



**WOREDA (DISTRICT) PARTICIPATORY LAND USE PLANNING IN PASTORAL
AREAS OF ETHIOPIA: DEVELOPMENT, PILOTING AND OPPORTUNITIES FOR
SCALING-UP**

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Abstract:

Land use planning in rangelands is challenging due to the variable nature of the environment and to the multiple often over-lapping land uses over a large scale. In 2014 the Government of Ethiopia (GoE) embarked on developing a process of local level participatory land use planning in pastoral areas. The process has now been piloted in two regions of Ethiopia led by government land experts and with support of development actors. This paper describes the woreda (district) participatory land use planning process and how it was developed. It also considers the challenges faced in piloting and implementation, the risks and benefits of the approach, and opportunities for scaling-up the process across the pastoral areas of Ethiopia.

Key words:

Pastoralism, Ethiopia, land use planning, participation, rangelands

I. INTRODUCTION

Land and land resources are the foundation of economic growth and long-term social welfare. Land is at the heart of some of today's most pressing global development challenges, with land and resource scarcity becoming an ever-increasing source of conflict. By improving the way land and resources are used through appropriate policy and its implementation, people can move more easily out of poverty, become more food secure, build resilience to shocks and stresses such as drought, and have stronger incentives to protect and use land and resources sustainably.

In response to this, the Government of Ethiopia (GoE) has commenced developing a land use policy for the country and different tools and processes for its implementation. The long-term vision of the Government is to have in place comprehensive land use planning at different administrative (government and community) levels, which will provide a framework for integrated decision-making processes, implementation and a more rational and effective use of land and natural resources.

As a contribution to this in 2013 the government embarked on a process of developing an approach for land use planning at the lowest government administrative level – the *kebele* or 'village.' At the time it was assumed that such a planning process would be suitable for both sedentarised majority highland crop-farming areas mainly made up of individual land holdings, as well as the dryland-lowland pastoral areas where movement of people and livestock is still key to local production systems and communal land holdings are the norm. However it soon became clear that a different approach was required for the latter, in order to reflect the variation in such as scale and units of planning, ecology, and land uses. In response to this in 2014 the GoE (more specifically the Rural Land Administration and Use Directorate (RLAUD), Ministry of Agriculture), started developing a complimentary but more appropriate process for the pastoral areas. They were assisted by land experts from regional and local government, together with technical advice and/or financial support from the SDC (Swiss Development Cooperation), ILC (International Land Coalition) Global Rangelands Initiative¹, GIZ and Oxfam GB. A draft Manual for carrying out the PLUP process was developed and implementation of the Manual has been piloted in two *woreda*. This paper describes the development of the process and preliminary results of the piloting.

¹ ILC's Global Rangelands Initiative in Ethiopia works through ILRI (International Livestock Research Institute). The Initiative supports processes and activities that contribute to making rangelands secure through policy development and implementation, learning and sharing of experiences, piloting and testing out new approaches and/or innovations, and building the technical capacity of different land-focused stakeholders. It is a global programme with a particularly strong focus on East/Horn of Africa. More information can be obtained from Fiona Flintan f.flintan@cgiar.org

Why participatory land use planning?

Optimal use of the considerable and diverse natural resources requires systematic identification and inventorying of the resources and proper planning and management of their uses with genuine participation of land users. In the absence of land use planning the development of land becomes arbitrary focusing on short-term exploitation of the land, detrimental to long term conservation and sustainable use of the resource. Good land use planning gives time and resources to decision-making processes in order to reach conclusions on suitable or best possible use of land (and restrictions on inappropriate use) based on long-term objectives and more equitable benefits. Land use planning can ensure transparent and accountable allocation and distribution of land, that provides opportunities for and even favors poor and vulnerable land users, in order to make effective use of land and resources. It requires extensive information collection on the land and resource in question, and consideration of the land/resource itself as well as its position in a wider landscape and environment. Formalised (government-led) land use planning can also contribute to a stronger recognition, legitimisation, and protection of resources and land and different land uses.

Participatory land use planning is *'an iterative planning process based on a dialogue between all stakeholders, for negotiation, consensus building and decision making regarding the sustainable use and management of private, communal and public land'*.²

It is an opportunity for bringing different actors together, developing a shared vision and consolidating priorities, working across and integrating different sectors. This should result in a more effective and efficient allocation of land and resources, which can respond better to market demands, and an avoiding of land use conflicts. At the same time and as longer-term visioning and planning is encouraged, decisions to protect the environment and biodiversity can be positively influenced. The involvement of different stakeholders provides an opportunity for developing a common vision of what land use should be prioritised in a given area, understanding how land is currently being used and the implications of this, negotiating and agreeing how best land use can be optimised in the future given the likely different priorities of land users, and developing a plan of action for implementing agreements.

The word "participatory" emphasises the requirement for the active involvement of local land users and, in a best-case scenario, local land users will lead the PLUP process. PLUP should be demand-driven – reflecting the needs, positions and interests of those who use land or have a stake in it. PLUP brings together the "whole" landscape or other unit as the focus of attention, recognising that changes to one part

² GTZ (1999) Land Use Planning: Methods, Strategies and Tools. Germany.

of the whole will impact on and be influenced by other parts.

On the other hand, limitations or ‘dangers’ of land use planning can include the ‘locking-in’ of land uses within restrictive boundaries spatially and temporally, which reduce or prevent the flexibility of use including physical movement of people and livestock. . Community planning processes can be on a different time and spatial scale than government ones – combining these in an effective way can be challenging. Local land users may find long-term planning time-consuming and perhaps feel it is unnecessary. Land use planning may also result in a simplifying of such as multiple use by multiple stakeholders, reducing diversity and multiple gains, and increasing risk particularly in areas of variable climates and other regular change.

PLUP is an intensive process and can take several weeks, if not months, to complete requiring significant and consistent financial and technical resources. Complications and delays may result from there being multiple groups of stakeholders who need to be included, conflicts of interest over land use or lack of readily available data required for informed decision-making: in fact, the land use planning process can cause conflicts that if not carefully managed and resolved can result in violent outcomes.

Why participatory land use planning in pastoral areas of Ethiopia?

The pastoral areas of Ethiopia are found in lowland parts of the country and characterised by low, variable and unpredictable rainfall and rangelands made up of patchily distributed resources of high and low production potential. In order to make the most effective use of these resources and the variable climate that strongly influences resource growth and distribution, extensive livestock production is the most common land use system.

