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Knowledge Gaps in Integrated Land Use Planning

Basis for the preparation of training manual

Oromia Environment, Forest, and Climate Change Authority (OEFCCA)

By

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Contents

Acronyms

AU	African union
CADAP	Conservation and design advisory panel
CCGs	Common-commodity community groups
CFE	Common framework of engagement
CRGE	Climate-resilient green economy
ECA	Economic Commission for Africa
EFCCC	Environment, forest, and climate change commission
FAO	Food and agriculture organization
FSC	Federal steering committee
FTC	Federal technical committee.
GIS/RS	Geographic information system/remote sensing
GPS	Geographic positioning system
GTP	Growth and transformation plan
IISPT	Intermediate level investigative study and planning team
IMT	Intermediate means of transport
M&E	Monitoring and evaluation
MDG	Millennium development goals
MoU	Memorandum of understanding
NDS	National data system
NGO	Non-governmental organization
NILUPP;	National Integrated Land Use Planning and Policy,
NILUPP	National Integrated land use and development plan and policy
NILUP	National Integrated Land Use and Development Planning:
NSC	National steering committee
NTC	National technical committee
OBLAU	Oromia bureau of land administration and use
OBNR	Oromia bureau of natural resources
OEFCCA	Oromia environment, forest, and climate change authority
PET	Potential evapotranspiration
PM	Prime minster
PPT	Precipitation

PRSP	Poverty reduction strategy plan
RMD	Roadmap document
RMS	Road maintenance strategy
RSC	Regional steering committee
RTC	Regional technical committee.
SDG	Sustainable development goal
SESA	Social and environmental safeguard assessment
SISPT	Senior level Investigative study and planning team
ToR	Terms of reference
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization's
UTM	Universal Trans Mercator (x, y, and z position of nay site in meters)
WHO	World health organization

Terms and Definitions

a) **Administrative entity:** The Regional States, regional capital cities, zones, and their capital cities, other strategic towns, and cities, Woredas, or a similar entity entrusted with integrated rural/urban land-use plan.

b) **Harmonized plan:** a land-use plan where integrated land-use types are organized to co-exist in agreement with each other with minimal or no conflict both in rural and urban settings.

c) **Integrated land-use planning:** A general term used for evaluating potentials and limitations of every piece of land and harmoniously allocating that piece of land for a given type of use in an efficient, legal, ethical, and sustainable way and in both rural and urban settings, to address the needs of the current generation and assure sustainability and perpetuation of that piece of land and the environment for generation after generation

d) **Land Use** is the human use of land. Land use involves the management and modification of natural environment or wilderness into built environment such as fields, pastures, and settlements. It also is "the arrangements, activities, and inputs people undertake in a certain land cover type to produce, change or maintain it".

e) **Land Use Planning** is the general term used for rural and urban planning which is encompassing various disciplines that seek and assist to sustainably allocate and regulate land use types efficiently and ethically, thus preventing land-use conflicts.

f) **Land.** Comprehends any fauna, soil, or earth whatsoever, as meadows, pastures, woods, waters, marshes, mountains, and valleys. It has an indefinite extent upwards as well as downwards; adapted from Burton's Legal Thesaurus, 4th Ed. (2007). It may also be defined as a delineable area of the earth's terrestrial surface, encompassing all attributes of the biosphere immediately above or below this surface, including those of the near-surface climate, the soil and terrain forms, the surface hydrology (including shallow lakes, rivers marshes, and swamps), the near-surface sedimentary layers and associated groundwater reserve, the plant and animal populations, the human settlement pattern, and physical results of past and present human activity (terracing, water storage or drainage structures, roads, buildings, etc.) (FAO 1995).

g) **Land-use policy:** A legal framework serving as a guiding instrument of government in framing the direction to be taken on major issues related to the allocation, use, and management of the country's land resources over a period. Land-use policy is an instrument that provides a framework within which the government can prepare legislation for controlling defaulting parties so that implementation of NILUP continues to be realized as planned. It is essentially an expression of the government's perception of the direction to be taken on major issues related to land use and the proposed allocation of the national land resources over a fixed period. It has production and conservation components.

h) **NILUP:** A national integrated urban and rural land-use plan to be produced at national, regional, Zonal, Woreda recognized city/and or town levels.

i) **Participatory planning approach:** Involving grassroots communities that are organized by their livelihood sectors and capacitated to express their Kebele-level shared concerns and demands to be considered in Woreda-level land-use planning processes.

j) **Planning Unit:** A single administrative entity (national, regional state or autonomous city, zone, Woreda, the zonal capital city, (metropolis, large, medium, or small town) for which rural and urban land-use plans are prepared.

k) **Rural Zonal-Land Use Plan:** A zonal-level land-use plan that shows the boundaries of all its Woredas in a 1:50,000 scale map.

l) **Strategic plan:** A plan where the physical, economic, and environmental conditions are coordinated in planning the urban land-use plan.

m) **Structural plan:** A plan where the different land-use categories are shown in urban planning. A structural plan indicates assigned places to each land-use sector and special stipulations as the cases may be.

n) **Urban land-use plan:** A plan that shows land uses set aside for the different uses and for guarantying sustainable prosperity of dwellers of a designated city or town.

