rural communities have enhanced capacity to adapt their agricultural and food security strategies through experiential learning and testing of alternative strategies (including improved: access to information; linkages with other stakeholders; understanding of potential impacts of CC&CV and resilience of system in question). *Outcome 3 indicator: X individuals (y% women, z% vulnerable) in the 4 focal urban and rural communities per country are using their improved: access to*															

information, linkages with other stakeholders; understanding of CC and CV and experiential learning to enhance their agricultural and food security strategies according to their own indicators by end of Yr 3.																	
Activity 3.1 – Implementation of the action research strategies developed in 2.2 (Yr 2 &3). *Urban and rural communities are voluntarily involved in can describe their action research activities by month 18, and by month 24 have evaluated the different aspects of their action research, and used this to plan the following years action research activities. At least two media reports based on the communities' action research in each country by month 24, and a further two by month 36. Project reports capturing the implementation details and process by month 20 and 36.*	IRA, NAREC, with site specific partner orgs, NRI														X O	X O
Activity 3.2 – Monitoring of the action research strategies, and sharing of learning re practice and process. *Indicators identified by communities and agreed on by m 15, journal keeping culture introduced by month 13. These progress and outcome journals used to create 6 monthly reports on process and practice learning from different perspectives.*	IRA, NAREC, NRI														X O	X O
Outcome 4. Local governments and other key stakeholders have co-developed and started to practice strategies for reducing their vulnerability by addressing the climate related risks of interdependent urban and rural agricultural and food systems. *Outcome 4 indicator: X local government staff and Y other stakeholders can describe the strategies they have co-developed to strengthen capacity and can report on implementation progress and the resulting changes by month 24 and 36.*																	
Activity 4.1 – Implementation of the action research strategies developed in 2.4 (Yr 2 &3). *Local govt staff and other stakeholders can describe their action research process and findings, and have progress reported on them by months 18, 24 and 36.*	IRA, NAREC with site specific orgs														X O	X O
Activity 4.2 – Monitoring of the action research strategies, and sharing of learning re practice and process. *Self identified indicators by m15. Journal keeping culture introduced by m14. Progress & outcome journals used to create 6 monthly reports on process & practice learning from different stakeholder perspectives.*	IRA, NAREC, NRI														X O	X O
Objective 3. To learn and share lessons (through process documentation) for scaling up successful strategies for strengthening capacity at individuals, organizational and systems levels within the interdependent agriculture and food innovation systems in linked urban and rural settings to adapt to the challenges and opportunities brought about by CC&CV.																	
Outcome 5. Meaningful communication, knowledge sharing and learning by project stakeholders. *Outcome 5 indicator: CKSL plan co-developed by stakeholders by month 10. Range of different CKSL outputs exist and reflective learning on them is reported on in 6 monthly reports.*																	
Activity 5.1 - Iterative co-development of a project communication, knowledge sharing and learning plan by a group representing the key stakeholders. *CKSL plan m10, constantly reflected on & developed till m36.*	IRA, NAREC, NRI			X	X	X	X	X	X	X	O	X	X	X	X
Activity 5.2 – Implementation of the project communication, knowledge sharing and learning plan. *Range of CKSL outputs developed & shared, & feedback process to inform reflective learning from m10-36.*	IRA, NAREC, NRI								X	X	X	O	O	O	O
Activity 5.3 – Recorded learning / monitoring of the different processes and outputs of the CKSL plan in order to keep changing it based on experiential learning about best practice. *Regular journal keeping on feedback and suggested changes from m10-36.*	IRA, NAREC, NRI & team										X	O	O	O	O
Outcome 6. Understanding of & evidence for behavioural change amongst key stakeholders in the interdependent urban & rural agriculture & food innovation systems. *Outcome 6 indicator: Project team have used situation analysis and stakeholder consultation findings to understand current constraints between stakeholders and have developed OM progress markers for different stakeholders to help identify and monitor (easy, medium and hard) behavioural changes. Progress and outcome journaling culture adopted by project team and stakeholders.*																	
Activity 6.1 – Iterative development of Project Outcome Map (OM), to track the projects contribution to changes in behaviour of the different key stakeholders (boundary partners) within the projects sphere of influence. Develop Vision, Mission, Outcome Challenges, Progress markers, Progress journal and Outcome journal, Monitoring plan, and Evaluation plan. *Completed OM framework- m14, & 6 monthly progress reports.*	IRA, NAREC, NRI				X	X				X	X	X	X	X O	X O
Activity 6.2 – Implementation of the OM through journal entries, revisions and sharing of learning. *Iterative development and reflective learning evident in 6 monthly progress reports.*	IRA, NAREC, NRI & partners													X O	X O

Key: X = main implementation period for each activity, O = Output due. OM = Outcome mapping. In responsible column: IRA = Institute of Resources Assessment (Project leader), NAREC=Natural Resources & Environment Center, NRI = Natural Resources Institute.