Over the last three to four decades pressures of land use have increased in these areas due to population growth, the introduction of new land uses that may conflict with or challenge more traditional land use systems, and increasingly diversified interests of stakeholders. Neglected in terms of development by previous governments, significant investment in pastoral areas is now taking place. Livestock is seen as a key engine of growth in the country’s new Growth and Transformation Plan (2016-2021), reflected in a dedicated Livestock Master Plan and the establishment in 2015 of a new Ministry of Livestock and Fisheries at federal level. This will require a degree of intensification of livestock production systems and a more efficient use of resources and land.

At the same time other (non-pastoral) interests have grown in the pastoral areas including agriculturalists (brought by commercial sometimes international investors, government-led irrigation schemes, as well as

the demands of smallholders from other parts of the country with high population densities). Land used for urban development and infrastructure such as roads and dams is growing and new developments such as oil prospecting are all contributing to an increasing fragmentation of the rangelands and loss of key livestock resources. This has resulted in overuse and degradation of areas that remain, coupled with an invasion of non-local species such as *Prosopis juliflora* (invaded over 1.3 million hectares in Afar region alone).

Reconciling competing and conflicting land uses, and short and long-term planning and management of resources is required in order to balance different land uses and maintain both high and low production areas. Rangeland use demands planning at a large scale (i.e. beyond or across village boundaries) and incorporating mechanisms that allow for the movement of people and livestock in response to such as drought. The resources found in rangelands tend to have multiple and overlapping uses that may not be clearly defined due to their complex and dynamic nature. Resources are strongly connected to each other (e.g. water and grasslands) and plans for their use need to reflect this connectivity.

In this complex and variable context local land users are best placed to make decisions about land use. Through living and working on the land, local land users better understand the shifts, changes and trends of the physical environment and have adapted their land use to these. However as pressures on land and resources have grown there is need for greater and more intensive use and management of land for which local land users may not have the technical know-how. Here, the technical input of government land experts can be of benefit in for example assessing the suitability of land for different land uses and guiding and/or coordinating its more intensive use and management through such as the clearing of invasive species, rehabilitating degraded grasslands, and increasing local fodder production and availability. Through a participatory land use planning process government learns more about the local context. And both local government and community 'ownership' over land use plans can lead to stronger commitments to invest in and implement them.

To date and without a guiding spatial framework government land use planning in pastoral areas of Ethiopia has been somewhat lacking, haphazard and often contradictory. Decisions are made about land use at different government levels often without consultation across and between these levels, and rarely involving local land users. This has meant that land uses may conflict, place a heavy burden on local resources such as water, and result in the change of use of land that has wide and long-term negative consequences for non-benefiting stakeholder groups. Once highly-productive rangelands are being

increasingly fragmented (broken-up) and livestock routes blocked through unplanned settlement, fenced enclosures/exclosures, and agricultural plots along rivers.

Local government and communities require resources for land use planning and in order to improve the productivity of pastoral areas. To date local land use plans have not been included within local government development plans, which are the key planning tool for local government (district or *woreda*) to access funds from higher levels of government. Though there has been poor investment in pastoral areas in the past, national government is committed to allocating more funds to these areas (as above). Incorporating improved land use planning processes and priorities into local development plans will not only result in a more effective and efficient use of current budgetary allocations, but provides higher levels of government with greater reason for an increased allocation of funds to pastoral areas. NGOs and other development actors should also be using local level land use plans to design their own-supported interventions rather than spending time and resources developing their own plans.

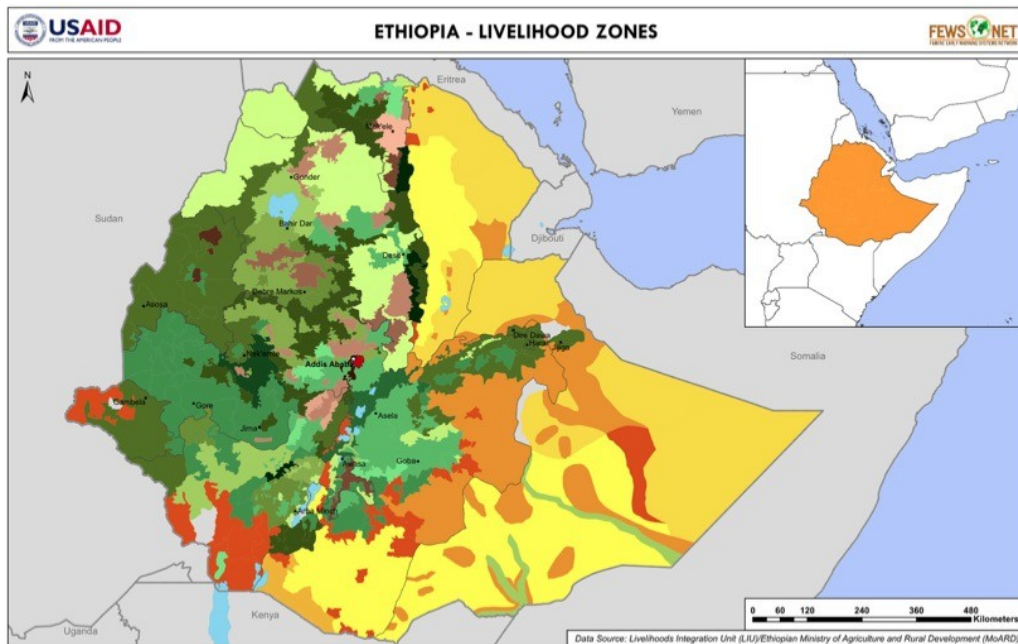
How is planning currently done in Ethiopia?

Community-level planning in pastoral areas

Pastoral areas in Ethiopia cover Somali and Afar regions, large areas of Oromia and Southern Nations, Nationalities, and Peoples (SNNP) regions, and parts of Gambella and to a lesser degree Beneshangul-Gumuz, found mainly along the eastern, southern and southwestern parts of the country (see Figure 1.1). These areas are typically arid or semi-arid lowlands and comprise approximately 63% of the total land area of the country. The climate of these areas is characterised by low and erratic rainfall – between 0mm and 700mm per year – and high temperatures, reaching 50°C in parts of Afar. The variability of rainfall is high, resulting in the patchy distribution of resources.