1. INTRODUCTION

The Knowledge gap assessment study on Integrated land use planning is conducted by ABT-PCS Professional Consulting Services which has been contracted by Oromia Environment, Forest, and Climate Change Authority (OEFCCA). The overall assignment has been providing timely assistance and advisory services to Oromia National Regional State (ONRS) on preparation and effective implementation of the sub-basin Integrated land-use plan (ILUP) and also on the reinforcement of the on-going land use planning efforts of the regional state. In specific terms, the assignment dwells on:

a) Developing training manual and technical training syllabus including training of trainers on integrated land use planning
b) Strengthening the regional, zonal, woreda level capacity on ILUP preparation and enforcement
c) Liaise and advise the regional government to reinforce FDRE's ongoing national integrated land use plan
d) Developing integration mechanisms /tools of the different land-use planning scales that promote:
   a. vertical, integration,
   b. multi-scale coordination: horizontal integration
   c. a set of planning procedures applicable at different scales,
   d. developing clear objectives, legally binding land-use plans that are linked to financial planning
   e. aiming at sustainability: balancing social, economic, and environmental needs
   f. stakeholder engagement: involvement of all actors including civic societies
   g. Links between ILUP with pertinent development and nature conservation laws such as the forest development, conservation and utilization proclamation No. 1065/2018, and other environmental laws
   h. The fact of future oriented-ness

Because of the above-stated assignments, it was necessary to conduct a literature review of the basin-based land use plans and the extent of engagement of the different planning actors and gauging the levels of their knowledge in planning and plan facilitation. Also, the study included field level studies, focus-group discussions, and individual interviews using a structured questionnaire.

In the literature interview, we scrutinized the issues considered, methods, and approaches used, as physical and social components considered in the land-use study and planning process and the extent of engagement of the necessary planning actors whose level of knowledge and expertise in land use planning needs to be gauged. In all the literature reviews, questionnaire interviews, focus group discussions and expert field observations, we tried to learn about the level of knowledge and depth of engagement in terms of:

- ✓ Environmental, social, physical, and economic study parameters that are considered for the study
- ✓ methodical approaches in involving the three major planning groups,

- ✓ data investigative approaches,
- ✓ scope and extent of the study parameters that are considered in the planning process,
- ✓ land use fitness prioritization issues and levels,
- ✓ methods used in deciding on best land use among the multiple competing land use candidates,
- ✓ reconciliation procedures between competing land use candidates,
- ✓ the utility-period (lifespan) of the reconciled/negotiated land use plans,
- ✓ updating cycles, recommendations for enforcing the land use plans, and
- ✓ the scale used for each of the rural integrated land use plans and integrated urban land use plans
- ✓ Methods and approaches recommended for facilitating the implementation

Our firm focused on each of these investigation concerns to identify knowledge gaps so that a focused training manual can be prepared to enhance the quality of the land use plans. The study also focused on issues and parameters of the integrated land use plans of the river basins to make the plans aligned to administrative level plans that can comply with the official Land Use Planning Roadmap to be considered at:

1) Woreda, zone and regional level rural land use plans of the Oromia Peoples National Regional State (OPNRS), and
2) small, medium, and large towns as well as city-level urban land use plans,

The study has been scheduled to be studied to know how many of these issues are known and addressed in the basin-based land use plans of the Oromia region so that they can be customized to administrative-boundary-based integrated land use plans.

The report is organized into four chapters. The first being this introduction, the second Chapter is the Main Report while the Third Chapter is summarizing the conclusive findings. The last 4th chapter is recommendations.

2. MAIN REPORT

Literature Review and Findings

Oromia Peoples National Regional State (OPNRS) has twenty administrative zones among which we have sampled four zones (20% sample coverage) both for the literature review and field-level investigations. The region is the home of **pristine ecology** that has national and regional relevance. It is the home of large areas of tropical rainforest, fertile agricultural land, arid fertile plains, populated central highlands, lakes, and wetlands, large areas of rangelands, wildlife habitats, biodiversity ecotones, and fish resources. It is known for its long and wide rivers that most originate from the central highlands and travel traversing the region and flowing into neighboring regional states and even neighboring countries. Please refer to Table 1 below for sampled zones Woreda, and Kebeles whose corresponding altitudinal zone, agroclimatic zone, and dominant land use are presented.

Name of the sampled zone	**Woreda**	**Kebele**	**Altitude in m a s l**	**Represented ACZ**	**Representative land use**
East Shewa Ppt 859 – 867 1616	1. Lome Woreda		1787	1-Moist Weyna Dega	Cereal esp. Teff croplands
	2. Ade'a Woreda		1925		
		1. Tade-dildima Kebele	1867		
		2. Denkaka Kebele	1865		
Illuababor Alle Wereda PPt 1900-2200	3. Yayo Woreda		1592	2- Wet Weyna Dega, and 3. Wet Dega,	Coffee and forest land use
	4. Alle Woreda (Gore town)		2951		
		3. Achebo kebele	1599		
		4. Gumoro kebele	1675		
Borena 1696m asl Ppt 680 – 2000mm	5. Yabelo woreda		1702	4-Dry Kola, 5-Moist Kola, 1-Moist Weyna Dega, 6- Dry Dega	Livestock keeping, range lands
	6. Elwaye woreda		1377		
		5. Dehreto kebele	1594		
		6. Ediale woreda	1540		
East Harrarghe 1879 400 -1200 PPT	7. Babille woreda		1671	7- Dry Weyna Dega, 1-Moist Weyna Dega	Chat and Sorghum cultivation Livestock grazing for fattening and milk production
	8. Haromaya woreda		2029		
		Ediale kebele	1540		
		Tula kebele	1669		

Table 1. ***Zones, Woredas, and Kebeles of the Oromia Region that are studied for the knowledge-gap assessment***

The knowledge gap assessment covered relevant offices ***4 zones, 8 Woredas, and 8 Kebeles*** (Table 1). In total, 385 experts, who are operating in these 20 administrative circles, have been interviewed for this knowledge gap in facilitating and preparing the Integrated Land Use Plan. The sample zones, Woredas, and Kebeles represent several agro-climatic zones that dictate the land capability classes which, in turn, dictate the type of land use that can perpetuate for generations (Table 1). Otherwise, the entire Oromia region might be having 17 agroclimatic zones the possible 18. Unfortunately, though OWWDS claims that it has studied the agroclimatic zones, no agroclimatic zone characterization and mapping was considered as a tool for prioritization land uses to be an input for land use of the river-basins land use plans.