Appendix 4. Checklist developed and used for the reconnaissance visits

Exploring urban-rural social and environmental interdependence and impacts of climate change and climate variability and responding through enhanced agricultural, food and energy innovation systems.

RECONNAISSANCE VISIT APPROACH

Background

The rapid urbanization in Africa poses many challenges for national and local government's regarding the provision of infrastructure and services which are already notably lacking in many areas. Alongside this rapid urbanization, climate change is posing a serious global threat, to which Africa faced with multiple stresses and low adaptive capacity is particularly vulnerable.

Recently more sophisticated analyses of the linkages and interdependencies between rural and urban areas provided by the flows of people, goods, services, information and money is increasingly being recognised as important to both social and ecological concerns. Whilst these urban-rural linkages have been partially explored in Tanzania and Malawi, the impact of a changing climate on them has not been analysed. These interdependencies have deepened since the 1980's and as a consequence trends and stresses at global, national and local levels affecting livelihoods, food security and access to energy in urban areas have heightened implications for rural areas and *vice versa*. There is little evidence that such studies are accessible to or influencing decision makers - particularly local governments.

Our 'Urban' project will explore the linkages between rural localities and centralized urban centres in Tanzania and Malawi building on our existing 'Rural' CCAA funded project. However, our focal system will be the linked urban rural areas in relation to agriculture and food systems aiming to explore resilience and strengthen the capacity of these innovation systems to respond to climate change and climate variability.

Situation Analyses under our Rural project explored rural people's knowledge, perceptions and strategies in relation to climate change and variability within a broader livelihoods context in eight villages in each of Malawi and Tanzania.

Table 1 Tanzania Action research Sites

		Agro-ecological/ biophysical factors	
		High Potential Area	**Less Favoured Area**
Socio-conomic factors	High	Nyombo (Njombe district) Kapugi (Rungwe district)	Sanjaranda(Manyoni district) Chibelela (Bahi District)
	Low	Mwitikilwa (Mufindi district) Mpunguti Makwale (Kyela district)	Maluga (Singida district) Laikala (Kongwa district)

Action research is happening in all 8 villages, using themes of soil and water management and crop and varietal testing

Table 2 Malawi Action Research Sites

		Agro-ecological/ biophysical factors	
		High Potential Area	**Less Favoured Area**
Socio-economic factors	High	Mtambalika (Mulanje district) **Kacholola Ndhlovu (Mzimba district)**	**Mphampha** (Chikwawa district) Muyeleka (Karonga District)
	Low	**Nessa (Mulanje)** Samuel Mphepo (Mzimba)	Mpasu (Chikwawa District) **Mwayuweyu (Karonga district)**

Sites of current action research : Nessa Village Crop diversification; Mphampha Village Crop Diversification ; Muyelaeka Village Seed Multiplication and Crop Diversification, Kacholola Ndhlovu Village Seed Multiplication and Crop Diversification

We now need to develop a clearer understanding of the flows/ inter-relationships between our existing focal rural sites and urban centres. It is beyond the scope and resources of the Urban project to work in eight rural communities and associated urban centres in both countries. We need, therefore, to select which of our existing sites we will focus on.

Aim
To make a preliminary characterization of linkages between our current rural sites and urban centres to inform the project's activity planning and selection of rural and urban sites.

Outcome
More detailed (and locally verified) knowledge of:
- What the main urban-rural flows are eg: food staple crop (seasonal, only in bad years elsewhere); other crops (e.g. tomatoes, sunflower); labour migration, charcoal; income; remittances; agricultural input etc.
- Where the urban centres most closely associated with the rural communities are located.
- Who are the main stakeholders most closely associated with the rural communities.