Figure 1.1: Livelihoods zones of Ethiopia (Source: MoA, accessed 2015, www.dppc.gov.et)

The yellow and orange areas illustrate the predominantly pastoral and agropastoral livelihood areas



It is estimated that 12–15 million pastoralists and agro-pastoralists (of a total population of around 90 million) live in these areas, though many of these can now be called agriculturalists in livelihood and ethnic terms (MoFED, 2006). Livestock holdings amount in the lowland grazing zone amount to 15.6 million cattle, 17.3 million sheep, 22.8 million goats and 4.5 million camels (MoA, 2015).

There is a common perception amongst policy-makers that pastoralists do not plan, and particularly not in a long-term manner. However in reality, land use planning is a lifelong practice for pastoralists, as environmental conditions and other factors are constantly changing and pastoralists need to adapt their use of the land according to this. The plans of pastoralists tend to be verbal, and not written down making sharing them with non-pastoralists challenging. They also tend to be more short-term in nature due to the vagaries and unpredictability of the environment in which they live.

Pastoralists plan for a number of reasons including 1) to decide on and manage different land and resource uses; 2) to decide on and manage the access and use arrangements of different users; 3) to facilitate mobility; 4) to conserve sacred sites; and v) to prevent and resolve conflict.

Pastoral planning tends to take an integrated and holistic approach that considers the interconnectedness of rangeland resources (land, water, vegetation, minerals), and not just one particular resource. As such,

water use is planned with grazing use, for example. Pastoralists classify land according to a mix of ecological, socio-economic (production), and cultural criteria. The Mursi, found in South Omo zone of SNNP for example, classify their land into three types: grazing land (*missa iwony*), cultivated land (*baa gunyang*), and sacred land or ritual places (*baa barrara*). When discussing land use and land use management, the Mursi stress that all three types of land are vital for a healthy and productive pastoral system. As a local saying goes: “*If you have only two cooking stones, you will never cook anything.*” That is, if you ignore, remove, or lose one of these three important land types, the whole system will collapse.

In pastoral societies there are clear, usually hierarchical governance structures that lead community decision-making processes and, for example, control access to land and rangeland resources. These have developed in different ways in different areas, influenced by the demands of the communities they serve, the natural environment, and political forces. In some cases there may be specific governance structures for a particular resource (such as water), but in other cases decisions about all resources are made by a central group of community members. These decision-makers are usually elders, considered to be knowledgeable, and male, though opportunities will exist for others (women, youth, etc.) to influence the decisions made. The social organisation and traditional resource management systems of pastoral communities have greatly contributed to the continuity of social and ecological systems for centuries.

Though governance structures might give responsibility for planning and managing different resources to different groups of decision-makers (e.g. for water and grazing), these are expected to work together to ensure that over-exploitation of one resource or the another does not occur. This layered or “nested” approach of governance, with strong horizontal and vertical linkages, is typical of common property regimes. Details of these different governance structures amongst and planning processes by pastoral groups in Ethiopia are detailed in the document: *Pastoralists Do Plan! Community-led Land Use Planning in the Pastoral Areas of Ethiopia* (copies of which are made available).

Government planning processes

Formalised government national level land use planning commenced in the 1980s, with the Land Use Planning project that was financed by UNEP and the Ethiopian government. A national land use plan in the scale of 1: 1,000,000 was developed by 1983; followed by area level studies between 1983-1986 in selected areas of the country at different scales. The study defined 12 major geomorphologic units and 70 subunits across the country; 18 major soil associations; six major climax and edaphic vegetation associations and subunits; 14 growing periods of different lengths; ten thermal zones; and six rainfall pattern zones.

Though this mapping process proved useful in providing an overall picture of land use capability at a national scale, it was not defined or detailed further through more information collection of planning at lower levels of land use in the country. Rather today, land use planning where it has occurred has been piece-meal driven by different sectoral interest groups or for use in a specific process or activity. The government Millennium Development Goal programme of the Ministry of Agriculture for example has supported the development of a number of river basin-focused land use plans (1:50,000 scale), where with water as an entry point, riverine areas are targeted for irrigated agriculture. These plans have been made through the collection of technical scientific information and decision-making by actors removed the local context.

The Ministry of Water, Irrigation and Electricity is also involved in river basin planning though at a larger scale focusing on river basin master plans. Such plans have now been completed for most rivers basins in the country (the majority of which cross several regions) and guide large-scale schemes such as the building of dams, hydro-electric generation and government large-scale irrigated crop farming. Some regional governments too have developed river basin plans. The government of Oromia Regional State for example has carried out extensive planning (including both technical and socio-economic data collection) for a number of river basins in the region. The Oromia Water Works and Supervision Development Enterprise has assisted in building the capacity of other regions to do the same. There is little sharing of information or integration of plans across regions even though such as rivers cross regional boundaries.

Other actors with an interest in and who can influence land use planning at a local level include the federal Agricultural Investment and Land Administration Agency (in particular land units over 2,000 hectares and in ‘emerging regions’), sectoral ministries such as Ministry of Mines and Energy, Ministry of Federal Affairs (MoFA) with the villagisation/commune resettlement programme and the Pastoralist Community Development Project, the Ministry of Forests and the Environment, the Ethiopian Wildlife Conservation Authority, the Productive-Safety Net Programme and related watershed and/or sustainable land management programmes. Often there is little communication between these ministries, authorities and programmes. In addition NGOs and development agencies often have their own planning objectives and approaches that can further confuse the situation.

The national body responsible for land use planning in the country is the Rural Land Administration and Use Directorate (RLAUD), in the MoA. It is mandated to coordinate the implementation of the federal Rural Land Administration and Use Proclamation (2005) by providing a national level strategic planning

framework, harmonising and standardising land administration procedures and processes, harmonising and coordinating donor activities and providing technical and financial support to regions.

Each regional state in Ethiopia has its own responsible agency for land administration and use, and a set of land experts. Under the country's Constitution each region can develop its own policy and legislation under the framework of national policy, legislation and guidance. Some regional governments such as Somali and Afar regions have developed land policies and legislation for pastoral areas, but their application is limited. No region has produced a region-wide land use plan, though Gambella region (which has 2-3 pastoral woredas) is in the process of doing so. Outside Oromia region (as described above), little land use planning has been completed beyond riverbasin planning for irrigation development, and to date no comprehensive land use planning has been completed by government at *woreda* or *kebele* levels.