In this investigative study, shown in Table 1 above, the following 7 productive agroclimatic zones of the possible 17 are sampled.

1. Dry Dega
2. Dry Kola,
3. Dry Weyna Dega,
4. Moist Kola,
5. Moist Weyna Dega,
6. Wet Dega,
7. Wet Weyna Dega

We believe detailed information would have to be obtained if comprehensive and all-inclusive resource assessment and suitability grading is to be enacted before coming up with integrated land use plans of the Oromia region. Oromia region had been home to pristine ecology, guarantee conducive climatic and hydrologic processes up to the nearest past. However, currently, lands have become susceptible to eroding rainfall, desiccating heat storm, and scorching sunshine that are all threatening agricultural productivity within the existing means has been worsening year-in-year-out. Please refer to The Erosivity Index Modelling thesis by Azene Bekele-Tesemma 1988 Additional evidence is the mass media reports on flood inundation, landslide, and people's displacement that we can cite. As a result, the production challenges in the face of escalating population growth has become unbitable. This confirms that using the agroclimatic zone characterization of lands could have been considered in prioritization and sections of sustainable land use in the land use planning. *Unfortunately, prioritizing the allocation of lands to the type of land use was not one of the parameters considered in deciding the type of land use for consideration.* Lands and their adjoining climatic and environmental factors dictate that the different lands can sustain the different kinds of productions.

The different kinds of productions can be effective when lands are characterized and categorized as they fit the different productions in terms of suitability grades such as best suited, suited, and less suited. One such environmental factor could have been soil depth. Lands of different soil depths are suited for different land-use types. Unfortunately, according to our literature review finding, no soil depth study has been conducted (at least it is not indicated as a factor considered for prioritization of land uses in the land use planning.

Therefore, this study is opting for integrated land use planning as they fit for the different agroclimatic zones of OPNRS. ILUP is a guide for careful, optimal, and responsible use of lands as an entity entrusted to the current generation to be able to transfer it to the next at least at

the quality that the current generation borrowed it; while, at the same time, the lands and their resources do effectively contribute to the sustainable economic growth and continued social transformation of the current generation.

Another target of our investigation was learning the knowledge gaps of the different professionals who could have been in the facilitation team from the headquarters. To this effect, intensive discussions were held with 29 staffs of five relevant headquarter offices (Table 2 below) by using focus group discussion and questionnaire interview methods. Their service years range between 5 and 30 years. Their education level ranges between first degree to doctoral level in diversified professions. Please refer to Table 2 below for their names and telephone addresses if needed to cross-check.

Name of the participants	Profession	Education Level	Year of service	Cell pho
a) Experts from Bureau of Land Administration and Use of Oromia				
1. Seid	NRM	BSc.	30	098209764
2. Samuel Gada	Plant Science	BSc	28	090083508
3. Gamachu Yadata	GIS	BA	10	091785230
4. Belay Getachew	Rural Development	MSc.	15	091387865
5. Zinash G/Wold	Urban Management	MA	28	091111520
6. Iyob Adunya	Urban Plan Development	BSc	8	091345954
7. Ahmed Yusuf	Urban Land & Real Estate Management	MA	19	09157436
8. Abduraman Munir	ULM&S	BA	8	092173544
9. Mazgabu Olana	Business Management	BA	10	092443059
10. Olani Namomsa	Geography & Env. Scie.	BA	10	093244921
11. Masgabu Cala	Geography & Env. Scie.	BA	5	092163189
12. Dimshasha Alemayehu	Law	LLB	8	091601370
b) Experts from Forest and Wildlife Enterprise of Oromia				
13. Birhanu Jilcha	Wildlife Management	BSc	28	091195753
14. Girma Darsu	Conservation Biology	MSc	22	091797589
15. Mengistu Tadesse	Geography & Env. Mgt.	MSc	12	092800708
16. Bekele Tsegaye	Ecological & Systematic Ziology (Biology)	PhD	35	091115423
17. Taressa Dandena	Biology	MSc	29	091163359
18. Chemere Zewude	Integrated Water Shade Mgt	MSc	25	091107158
c) Experts from Bureau of Agriculture and Natural Resource of Oromia				
19. Belaynesh Sori	Soil & Water Conservation	BSc	10	094115064
20. Tadesse Wayuma	Plant Science	BSc	15	090960243
21. Amanuel Hailu	Horticulture	MSc	23	091110940
22. Yadata Korme	Water Shade & NRM	BA	15	091175877
23. Takele H/Mariam	Horticulture	BSc	20	091784027
24. Adisu Waqayo	Land Resource Mgt & Env. Protection	MSc	9	091216004
d) Experts from Oromia Environment, Forest, and Climate Change Authority				
25. Cali Ayele	Geography & Env. Study	BA	12	090419310
26. Bekele Adunya	Forestry	BSc	6	095451333
e) Experts from Oromia Livestock and Fishery Resource Development Agency				
27. Tayech Gudisa	Animal Sceince	BSc	15	092378618
28. Birhanu Tilahun	Animal Health	DVM	25	091101466
29. XXX	Animal Sceince	BSc	15	

Table 2. ***Headquarter staffs of the OPNRS that have been considered for the knowledge gap assessment in their involvement for land use planning***

These are target experts whose knowledge gaps could have been targeted if they were involved in the land use planning processes. They could have been trainers of the trainees that are

deployed for land use planning, plan enforcement, and plan implementation at zonal, district, and Kebele levels. Unfortunately, none of these HQ staff were involved in land-use planning. Because they were not involved in the land use planning and enforcement as well as facilitation processes, it is very difficult to learn from their knowledge gap in that exercise. This is a dilemma for the firm which has been contracted to fill the knowledge gap.