Method/ approach
Four types of flows could be considered (based on Gete et al 2007[2]) :
- Natural resource flow eg water, sediment, nutrient, energy (hydro, biomass, wind, solar)
- Product flow (value chain) eg crop, livestock, forest products (eg charcoal) , agri inputs, manufactured goods,
- Labour/ People flow – rural- urban, urban-rural, rural-rural, urban-urban, cross-border.
- Knowledge and information flow eg market information, services

A fifth type of flow that could be considered is financial flow. In the Gete et al Framework this is included as a sub box under labour, but this is just remittances, might not cover loans, government salaries project funds etc

Each flow has an associated stock eg the flow of charcoal from a rural community to an urban centre will be at least partially determined by the forests to which the community has access.

A combination of existing literature and field work (a checklist and PRA tools) could be used to make a rapid assessment of the flows.

Existing literature
The Situation analysis reports provide some indication of stock and flows for each village we visited. Appendix 1 shows a possible framework using the project villages for Tanzania. It would be useful if such a framework could be completed for Malawi and Tanzania villages prior to the field work. This mayhelp to avoid collection of information for a second time.

Checklist and PRA tools
See appendix 2 for draft checklists and tools. See Diyamett et al 2001[3] for an early review of methods and tools for exploring rural urban-interactions. A digital camera can be used to capture maps, diagrams etc to facilitate reporting

[2] Gete, Z., P. Trutmann, and Aster, D. (eds.), 2007. Fostering New Development Pathways: Harnessing Rural-urban Linkages (RUL) to Reduce Poverty and Improve Environment in the Highlands of Ethiopia. Proceedings of a planning workshop on Thematic Research Area of the Global Mountain Program (GMP) held in Addis Ababa, Ethiopia, August 29-30, 2006. Global Mountain Programme. pp 235. http://www.globalmountainprogram.org/RUL_Proceeding.pdf

[3] Bitrina Diyamett, Mathew Diyamett, Jovita James, Anthony Kibadu,Fred Lerise, Richard Mabala, Esther Mbutolwe and Nimrod Mushi (2001) Exploring rural-urban interactions in Tanzania: a critical review of the methods and tools used Rural-Urban Interactions and Livelihoods Strategies Series Working Paper 3 ISBN 84369-036-5 International Institute for Environment and Development (IIED). UK

Target group for discussion
The current CCAA-Rural project farmer groups
Key informants eg Village government, Anyone with knowledge of these flows eg Local Extension Agents.

Selection of villages

Criteria
- Offer a range of flows particularly relevant to agriculture, food innovation systems and climate change and variability
- Accessibility

Possible focal villages:
Tanzania: Chibelela, Laikala (Less favoured), Nyombo and Mwitikilwa (High potential)
Malawi: Nessa (High potential agro-ecologically) and Mphampha (Less favoured)

Reconnaissance team
Two person team.
For example, Emma & Swai in Central zone, Emma & Nsemwa in SHZ; Miriam and Cosmo or the Urban researcher for both Nessa and Mphampha village (in Mw by keeping focused on the Southern area and the linkages between our high and low potential villages close to Blantyre it should be possible during this small project to really focus, it doesn't make sense to spread ourselves thinly all over the country and achieve much less.

Appendix 4a. Framework to summarise information available from Situation Analyses

Natural resource stock and flow

	High potential (S. highlands Tanzania)				Less favoured (Central Zone Tanzania)			
	Nyombo	Kapugi	Mwitikilwa	Mpunguti	Sanjaranda	Chibelea	Maluga	Laikala
Water		Number of rivers						
		Steep sided valleys						
Vegetation/ Trees		Natural forests present in 1961. Removed over time for tea, other crops (1960s, 1970s) and firewood and charcoal (1990s)						
Soils		Decline in soil fertility						
Fuel used for cooking		Firewood – own or buy tree in village; Walk 4- 7 hours to natural woodland.						

Product stock and flow (Value chains)

	High potential (S. highlands Tanzania)				Less favoured (Central Zone Tanzania)			
	Nyombo	Kapugi	Mwitikilwa	Mpunguti	Sanjaranda	Chibelea	Maluga	Laikala
Main crops consumed		Maize, Beans, bananas						
Main crops sold		Tea, Coffee, Banana (lorries to Dar) , Cassava, Avocado						
Main livestock kept		Cattle Goats Sheep Chickens and more recently Cattle crosses (for milk) Pigs Ducks Rabbits						
Forest products		Internal market for firewood						
Main income		Crops, Livestock Local brew Casual labour						
Agri inputs		Low use of external farm inputs						
Consumer goods?								