II. THE DEVELOPMENT OF WOREDA PARTICIPATORY LAND USE PLANNING FOR PASTORAL AREAS

Defining the unit and approach for participatory land use planning in pastoral areas

In consideration of the above, government representatives and technical experts agreed that the most appropriate unit for government-led participatory land use planning in pastoral areas is the *woreda* or district. The main reasons for this are the following:

- i) Government administrative boundaries should be used to define the unit or at the very least, be easily incorporated within it. Working with/within government administrative boundaries is important because this is a government-led process, and by doing so opportunities are opened up for gaining some protection of land use through the process, making use of and building the expertise of government land officers at local levels, and for accessing funds from government sources for implementation of the plan. Current administrative units are national, region, zone (though not strong in all areas), *woreda* (district) and *village* (*kebele*). The *woreda* is the lowest level of government that receives and disburses a government budget.
- ii) The unit needs to be as close to and supportive of current landholding and/or management units of local land users as possible, in order to limit potential negative impacts of working within government administrative boundaries. Lessons from other countries show that even if government administrative and local use-management units do not match it is still possible to

reconcile any differences either by starting with the larger unit (in this case the government unit as the starting point) and ensuring that the smaller units within it are all included and linked, or by starting with the smaller (government) unit(s) and ensuring that agreements are established across their borders to keep the larger unit intact.³ Customary pastoral units of management can be larger than *woreda* and significantly larger than *kebele*. With some rangelands crossing more than five *woreda* and more than seventy *kebele*, a *woreda* as a planning unit (with coordinating agreements and linkages across *woredas*) is more likely to be successful than trying to do the same across a significantly higher number of *kebele*.

iii) For the process to be ‘participatory’ the unit needs to be of a size that will allow effective inclusion of different stakeholder groups including community members in decision-making processes. A region or zone is too large an area to support effective participation of communities as well as other stakeholders – only a *woreda* or a *kebele* could offer this.

It thus became clear that the *woreda* (or district) is the most appropriate level for land use planning that is both participatory and technically comprehensive. This is not to say that land use planning at other levels is not appropriate and useful – it is – but for different objectives and purposes. For the objectives and purposes described here, the *woreda* is considered to be the most appropriate. The *woreda* is the lowest budgetary-holding administrative unit of the government structure and thus is the lowest level (closest to the people) that could access funds to implement the plan. It also has a team of experts who have some knowledge on land use planning processes whose capacity and skills could be further improved. In addition, and perhaps most importantly, it is more likely that sufficient rangeland resources are found within the boundary of the unit (the *woreda*) whereas at lower levels (e.g. village or *kebele*) this is rarely the case – where rangelands cross *woreda* boundaries it would be practically possible to coordinate cross-border agreements and use to facilitate the protection of the unit in its entirety. Where a situation exists where sufficient resources are *not* found in a *woreda*, it was agreed that a process of *joint* WPLUP could be developed to keep the shared resources intact and managed collectively. This process ‘borrows’ directly from the experiences of Tanzania and *joint* village land use planning (see another paper presented at this Conference by Kami et al 2016 *Making Village Land Use Planning Work in Rangelands: The Experience of the Sustainable Rangeland Management Project, Tanzania*).

³ As per village land use planning and more specifically *joint* village land use planning in Tanzania.

The WPLUP Process for Pastoral Areas

With these initial ideas in mind a process of WPLUP for pastoral areas was developed by the RLAUD with support from development and technical partners. The key stages and steps are:

Stage 1 – PREPARATION

Step 1: Facilitate initial discussions and agreement for a land use plan

Step 2: Carry out a stakeholder analysis

Step 3: Establish the WPLUP Team

Step 4: Identify and map the traditional rangeland management unit if present, and understand the relationship between the unit and the woreda(s)

Step 5: Prepare equipment and materials required

Stage 2 – PRODUCING THE WOREDAS PLUP

Step 6: Collect and analyse data

Step 7: Identify and analyse problems and solutions with land users

Step 8: Formulate and write the WPLUP

Stage 3 – PREPARING FOR IMPLEMENTATION OF THE WPLUP

Step 9: Develop monitoring and evaluation system

Step 10: Prepare budget and workplan for the implementation of the Plan

Step 11: Present and finalise

Step 12: Prepare *joint* woreda resource-sharing agreement (if required)

The basic principles of the land use planning process are: efficiency (available land resources are used in such a way that they produce maximum benefits), equitability (provide benefits to all socio-economic categories of land users including women and youth) and sustainability (do not result to degradation of the resource base and are viable in the socio-economic context). Additionally, land use planning should improve and facilitate rather than constrain local decision-making.

Key important considerations of the planning process include:

1. Participation

The planning process tries to be as participatory as possible whilst also considering efficiency and time/resource limitations. The WPLUP Team is lead by the *woreda* technical land unit and includes at least one representative from each village (*kebele*), plus representatives from other stakeholder/interest groups. This can result in a ‘team’ of over 60 people, so in order to be workable the team is divided up into sub-teams that work on different aspects of the PLUP process. It is anticipated that community representatives contribute to all aspects of the planning process (i.e. are members of each sub-team).

2. The particular needs and characteristics of pastoral areas and rangelands are central

Often rangelands cross administrative boundaries including *woreda* boundaries – and it is critical that access and mobility in order to use rangelands effectively is maintained. Therefore a very early key step in the process is for the local land users (communities) to map the area they consider to be the rangeland and its’ use. This allows the Team to see whether the rangeland (unit) crosses *woreda* boundaries. If the rangelands does cross *woreda* boundary(s) then all *woredas* concerned (i.e. that are sharing the rangeland resources) should plan together. Starting off with the mapping of the rangelands also confirms the importance of this use compared to other uses in the *woreda* and its centrality to the WPLUP process. A key objective of the planning process is at the very least to ‘do no harm’ to current use of and access to rangelands, and at best to protect and develop these for local rangeland users.

3. Financial and technical viability

All attempts are being made in the piloting of the process to ensure that the process is financially and technically viable given limitations in current capacities/skills of land experts/staff in regional and local level government, and the availability (current and future) funds for government to replicate and scale-up the process. The national government staff from RLAUD have been key in training and building the capacity of land experts in lower levels of government.