Oromia Peoples National Regional State (OPNRS) has made enormous and rewarding efforts in devising land resource-development plans for selected land types. It is almost fully covered by river-basin studies. The river-basin studies such as Omo, Gibe, Baro-Akobo, Genale-Dawa, Awash, Wabe Shebele, Dawa sub-basin, the Awash sub-basin, and Danakil sub-basin are excellent examples.

At the same time, it is necessary to appreciate that the implementation of such river-basin plans has been *inexistent. It is felt that this is because it was not planned based on an administrative entity and share of responsibilities was not established as of the planning process*. Besides, the call for the watershed planning projects, most usually, had been related to the interests of hydropower and irrigation sectors owned mostly for agriculture interest. Since the interest and expertise of planning experts were focused more on hydropower and irrigable land, more attention has been given to flow-directions and hydrologic processes. Consequently implementation of even a tiny bit of the development plans has been hampered by a lack of legally organized ownership of the plans at regional, zonal, and Kebele levels. Because neither the land users nor their administrative organs were made part of the initiation and the making of such land use plans, plan implementation remained hampered.

From the outskirt, almost all the land-based studies are said to have been participatory. It is obvious that many consultative approaches such as Rapid Rural Appraisal (RRA), Participatory Rural Appraisal (PRA), questionnaire interviews, and the like, must have been used. But these are all good for understanding basic skills, capacity gaps, and development needs; for understanding community-oriented physical assessment parameters, etc. In such studies, these communities do not need to be organized because they are not meant to give coherent views and are not necessarily required to arbitrate and reconcile land-use conflicts and pursue through implementations. This is to say that they need not own the process because they do not own the agenda.

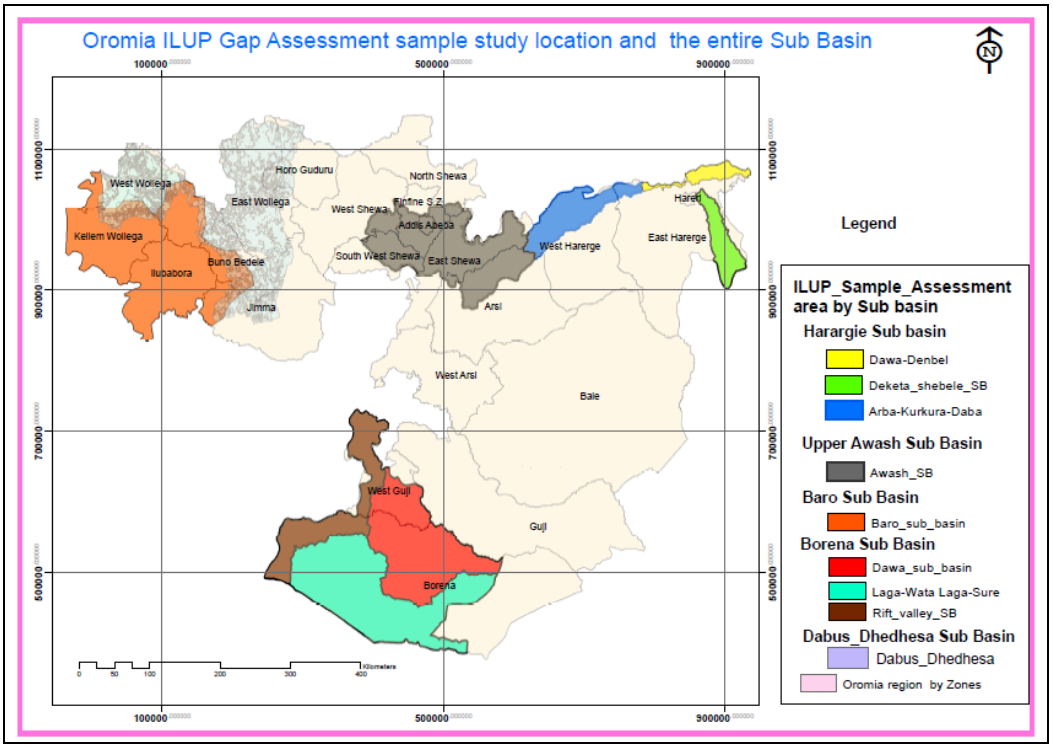


Figure 1. ***Sub-basins whose plan documents are reviewed for the Knowledge gap assessment***

But, in people- and **organization-centered land-use planning**, the level of community participation differs greatly. More than 80% of these communities own the land for which land-use plan is to be prepared. It is the communities' stake. It is their land at least at the user level. Therefore, only community-consultative approaches such as RRA, PRA cannot be satisfactory. Land users themselves need to drive the planning process while government organizations (such as ministries, agencies, etc.,) need to facilitate the process while subject matter specialists need to guide it. At the grassroots level (Kebele-level), land-use plans need to be discussed and negotiated through the involvement of organized communities that can also make their opinions heard, own the land-use plan and defend it, assist in arbitrating land-use conflicts, and serve as an extension arm in facilitating and enforcing land-use plans through their common commodity community groups (CCGs). In the rural setting, these kinds of community participation necessitate communities to be organized in their **livelihood domains**. The livelihood domain may cover beekeeping, coffee growing and marketing, livestock production and marketing, production of high-value fruits and vegetables, smallholder agriculture and commercial farming, commercial and protected forest development, and marketing, etc. This necessitates integrated, aligned, and harmonized urban and rural land-use plans that are developed with the full participation of bureaus, and communities.