People/ labour stock and flows

	High potential (S. highlands Tanzania)				Less favoured (Central Zone Tanzania)			
	Nyombo	Kapugi	Mwitikilwa	Mpunguti	Sanjaranda	Chibelea	Maluga	Laikala
Number of households		500 (2007)						
% of popn < 15 years (2002)		44% Increase in number of orphans						
Out movement		Mainly youths on a seasonal basis eg to Morogoro to harvest sugar cane; to Kyela for petty business						
In movement		Very few people are moving in.						

Knowledge and information stock and flow

	High potential (S. highlands Tanzania)				Less favoured (Central Zone Tanzania)			
	Nyombo	Kapugi	Mwitikilwa	Mpunguti	Sanjaranda	Chibelea	Maluga	Laikala
Formal sources		Primary and secondary school; Dispensary. DALDO office Wakulima Tea Company (Rungwe Fair Trade Fund)						
Local/ traditional knowledge		??						
Information Sources		Radio (Most) Mobile phones (eg market information) TV (Very few) Newspapers don't reach unless bought in town						

Appendix 4b. Draft checklists and PRA tools

a) Checklist for Rural community focus groups (members of groups working with the Rural project)

Within the time available try to disaggregate the information by gender, age and wealth.

1) Product flow (value chain) eg crop, livestock, forest products (eg charcoal) , agri inputs, manufactured goods,

1.1 List the main products leaving the village (*Stickers may be useful here*)
1.2 Rank these products in order of aggregate income for the village and indicate roughly what % of HH (and what types of HH) are involved e.g. selling charcoal to urban areas, is this every month, twice a year, only if crops fail
1.3 Rank these products in terms of income for a) women, b) Youth and c) People ranked lowest according to Situation analysis wealth ranking
1.4 For the most important products sold complete the table below

Product	Where sold	Final destination if known	Who buys	Main months of the year sold	Trend (Increasing, Decreasing, Staying the same)	Reasons if increasing or decreasing

1.5 List the main products entering the village
1.6 Rank these products in order of aggregate expenditure for the village
1.7 Rank these products in terms of expenditure for a) women, b) Youth and c) People ranked lowest according to Situation analysis wealth ranking
1.8 For the most important products bought complete the table below

Product	Where bought	Source if known	Who sells	Main months of the year bought	Trend (Increasing, Decreasing, Staying the same)	Reasons if increasing or decreasing

2) Labour/ People flow – rural- urban, urban-rural, rural-rural, urban-urban, cross-border.
Construct a mobility map with focus group.

> *Write the name of the village at the centre of a flip chart. Ask each person in turn to name the furthest place they have visited (If a large town which part of the town). Write on a sticker the gender and age of the participant, name of the place, whether it is a village or town, the name of the district, the approx distance from the village, the reason for going and the period of time spent there. Place the sticker on the flip chart showing its relative location in relation to the village.*
> *Discuss with the group the extent to which the map represents the mobility of other members of the village.*

What urban locations, types of households are at the other end of these R-U linkages, who migrates and on what basis, for what reasons? e.g. (cyclical, permanent, male, female, youth, position in HH etc? reasons for leaving and main destinations); Is the amount of migration changing? Is it triggered by specific events or ongoing? Any associated money flows?

3) Natural resource flow eg water, sediment, nutrient, energy (hydro, biomass, wind, solar)

PRA tool: Mapping natural resources within village. Indicate any flows into or out of the village

4) Knowledge and information flow eg market information, services

4.1 Which urban centres are the focal group most familiar with?
4.2 What are their sources of information about these centres?

b) Checklist for Key informants

Within the time available try to disaggregate the information by gender, age and wealth.