4. Acceptability of process by different stakeholders

A key objective of the process is that it is (as much as possible) acceptable to both government land experts and to local communities. As such the process combines technical aspects of data collection, analysis and planning such as land capability assessments and classifications, with the use of participatory tools for collection of socio-economic information. All information collected is then combined and used for identifying problems and solutions, and then the development of the land use plan itself.

Implementation mechanisms (and supporting institutions) are still being developed, but it is anticipated that this will be incentive-based rather than enforced.

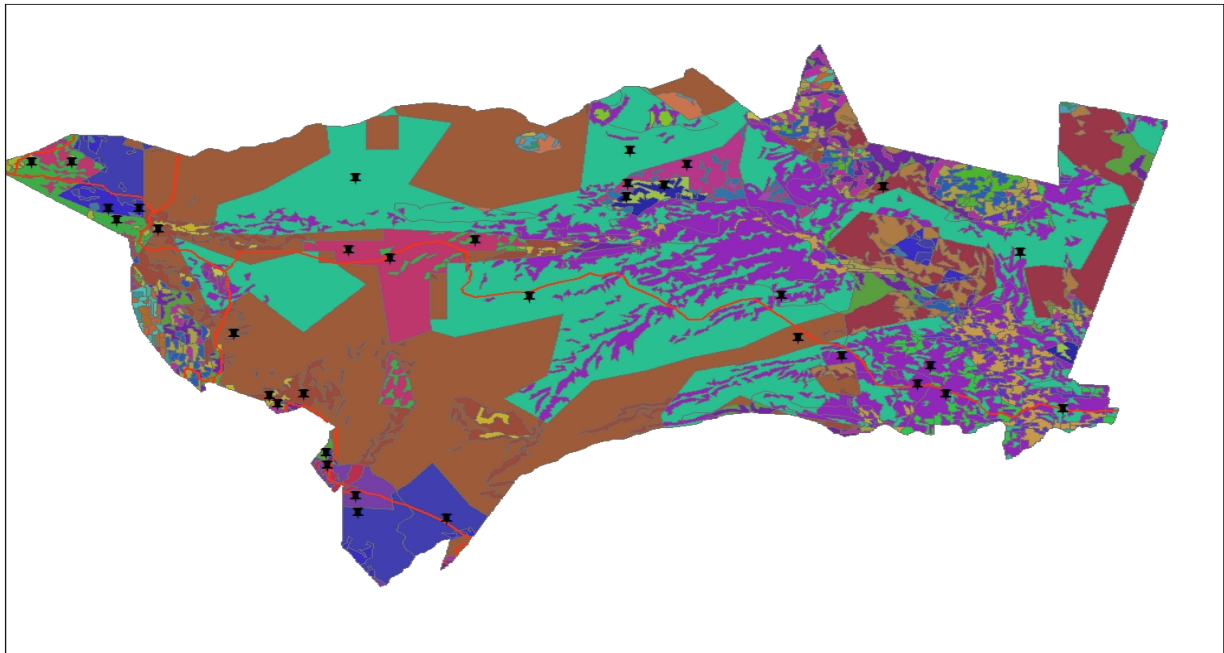
The WPLUP Process in Chifra Woreda, Afar Region

The WPLUP Process in Chifra Woreda, Afar Region took place from April 2015 through to March 2016. This was significantly longer than anticipated due to a prolonged break in the process of six months from September 2015 to February 2016 due to a number of factors including organisational shifts in technical and financial support.

The first step was to raise awareness about the process and to obtain general agreement from different stakeholders. While the institutions might be ready to plan, the communities might not. During the inception phase intensive and repeated awareness creation proved to be successful not only to harmonise the understanding of why to plan according to the WPLUP but also to ensure active and constant participation of the land users all through the process. Dealing with an oral society using traditional ways of communication – in the case of Afar *daguu* – it was necessary to reach all community members in a sparsely populated area with limited technical infrastructure across large planning units.

A woreda base map was created using the boundaries of the woreda. Information was then layered on this woreda base map. The slope map was clipped out from the DEM 30 m resolution and classified by Global Mapper and ArcGIS 10.1, whereas the soil map used was that of FAO, with Google earth used for vegetation cover. Because slope was included as a criteria in deciding on slope-soil-vegetation sub-units the Team ended up with a large number of sub-units and it was realized that this would need to be reduced. It was thus decided that any sub-unit below a minimum number of hectares would be ignored (unless that sub-unit was considered important for a particular land use reason).

Figure 2 The consolidated slope-soil-vegetation map for Chifra Woreda used to define sub-units in which data was collected (the black squares show data collection sites)



Biophysical data collected

Biophysical information was collected including climate, vegetation, soils, crops, land use, drainage conditions, water resources, past and present watershed development activities and trends in land degradation particular relevance to soils, vegetation and water.

Land capability assessments were carried out in 11 land use sub-units. The data collection was ranked against land capability factors slope, soil depth, erosion, texture, water logging, infiltration rate, length of growing period, and stoniness. In addition to adapt the ‘normal’ criteria used in such classification processes two further criteria were added – i) water-drought vulnerability and ii) vegetation (palatable or non-palatable and invasive species). An example of ranking of information from one data collection site in one sub-unit is provided below.

LandUnit slophaglisolowhakOpen shrup land

Land capability limiting factors	Class	Code	rup										
Slope/L	0-3	L1	1	2	3	4	1-4	5	6	1-6	1-6	1-6	
Soil depth/D	>150 m	D1	1	1-2	1-2	1-3	1-4	1-3	1-4	1-5	1-5	1-5	
Erosion/E	S	E1	0	0	0-1	0-2	0-2	0-3	0-3	0-4	0-4	0-4	
Texture/T	C	T-6	3-5	3-6	3-7	2-7	2-7	2-7	2-7	1-7	5-7	1-7	
Water-drought vulnerability /WD	< 2hrs	WD3	1	2-5	2-5	3-6	4-5	4-5	5-6	5-6	1-3	1-6	
Water logging/W	intermittent	W1	0	0	0-1	0-2	0-2	0-2	0-2	0-2	1-3	0-3	
Infiltration rate/I	poor	I-2	0	0	0-1	0-2	0-2	0-2	0-2	0-2	1-2	0-2	
LGP/G	45-60	G-3	G6	G6	G6	G5	G1-G6	G1-G6	G1-G6	G1-G6	G1-6	G1-6	
Stoniness/St	30-50	St-2	0	0-1	0-2	0-2	0-2	0-3	0-3	0-4	0-4	0-4	
Vegetation (palatable or non-palatable and invasive spp) /V	VGP & SI	V3	0-1	0-1	0-1	0-2	0-2	0-2	0-2	0-3	0-2	4	
Land Capability Class			I	II	III	IV	VI	VII	VIII	V	IX		
LC Sub-class:	VIII G		Suitable for cropping				Not suitable for cropping						
			Suitable for livestock - pastoralism								Swampy	Invasive	
			Suitable for forest/woodlands & wildlife conservation, tourism									Biodiversity	Mgmt

The conclusions of all sub-unit classifications and required management are summarised in the following Table.