For effective participation and ownership by the rural communities, it is necessary to organize them according to their livelihood options and to build their capacity in participatory planning and livelihood project identification. The same applies to a land-use planning and enforcement institution that can facilitate, guide, and regulate land-use planning and enforcement. Of course, these are the major gaps which will be considered in the capacity building training.

In this respect, the call of OPNRS's call for a training manual is timely and necessary. Of course, the training manual will have to be fitted to the prevailing capacity gap. This is the reason why we needed to dwell on planning-knowledge-gap identification. The main purpose of **the regional land-use plan** is to serve as a guide for efficient, effective, equitable, comprehensive, and sustainable use of the region's land and its land resources.

The knowledge gap was supposed to be shoveled-off from the review of:

a. the watershed-based land use plans both in rural and urban settings,

b. Questionnaire interviews of 385 informants who came from the headquarter (regional office), four zones, eight Woredas, and eight Kebeles as a sample,

This study recognizes that filling the knowledge gap by training and associating capacity-building tools alone may not be a complete panacea. Still, the lack of authoritative institutions structured from zones down to Kebeles for facilitating participatory and integrated land-use planning is a standing issue.

In compliance with the roadmap on "Land Use Plan Preparation," the knowledge gap assessment is conducted in recognition and line with the need for beneficiary-driven, institution facilitated and expert-guided planning approach. Since the expert is the one who can orchestrate this kind of integrated land-use planning approach, finding, and filling the knowledge gaps of the experts has paramount importance.

At most, reality has shown that we cannot continue to address our food security challenges by only growing food crops. The situation has now become alarming look at several possibilities by which we can intelligibly widen the types of productions on land.

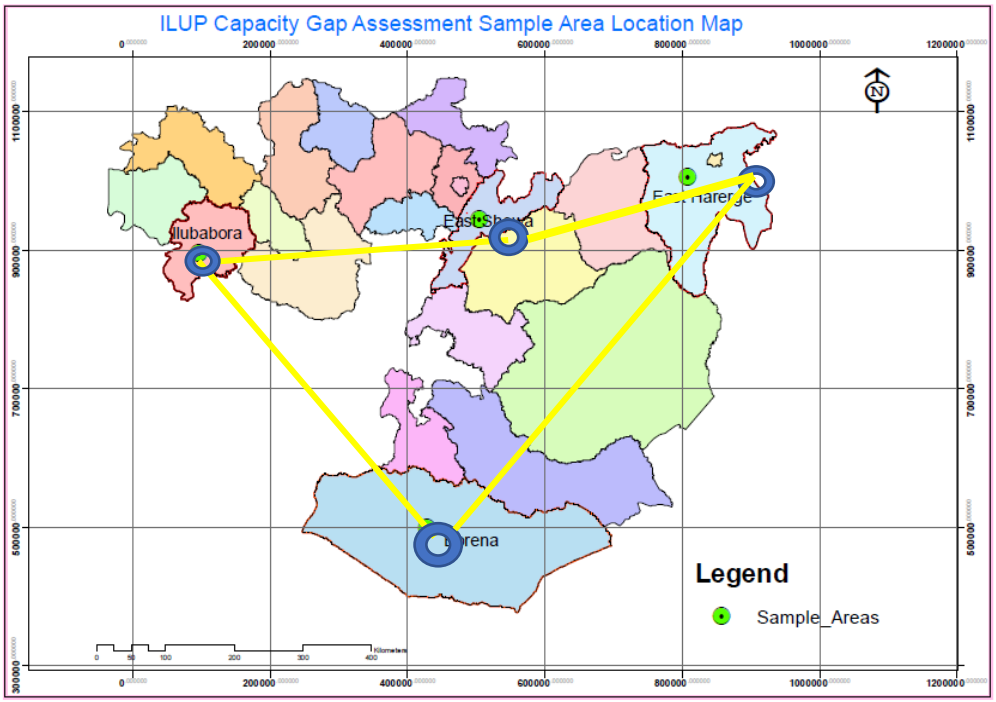


Figure 2. ***The 4 administrative zones where experts who are operating down to the Keble level are considered in the field-level assessment.***

As shown in Table 3 below, the area coverage of the sample zones is significant. The four sampled zones, that are considered for the knowledge gap assessment study, cover 104,990.125KM^2. This is 28.23% of the total land area of OPNRS. Please refer to Table 3 for the details of the area of the four administrative zones that are sampled down to the Kebele level.

Cer. No.	Name of Zone	Area in Ha	Area Coverage in Km^2	Sampled Area In % From respective total sample area
1.	Borena	5572568.683	55,725.687	14.98

2.	Illuababor	1152859.885	11,528.599	3.10
3.	East Harrarghe	2696387.361	26,963.874	7.25
4.	East Shewa	1077196.538	10,771.965	2.90
Total		10499012.467	104,990.125	28.23

Table 3. ***Area coverage of the sampled zones and their shares from the region total.***

The training manual will be built on a solid gap assessment foundation that makes it real problem-solving. First, the time budgeted by the Client was not considerate of the field situations. In real terms, **traveling alone** to Illu Aba Bor, East Harrarghe, Borena, and East Shewa took more time than originally allocated by the Client. Of course, at the expense of the Consultant, the interest of the parties consulted during the Inception Report approval period, demanded that we sample these above-indicated 4 zones due to their representative nature of the land uses in the region. We were also requested to cover Woredas, Kebeles, and towns in each of these sampled zones. We accepted the detailed investigation which made the foundation for our knowledge gap assessment which can be effective problem-solving. This necessitated the allocation of a time budget for the field assessment which is four times more than allocated earlier. We surely believe that "what is acquired in a hurry gets lost when in a hurry" (Prepositions in Azene Bekele-Tesemma 1997).