1) Natural resource flow eg water, sediment, nutrient, energy (hydro, biomass, wind, solar) *KEY INFORMANTS COULD BE ANSWERING Q1 WHILE THE FOCUS GROUP IS BEING INTERVIEWED*
PRA tool: Mapping natural resources within village. Indicate any flows into or out of the village

2) Product flow (value chain) eg crop, livestock, forest products (eg charcoal) , agri inputs, manufactured goods,
2.1 List the main products leaving the village (*Stickers may be useful here*)
2.2 Rank these products in order of aggregate income for the village and indicate roughly what % of HH (and what types of HH) are involved e.g. selling charcoal to urban areas, is this every month, twice a year, only if crops fail
2.3 Rank these products in terms of income for a) women, b) Youth and c) People ranked lowest according to Situation analysis wealth ranking
2.4 For the most important products sold complete the table below

Product	Where sold	Final destination if known	Who buys	Main months of the year sold	Trend (Increasing, Decreasing, Staying the same)	Reasons if increasing or decreasing

2.5 List the main products entering the village
2.6 Rank these products in order of aggregate expenditure for the village
2.7 Rank these products in terms of expenditure for a) women, b) Youth and c) People ranked lowest according to Situation analysis wealth ranking
2.8 For the most important products bought complete the table below

Product	Where bought	Source if known	Who sells	Main months of the year bought	Trend (Increasing, Decreasing, Staying the same)	Reasons if increasing or decreasing

3) Labour/ People flow – rural- urban, urban-rural, rural-rural, urban-urban, cross-border.
Construct a mobility map with the key informants who are from the village.

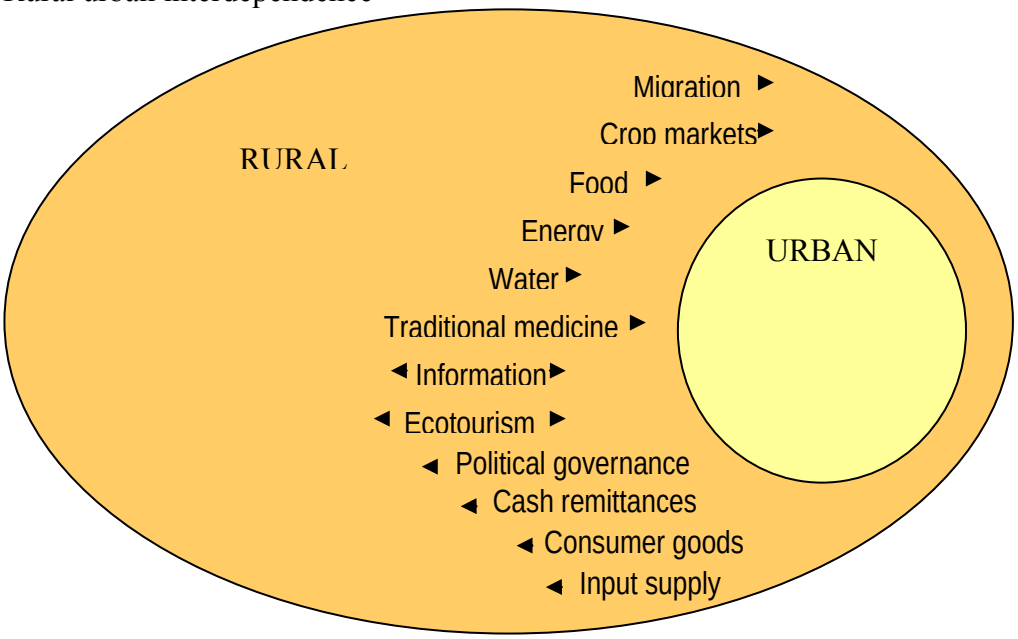
> *Write the name of the village at the centre of a flip chart. Ask each person in turn to name the furthest place they have visited (If a large town which part of the town). Write on a sticker the gender and age of the participant, name of the place, whether it is a village or town, the name of the district, the approx distance from the village, the reason for going and the period of time spent there. Place the sticker on the flip chart showing its relative location in relation to the village.*
> *Discuss with the group the extent to which the map represents the mobility of other members of the village.*

What urban locations, types of households are at the other end of these R-U linkages, who migrates and on what basis, for what reasons? e.g. (cyclical, permanent, male, female, youth, position in HH etc? reasons for leaving and main destinations); Is the amount of migration changing? Is it triggered by specific events or ongoing? Any associated money flows?

4) Knowledge and information flow eg market information, services
4.1 Which urban centres are the key informants from the village most familiar with?
4.3 What are their sources of information about these centres?