Land use sub-unit	Class	Condition	Management
1. Open shrubland	VI	Steep or stony and eroded lands. Presence of unpalatable species. Low and variable rainfall resulting in occasional drought.	Improving rangeland productivity e.g. palatable species. Careful water development.
2. Open woodland	VI-VII	Steep or stony and eroded lands. Presence of unpalatable species. Low and variable rainfall resulting in occasional drought.	Improving rangeland productivity e.g. palatable species. Careful water development.
3. Open grassland with shrubs	VII-VIII-IX	Severe past erosion. Stony eroded lands. Sandy soils. High vulnerability to drought. Complete infestation of invasive species.	Clearance and management of invasive species.
4. Open bushland-woodland	IV	Good soils, flat or gentle slopes, subject to erosion and damage. Poor vegetation cover incl. non-palatable or invasive spp. Rainfall variability.	Grassland improvement incl. palatable spp. Annual crops on occasional basis with intensive conservation practices. Well-planned careful water development.
5. Open shrubland	III	Moderately fertile, gentle slope, subject to erosion and soil damage. Sloping and moderately eroded lands with access to permanent water and/or can experience rainfall variability. Good palatable spp.	Use of crop inputs and crop rotation (irrigation costly). Suited to livestock production, need maintenance of plant cover and control of invasives/bush. Grassland improvement. Drought reserves. Well-planned careful water development.
6. Open shrubland 30%	IV	Moderately steep, stony and eroded lands or flat soils subject to erosion. Patchy sometimes poor vegetation incl. presence of unpalatable spp or	Grassland improvement incl. palatable spp. Annual crops on occasional basis with intensive conservation practices. Well-

grassland		invasives. Some variability of rainfall.	planned careful water development.
7. Open woody vegetation	VIII	Heavy infestation of invasive species or bush and/or Very steep slope; rocky and stony. Infertile drylands. Drought common.	Clear invaded area and rehabilitate as grazing land incl palatable species etc. And/or Well-managed browse (sheep/goat or camel), careful forest management. Wildlife management. Well-planned careful water development.
8. Open woody vegetation	VII	Can be steep slopes and/or uneven surface, eroded, shallow soils, swampy and drylands; risk of degradation and damage; high risk of drought; invasive species invasion. Drought common.	Well-managed grazing/browse (sheep/goat or camel), careful forest management. Control and management of invasive spp including removal where possible. Wildlife management. Well-planned careful water development.
9. Open shrub and woody vegetation	VII	Poor soils. Stoniness. Non-palatable species and/or invasive species. Reasonable water availability in some places, but drought vulnerable and poor access in others.	Clear invaded area and rehabilitate as grazing land incl palatable species etc. And/or Well-managed browse (sheep/goat or camel), careful forest management. Wildlife management. Well-planned careful water development. For forestry requiring enclosures; wildlife or conservation; grass/fodder cut and carry also possible. Controlled grazing access, collection of NTFPs.
10. Open shrubland	VI	Can be steep slopes, or shallow soils; Rainfall variability high.	Physical, biological soil and water conservation; drought resistant species; enclosures for regeneration grassland and palatable spp. improvement; tree planting. Well-planned careful water development.
11. Open shrub and woody vegetation	IV	Good soils, flat or gentle slopes, subject to erosion and damage. Poor vegetation cover inc. non-palatable or invasive spp. Rainfall variability.	Grassland improvement incl. palatable spp. Annual crops on occasional basis with intensive conservation practices. Well-planned careful water development.

Rangeland data

Detailed discussions were held concerning the rangeland use planning. This resulted in a base map of the major rangeland units. The major rangeland units in Chifra Woreda, therefore, are Arto-duba (A), Mile-guraele (B), Wuama-weranso (C) and Wanaba-geri (D).

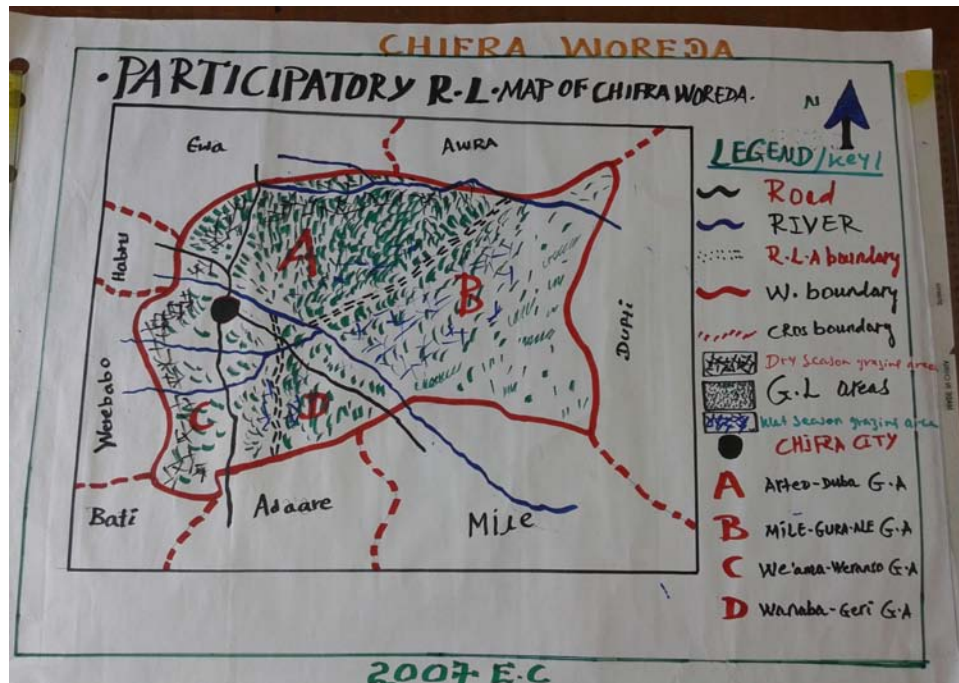


Plate 1: Participatory rangeland map of Chifra Woreda

Chifra Woreda is bordered with Ewa Woreda in the North, Ader Woreda in South, Mile and part of Dubti Woreda in the East and North Wollo of Habru and part of Bati Woreda (Werebabo) in the West. Mobility across borders between Chifra and these neighbouring *woreda* exist year around assuming different patterns. In wet seasons for instance, there is an inward mobility pattern to Chifra from the rest of the *woredas* while during dry season and drought periods, the mobility goes outside of Chifra to areas where there is grass.