The statue of implementable land use planning is the genuine participation of the land users from the ground-up. The consultant would like to stress that the "rhetoric of "people's participation may be seductive to donors and appealing to NGOs, and the government agencies; but, if administered by hierarchically-structured, politically-censored, and centrally-managed community-organizations, unexpected results may emerge" (Azene Bekele-Tesemma 1997). This is also why we wanted a thorough investigation of the nature of land use planning and plans for the lasting benefit of the region. We have conducted a thorough investigation by using a detailed questionnaire interview Questionnaires (Appendix A and Appendix B), a focus Group discussion Checklist cross-checked by the Literature reviews, and our knowledge and Expertise, and Experiences. We now feel that we have formidable evidence for the kind of land use planning manual we are going to prepare for our client upon agreement of the client

The land-use plan was conducted by the Oromia Water Works Design and Supervision Enterprise, (OWWDSE), In this regard, ABT-PCS is mandated to conduct a review of the land use plans prepared by OWWDSE and conduct a field-level investigation (Chapter 2). However, the purpose of these investigations is to identify the knowledge gaps among the experts of OPNRS who ***may be involved in the facilitation*** of land use planning and its implementation. For sure, it is known that OWWDSE will not be the custodian whose staffs may be involved in facilitating the integrated land use planning. Instead, the experts of OPNRS will be the ones to be involved in the facilitation and supervision of the day to day land-use planning. To this end, ABT-PCS has been more inclined to investigate the knowledge gaps of the experts of the OPNRS concerning the land use planning in OPNRS as enshrined and adopted ILDP roadmap.

Land mismanagement indeed is one of the major development constraints of the Oromia region. It is well known that with a largely increasing population, land resources in Oromia are becoming limited. On the other hand, the rapid development of the region's economy also increases a call for the wise and planned use of the land resources of OPNRS. It is a challenge for the regional government to balance the huge demands for land resources and the improvement of the current environmental situation. According to the information from the

OWWDSE-SEA, (2010), one of the land management strategies of the Oromia Regional Government is using the land-use master planning as an instrument to manage the utilization of land resources. In line with this, in mid-2006, the Oromia National Regional State decided to implement a development corridor approach, which is in line with the rural development strategy to address its development objectives. This indicates that, as of the beginning, the intention was to come up with a land development plan of certain land-use types instead of an integrated land-use plan

The basin-based Land Use Plan documents mention that the idea of the land use planning was initiated by the regional government higher officials by conducting an informal discussion with stakeholders and observations of the project area through "identification of issues, opportunities, and constraints and formulation of objectives". ***The program was guided by the president of the region and finally came up with the urgent need for land use planning and to formulate a general strategic document that is in line with the Plan for Accelerated and Sustainable Development to End Poverty (PASDEP) and that considers water as an entry point to bring fast Development and Socioeconomic Transformation***. It was an excellent opportunity that the program was guided by the President's office except it missed the truck when it took water as an entry point. The initiative seems to be for promoting the sustainable use of land, water, and human resources ***for food production***[i] and to promote land management with care and efficiency so that the benefits accrue not only to the present generation but also for the future generations". Besides, recurrent drought which was the then challenging issue to the life of more than 1.5 million people of the region, the worsening poverty situation and the need for societal transformation forced the regional government to strategically address these issues. The reasons are still valid except that food production cannot be the only target of the integrated land use planning or food security.

Finally, the OPNRS has initiated the idea of basin-based land use planning in **2007** and commissioned the planning work to ***Oromia Water Works Design and Supervision Enterprise***, (OWWDSE), which is a governmental consultancy firm (OWWDSE-SEA, 2010). The study was initially activated, in 2008, in five zones: ***Borana***, ***Harrarghe*** (***Eas***t and West), and Oromia Special Zone Surrounding Finfinnee. The study was Basin-based that covered 12 sub-basins throughout the Oromia region and the last study was conducted at **Illuababor zone** which was completed in 2018. To this effect, the plan document is about 13 years since it was incepted and started. Please note that the zones that are sampled in this study (shown in boldface) are among both early-studied and planned (**Borena and East Harrarghe**) as well as the lately studied and planned zone (**Illuababor**). In both cases, the plan is obsolete. More than anything, *it is sad that OWWDSE does not possess the* ***shapefile or the geo-referenced data*** *on Integrated Land Use Plan (ILUP*). **The office also attested to us that there is no land-use plan.**

According to the plan document, the initial client of the Land Use Study project was the ***Pastoral Development Commission of Oromia***. Later, however, the role and responsibilities about Land Use Planning Study were transferred to the ***Bureau of Land and Environmental Protection of Oromia*** which was later also divided into two: ***OBLAU and OEFCCA***. In this ownership, EFCCA is inevitably a land user by itself that makes it difficult to avoid bias in the use

planning process. The last version of the 'land use plan document' has been finalized and handed over to the OBLAU in **2018**. The document has three sections: Section I: one **Main report**, Section II- **Sectoral Studies,** and Section III- **Planning**. Section-II consists of 10 volumes while the full gamut study could have produced at least 49 different studies or volumes. In this connection, the study-crew has been astonished at how land use characterization could be made without considering soil depth concerning slope categories which are being missed in this study. This is true even for a land development plan which this study is inclined to. Section-III is composed of five volumes. However, based on the limitedness of the coverage of the studies and the methodology used, one can easily conclude that there was no integrated land use planning. The contents of both Section II and Section III are presented as follows:

Section II: Sectoral Studies

Volume I: Soil survey

Volume II: Land use /Land cover and change detection

Volume III: Agro-climate

Volume IV: Agronomy

Volume V: Forestry and Wildlife assessment

Volume VI: Hydrology and water resource assessment

Volume VII: Hydrogeology

Volume VIII: Livestock and feed assessment

Volume IX: Socioeconomic survey and analysis

Volume X: Land degradation and Erosion hazard assessment

Section III: Planning

Volume I: Land Evaluation

Volume II: Proposed Land use plan

Volume III: Management guideline

Volume IV: Implementation guideline

Volume V: Strategic Environmental assessment

Description of the zones whose plan document is reviewed

This review is organized in Administrative Zone by Administrative Zone, listed as follows

a) East Shewa zone is situated in the Upper Awash sub-basin,

b) Ilu-Ababor zone is situated in the Baro sub-basin,

c) East Harrarghe zone is contained in five sub-basins: Dakata, Dawa-Dambel, Erer-Mojo, Fafan-Dintin, and Ramis, and

d) Borena zone in encompassing three sub-basins; Dawa, Laga-Wata/Laga-Sure, and Rift Valley Lakes

Each of these administrative zones is described as follows:

a) EAST SHEWA: Upper Awash (Central Oromia) sub-basin:

The preparation of the land use plan of the Upper Awash (Central Oromia) sub-basin commenced in 2008 by OWWDSE. The initial client of the Land Use Study project was the **Rural and Agricultural Bedelle zones Development of Oromia**. Later, however, the roles and responsibilities of the Land Use Planning Study were transferred to the **Bureau of Rural Land**

and Environmental Protection of Oromia. However, what is not clear to this study is the fact that the staffs of this office are not clear on what kind of planning was conducted, who participated and how the planning processes were.

b) Baro Sub-Basin:

Baro sub-basin comprises **Illuababor**, Qellem Wellega, West Wellega, and certain parts or districts of Jimma and Bun'o of Oromia Regional State. The entire study was carried out **between 2017 and 2018** by OWWDSE. The client of the Land Use Study Project was the Rural Land Administration and Use Bureau of Oromia Regional State. The detail is described in CHAPTER 2.2

c) Daketa, Dawa-Dambel, Erer-Mojo, Fafan-Dintin And Ramis Sub-Basins:

These five sub-basins are situated in the **East Harrarghe** zone. The entire study of these five sub-basins was carried out between **2007 and 2009** by OWWDSE. The initial client of the Land Use Study project was the Pastoral Development Commission of Oromia. Later, however, the role and responsibilities of the Land Use Planning Study were transferred to the Bureau of Land and Environmental Protection of Oromia. The detail is described in CHAPTER III.

d) Dawa, Laga-Wata/Laga-Sure and Rift Valley Lakes Sub-Basins:

These sub-basins make the **Borena zone**. The basins were planned between **2007 and 2009** by OWWDSE. The initial client of the Land Use Study project was the **Pastoral Development** Commission of Oromia. Later, however, the role and responsibilities of the Land Use Planning Study were transferred to the Bureau of Land and Environmental Protection of Oromia. The detail is described in CHAPTER IV.

Gaps identified and comment under this section:

There is no mention of the population projection at all and no plan for updating the land-use plan. Given that, the land use plan is dynamic and iterative; considering the future scenario analysis, the potential risks and alternative mitigation measures should have been discussed in line with forecasted demographic changes. However, the document mentions, in its management guideline, "When population increases in each area, the increased demand for production can induce stress and consequent degradation of the land resource. If no other source of income can be tapped people 's standards of living decrease." (OWWDSE-Management Guideline, 2018). At present, the data and information in the document get obsolete, which requires urgent updating before implementation planning.

Objective and purpose of the reviewed land use plan

The document of the land use plan developed by Oromia Water Works Design and Supervision Enterprise (OWWDSE) utilized the objective of LUP framed in (FAO, 1996) that defines LUP as; "Land-use planning means the systematic assessment of physical, social and economic factors in such a way as to encourage and assist land users in selecting options that increase their productivity, are sustainable and meet the needs of society" (FAO, 1996). Likewise, the ILUP document mentions the objectives as indicated below.

General objectives of the land use plan: it was to guide development decisions on land use in such a way that the environmental, social and economic resources of the land are put to the most

beneficial use, and at the same time conserving those resources for the future, which, in essence, is ensuring sustainable development in the study area for many years to come.

Specific objectives:

1. To support the ***agricultural and rural development*** program,
2. To optimize the actual land use,
3. To solve and avoid land-use conflicts caused by competing interests and conflicting land tenure situations,
4. To conserve and rehabilitate natural resources,
5. To formulate **rational land management options** based on an inventory of land resources and evaluation of biophysical and socioeconomic limitations and potentials,

Gaps identified and comment under this section:

The review reveals that the objective of the planning itself and the reports are more skewed towards agricultural and rural development programs. In integrated and comprehensive land use planning, dictation would have been left for the inherent characteristic of the land and its environment in addressing the economic and social concerns of the people from every walk of life on a sustainable basis. Besides, the theoretical descriptions of SEA studies are presented in the form of a "text-book" or "ideal" approach rather than focusing on critical analysis of environmental management situations concerning the reality on the ground. In this regard, the document missed an analysis of the critical environment and policy-related bottlenecks.

The list of participants of the planning actors involved in preparing the plan

The report document mentions, in its stakeholders' analysis section, those key actors were identified considering that, their participation influences control over priority setting, policymaking, resource allocations, and access to public goods and services. Though the list is known, they were not involved in the planning process.