Appendix 4c. Rural urban interdependence – what are the links and how might CC affect them? Notes MADE DURING PROPOSAL PREPARATION

Rural urban interdependence



Rural urban flows/ linkages

Flows/ links	R		U	Details/ comments	Possible impact of climate change
Political governance	RURAL	←	URBAN	Central (Urban) – District – Ward – Village government	Mitigation policies, support for adaptation, relief activities, civil unrest due to resource degradation and conflict, increased migration issues
Water		→		Rural catchment areas for urban (and rural) use	Flow reduction as water sources dry, and flooding risk during heavy rainfall events. Contamination by increased input use around water sources as land pressure increases and climate combined with soil fertility become less favourable for crop production
Food		→		Rural – urban.	Reduced yields, change of crops or varieties grown, higher prices of foods, food shortages, reduced diversity of food types, reduced quality – possible opportunity for new food crops too if climate became more favourable for some crops. Reduced food intake and change of food types, more harvesting of wild food products as a coping strategy do these also get marketed in urban areas?
Energy		→		Electricity (H.E.P.) from Mtera dam; Charcoal from rural to urban	Reduced rainfall combined with occasional heavy rainfalls causing siltation could lead to only partial filling of dams, and thus low power generation levels and high maintenance costs. As drought and other climate changes reduce yields, more turn to alternative income strategies such as charcoal production, reducing the forest cover yet further, and causing increased local climate change.
Migration		→		Primarily rural-urban – permanent, temporary, seasonal	Migration is another key coping strategy used during bad seasons, so is likely to increase, having gendered effects on food security, school attendance, family relations, HIV/AIDS, malaria and other disease incidence.
Crop markets		→			Reduced yields leads to higher market prices, may change the sourcing behaviour of traders, eg may switch to other areas of the country where the season has been good, this temporary switch could result in long term market losses if new area seems to have a less affected climate than old sourcing area.

Flows/ links	R		U	Details/ comments	Possible impact of climate change
Input supply		←		Urban-rural	Asset reduction due to emergency asset sales as a coping strategy for droughts, floods, reduced yields etc, may mean ability of farmers to purchase inputs is further reduced. Need to demonstration/ farmer trialling of new varieties etc which could be faster maturing (and could be sold by stockists – eg new potential seed opportunities for stockists as climate changes). Also need for stockists to have an understanding of CC and seasonal projections to help farmers in informed input decision making.
Cash remittances		←		Primarily urban-rural	Increased emergency requests for assistance from rural areas may result in decreased cash remittances from urban areas. Higher food prices in urban areas as a result of bad seasons due to CC may mean cost of living in urban areas increases leading to reduced remittances being sent home to rural areas, likely to have gendered effects on nutrition, health, school attendance & input use.
Information		↔			Many different types of information will be viewed as increasingly unreliable in the face of CC & CV – eg traditional and scientific seasonal forecasting, traditional crop management methods, traditionally good varieties, even some coping mechanisms. The value of reliable understandable weather projection information could increase as the climate risks increase. Health information content and pathways are likely to change with changed diseases, and reduced cash for accessing medicine or medical care. Education may be seen as the long term coping strategy by some and so gain an increasing importance, but others may decide to pull children out for early marriage or to help with agricultural labour etc.
Eco tourism		↔			Death of wildlife due to heat stress and drought, destruction of forests due to coping strategies such as charcoal production and illegal timber businesses, would reduce the eco-tourism market, simultaneously reducing income to those communities linked into it. Potential opportunity though, for using the changes of climate as part of the eco-tourism experience, eg explanation of coping strategies, livelihood changes as a result of CC. Also may bring opportunities to be involved in CDM type projects, tree planting, bush regeneration, low energy cookstoves. Eco tourism could provide a new alternative livelihood for some communities. Impact of air-travel on eco-tourism, green tourists may not want to fly, and so long distance destinations such as Tanzania and Malawi may get reduced tourism.
Consumer goods		←		Urban-rural	Disruption to transport infrastructure, reduced cash flows in rural areas as a result of reduced yields due to CC, will reduce the market for consumer goods in rural areas.
Traditional medicine		→		Primarily rural-urban	Increased cost of living in urban areas & increased new disease incidence related to CC may result in increased use of traditional medicines for economic and other reasons, increasing biodiversity risks.