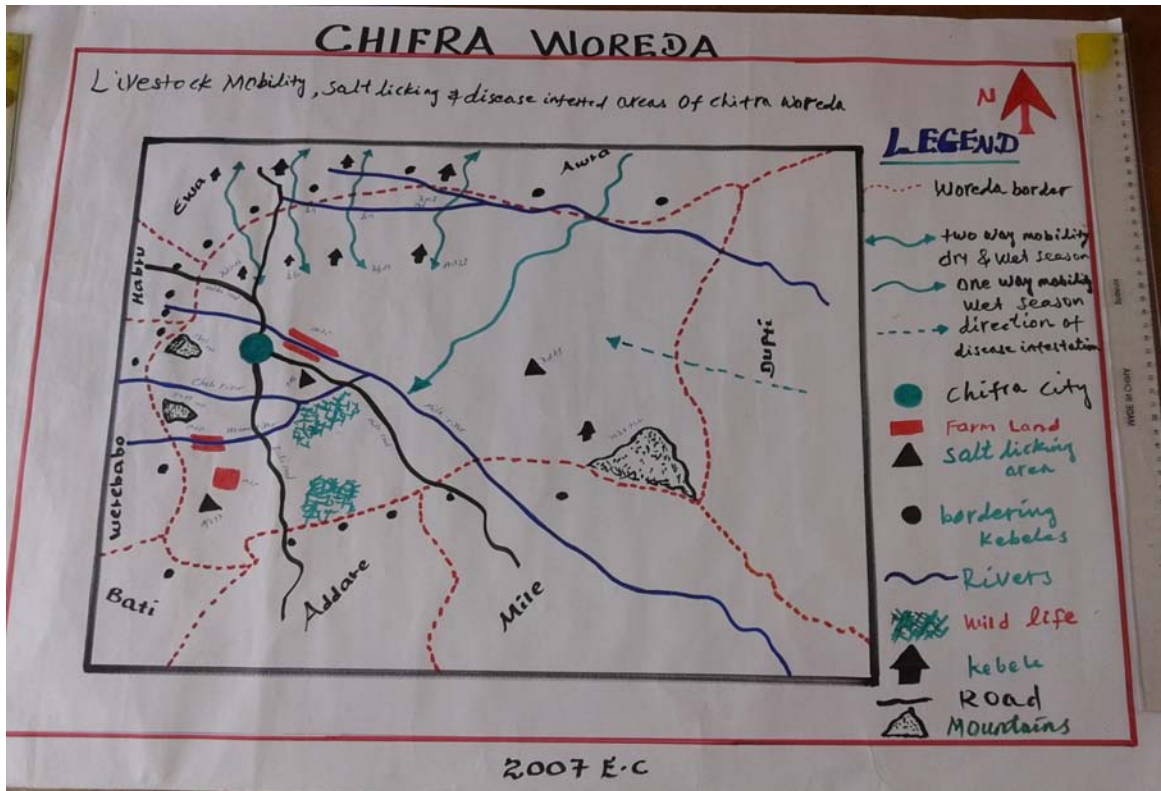


Plate 2: Mobility map of livestock for grazing, licking salt and avoiding disease

Following the identification and mapping of the rangeland and resources in Chifra Woreda, the rangelands sub-team started collecting data using GPS, cameras, tape measure, 1m long stick, clinometer, ruler and stationary materials deemed necessary for measurement activities in the field. Different plant, shrub and tree species were identified, and their usefulness or non-usefulness described by community members.

Example of information on plant species collected in Jara Kebele

Local name of plant	Latin species name	Use of plant	Distribution/occurrence
Durfu		For grazing	30%
Halale		For grazing	15%
Bunket		For grazing	14%
Keseltu		For browsing	1%
Genseltu		For browsing	9%
Unda unda		For grazing	2%
Medera		For browsing	20%
Gerota		For browsing	0.5%
Adegento		Invasive(non palatable)	8%
Dubule koase		Invasive (non palatable)	0.5%
Total	-	-	100%

The dominant species are *durfu* (grass), *medera* (shrub) *adgemento* & *gernto* (invasives), *kesseltu* (tree seedling).

Data collection point (Jara kebele)	Data collection Point A
What is the grazing /browse intensity high, med, or low	medium
What is the soil expensive(high, med, low)	High
What is basal cover of grass spec ice	Moderate
<i>Number of tree approximate height</i>	11 & 3m
What are main grass &plant spec ice& percentage	Durfu 30% Unda unda 20%
What is the grass composition score	1 st durfu 2 nd unda unda
What are main shrub, woody & tree spec ice & percentage	Keseltu 1% Medera 20% Gernto 0.5%
<i>What is mean plant height</i>	15cm
What is the status of range land area	It is moderate
<i>What is the main problem of range land resource</i>	Open grazing Distance to H ₂ O Poor management
Use of range land of forest in the hole plot	Its use in for grazing

Rangeland water availability during the permanent and temporary seasons (Jara kebele)

Water availability	River/ H ₂ ^O point/name	Kilo Meter	Per/Hour
Distance to drinking H₂^O	Mille river	4km(35 min)	8km(1:10hr)
Distance to permanent livestock H₂^O	Mille river	4km(35 min)	8km(1:10hr)
Distance to temporary livestock water	Seasonal water pond	0.5 km(15min)	1km(30 min)

Socio-economic data

The socio-economic sub-team conducted its data collection activities and analysis in six kebeles of Chifra Woreda. Here below is the data compiled for Teaaboi kebele of Chifra Woreda.