Appendix 4d. Revised conceptual framework of Thematic Research Area of the Global Mountain Program, Ethiopia

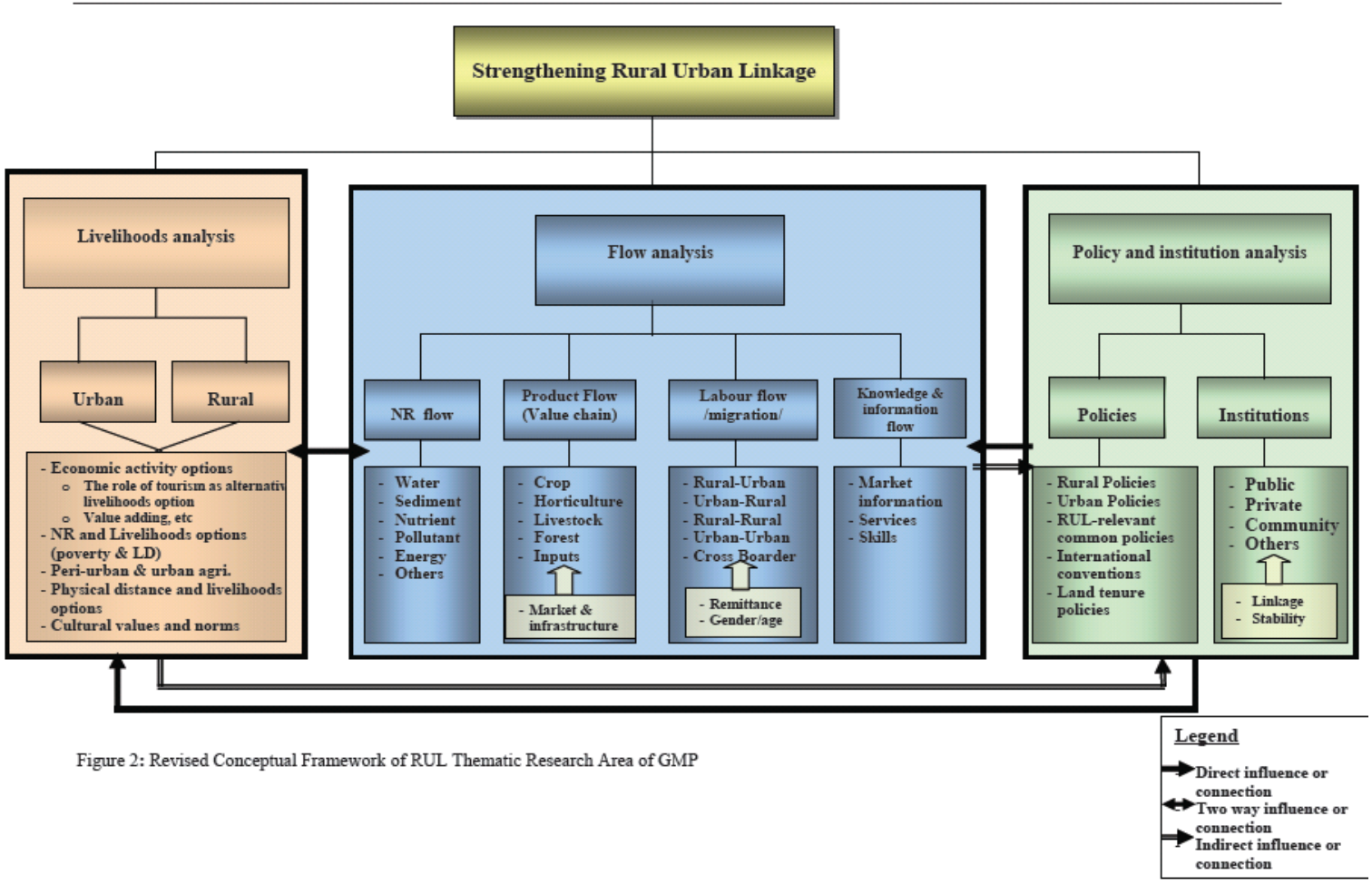


Figure 2: Revised Conceptual Framework of RUL Thematic Research Area of GMP

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Source: Gete, Z., P. Trutmann, and Aster, D. (eds.), 2007. Fostering New Development Pathways: Harnessing Rural-urban Linkages (RUL) to Reduce Poverty and Improve Environment in the Highlands of Ethiopia. Proceedings of a planning workshop on Thematic Research Area of the Global Mountain Program (GMP) held in Addis Ababa, Ethiopia, August 29-30, 2006. Global Mountain Programme. pp 235. http://www.globalmountainprogram.org/RUL_Proceeding.pdf

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