Resources include grazing and farmlands and wildlife as well as soil and rocks. The community benefits from milk and milk products from its livestock and collects fruits at different seasons in the year. The forests in the kebele harbor plants such as gersa, gerento, humra or roqa, keselto, kurkura, korasmathat for

different purposes such as construction, bed making, and beautification for women and for livestock feed. Some are found throughout the kebele while some grow at specific locations like near the border to Amhara region.

Resources use assumes a communal pattern. They assign a different place for people coming outside of the kebele. The use of and administration of resources is done in consultation in the community. In times of drought, when resources are scarce, they move to Ewa, Werebabo, Awra, Mile, Weama and Aiyisaita.

Table 5: Seasonal calendar in the Kebele

Activities		Season			
		<i>Karma</i>	<i>Gelen</i>	<i>Sugum</i>	<i>Hagay</i>
Rain condition		2	0	1	0
Livestock mobility		2	0	0	0
Water supply		3	0	0	0
Land use		3	0	1	0
Land cover		3	0	1	0
Workload	M	3	0	0	0
	F	2	0	1	0
Source of income		3	2	1	0

Table 6: Decision-making processes over livestock and livestock products

Activity	Who Collection access	Who Controls access	Who use it	Who control use	Who control money	Inheritance
Live animals	M	M	M/F	M/F	M	M
Meat	M/F	M/F	M/F	M/F	M/F	M/F
Milk	M/F	M/F	M/F	M/F	M/F	M/F
Cheese	F	F	F	F	F	F
Hide	F	F	F	F	F	F
Butter	F	F	F	F	F	F

Conclusions of the data collection

The land capability classification assessment (LCCA) shows that the majority of land in the *woreda* is only suitable for grazing/browse, with limited potential for farming in some areas due to poor soils. The LCCA also shows that land in many areas is severely degraded and requires rehabilitation including removal of invasive species, and soil-water conservation measures. Water is a limiting factor in the majority of places and requires careful development.

The socio-economic study shows that communities are facing many challenges in land use including rangeland degradation and increased reliance on feed (rather than grass/browse) for livestock. Land is managed communally. Today government administration plays a greater role in the *woreda* than previously, though customary institutions still tend to make decisions about use of the land. In general both men and women make decisions about livestock – though men tend to have greater authority over live animals, and women over livestock products (e.g. hides and dairy products).

III REFLECTIONS AND LESSONS LEARNED

Challenges of the process

There were challenges in the data collection including a lack of awareness creation and discussions at village level, road inaccessibility to reach some of the sites, and incompatibility of some of the classes in the worksheets to fit into local contexts were the challenges encountered by the sub-team. Moreover, the sub-team has faced gaps in dealing with vegetation and water drought vulnerability classes.

The WPLUP process has been designed based on various experiences gained from similar activities inside and outside of Ethiopia. The similar however, the context, envisaged scale and extent of the land use planning differs including in from how land use planning has been conducted in the past in Ethiopia. The participatory approach demands that government works closely with local land users, which is something that has not taken place to any significant degree previously. It demands working within different socio-economic and ecological contexts with a diverse set of actors, which requires good facilitation and negotiation skills – something government land experts may not have experience in. It requires problem-solving and the drawing of conclusions based on information from different sources – something that is challenging to achieve for all actors.

While over time an institutionalisation of these skills and knowledge will occur as time passes and experience accumulates, within not only the team responsible but also within all involved governmental institutions on a horizontal and vertical scale, it will take time to foster and for the timebeing there is

much “trial and error” and “adaption” and “improvement” throughout the piloting process. This has proved to be frustrating at times and it has only been due to the strong commitment and flexibility of government, development and community partners that the process has succeeded.

Afar Regional State as an emerging region in Ethiopia is still developing its own capacities across almost all governmental institutions, which are de-facto in place and have designated responsibilities but often lack the man-power and sometimes the experience. Good land use planning is cross-sectoral and involves offices that may not have been involved in the past. The process is resource-intensive and demands the time and input of different members of staff. Government currently lacks budget allocation for the planning process and thus it is reliant on the financial support of development partners, who may have their own agendas and/or priorities to consider as well. Despite trying to keep down the costs of the WPLUP process as much as possible, the completed pilot in Afar cost between US\$50-60,000. The process needs to be made more efficient if the government is going to be able to afford to replicate it in all *woredas* in pastoral areas and in particular if it does not want to have to rely on financial support from development agencies.

Another challenge that arose during the piloting process steps was the different understandings of ‘space’ (such as “rangelands”) and its representations in maps. Pastoralists and agro-pastoralists know their environment very well and are fully apt to describe the different land use units and their spatial extent. They may, however, not have the same skills in reading maps and understanding administrative boarders – especially given their mobile to semi-mobile livelihood systems spanning vast areas. Sensitive, often-intensive and flexible communication and facilitation is key to preventing misunderstandings and potential conflicts based on those misunderstandings.

During the pilots in Afar, the communities were also very vocal about their expectations. Hopes and expectations were raised through the process, which now depend largely on the local government’s commitment and resources to carry out. With a WPLUP in place in a marginalised environment, but with multiple ongoing development programmes from the government and development partners, the communities still wait to see how planning can strengthen and improve their livelihoods.

One clan leader in the pilots said “Our words are stronger than fences”. This stresses yet again the importance of traditional oral communication and the need to accommodate this in the planning process. It also challenges the validity of paper based plans and agreements. WPLUP aims at reaching accountability in land use between communities within and across *woredas*. Although the process is designed to work bottom up, starting at oral communication and resulting in written agreements, it is still

vital to disseminate the plans orally afterwards in order to ensure an institutionalisation within the communities.

Current status

The WPLUP process has been piloted in two regions of Ethiopia as part of GIZ- and Oxfam-supported programmes. The process is now being replicated in other woredas by the government and with support of GIZ, with the aim to scale-up the process across the pastoral areas of Ethiopia through the government with additional support from other development actors. It is anticipated that development actors will invest in supporting this government-lead planning process as part of future development programmes in different pastoral areas. As the process develops lessons learned are incorporated into the refinement of the process, which will remain with enough flexibility to be adapted to particular local contexts. It is anticipated that the process will complement land use planning in higher and lower levels which are also being developed – this includes national and region level land use planning and more local level land use planning such as for rangelands.