Sector offices and districts covered for the sectoral data:	list of District	**1.** Administration	**2.** Agriculture	**3.** Cooperative	**4.** Culture	**5.** Education	**6.** Health	**7.** Investment	**8.** Justice	**9.** Land Administration	**10.** Police	**11.** Rural road	**12.** Water	**13.** Women Affairs	**14.** Youth	Missing
1	Adama	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1/14
2	Adea	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1/14
3	Bora	0	1	0	0	0	0	0	1	0	1	1	1	0	1	8/14
4	Boset	1	1	1	1	1	1	1	0	1	0	0	1	1	1	3/14
5	Dugda	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1/14
6	Fentale	0	1	1	1	1	1	0	0	1	0	0	1	1	1	5/14

7	Gimbichu	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1/14
8	Liben-Chuqalla	0	1	1	1	1	1	0	1	1	0	1	1	1	1	3/14
9	Lume	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1/14
	Total missing	4/9	0/9	2/9	1/9	1/9	2/9	3/9	3/9	1/9	4/9	2/9	0/9	1/9	0/9	24/126

Table 4: Sector offices and districts covered for sector data, (East Shewa)

The sector offices and districts covered for sector data, for example, in East Shewa are presented in Table1-1 below, for 14 sectors. The report mentions that there were offices that were not interested to respond to the questionnaire. ***Accordingly, it can be seen that from table 4 above that 24 of the 126 sector offices failed to replay in the East Shewa alone.***

Note: please not that boxes that indicate "0" are indication those who were not willing to respond to the questionnaire interview. These are 19.05 % which is not significant for the study as such. However, from the same table, it is possible to observe that most important land users (owners) such as forestry, wildlife, heritage trust, eco-tourism, livestock and grazing, biodiversity, aquaculture, and fisheries, etc., were not invited while non-land users such as police, justice, etc.,

Focus Group Discussions: According to the plan document, the FGD was conducted at the district level focusing on major development problems and local solutions at the community level and expert observation and experiences of district-level personnel.

Point Data Collection was also conducted (using GPS) to gather information regarding the spatial distributions of social services and economic infrastructure within the geographic boundaries. Some point data were collected from district offices and some zone departments. Point data were collected for, WASH, water supply sources, schools, health services, Vet clinics, marketplaces, and FTCs.

Field observations: Experts' field-level observation was conducted to gather information on settlement conditions of the observed area population (scattered or clustered nature); major construction materials, nature of the surface area of the settlement /hillsides, top of a hill, plain land, or undulating surface; type of social services available; and other cultural and traditional places available. **However, no residential or settlement plan was prepared.** This is realized in all the plan documents reviewed. The same fact was observed during the field level investigations. To this effect, this knowledge gap assessment study did not bother to see the knowledge gap in conducting Urban Land Use planning in its literature reviews.

Coverage of the different land-use types

Based on the present land-use practices, apparent agro-climatic suitability of the area, information from the research station, market and development demands or potentials, and government needs or policy consideration; the following major land utilization types were selected and evaluated in the present study:

Proposed LUP	Area (ha)	% of Total
1. Area Suitable for Livestock Production Rangeland	95772	3.60

2. Crop-Livestock Specialized Zone	953870	35.87
3. Irrigated Agriculture	60890	2.29
4. Livestock-Crop Specialized Zone	418664	15.74
		53.9
5. Forest with controlled use of NTP	36676	1.38
6. Coffee Forest	564,255	21.22
7. Plantation Forest	3255	0.12
8. Productive Forestry	81256	3.06
9. Protected Dense High Forest	347107	13.05
10. Protective Forestry	78456	2.95
		41.78
11. Settlement Area	11377	0.43
12. Tea Plantation	1653	0.06
13. Tourism	**271**	**0.01**
14. Water Body	12	0.00
15. Wet Land	5768	0.22
Grand Total	**2,659,282**	100

Table 5*: Summary of the Proposed Land use planning (Baro sub-basin)*

For Baro sub-basin, the attempted land use types in the proposed land use plan show 15 land-use types while the land use land cover had shown 17 kinds of land uses. The current is reduced by two i.e., 15 in the present land-use types as shown in ***Table 5***. In the land use land cover map

As indicated in the table above, there is "crop-livestock specialized zone and area for livestock production which are not clear land-use types. Bush/shrublands mixed with grazing or rangeland which was shown in the land use/land cover (Table 5) has disappeared in the final land use plan (Table 5) with no reason specified. The settlement plan which is indicated in the proposed plan is identical to the existing land cover size. We surely assume that the settlement area would increase during the implementation of the proposed land-use plan.

Unfortunately, ***no rural or urban settlement plan production is attempted***. Therefore, no one can tell whether the land set aside for settlement is satisfactory or not. Also, normally, a land-use plan is made for several phases of certain years that are aligned with GTP periods and beyond. This is also not shown in the plan documents. It was not possible to infer the period of the land use plan in the different phases either. In this respect, one can easily assume that the land use planning was indicative of a development plan than a land-use plan.

S.N.	LULC Type	Area (ha)	Percent (%)
1	Afro-Alpine and Sub Afro-Alpine	270.99	0.01
2	Bush/Shrub-Grass Land	136,039.20	5.12
3	Coffee Forest	564,092.39	21.21
4	Cultivated Land	1,201,348.66	45.18
5	Dense Bush Land	293,390.50	11.03
6	Dense Bush Shrub Land	175.31	0.01
7	Dense High Forest	340,299.44	12.80
8	Dense Shrub Land	104.88	0.00
9	Open Grass Land	4,104.99	0.15
10	Open High Forest	36,676.49	1.38
11	Open Shrub Land	441.06	0.02
12	Plantation Forest	3,254.66	0.12
13	Riverine Forest	60,279.47	2.27

14	Settlements	11,377.18	0.43
15	Tea Plantation	1,652.69	0.06
16	Water Body	12.33	0.00
17	Wet Land	5,768.12	0.22
	Grand Total	**2,659,288.36**	**100.00**

Table 6*: Present Land use/ Land cover of Baro sub-basin*

	Land use types	Present land use (ha)	Proposed land use(ha)	Changes in proposed land use(ha)	% of change
1	Cultivated land	74689.7	51269.28	-23420.42	-31.4
2	**Built up Areas and buffer**	**1471.54**	**149,67.04**	**+13495.5**	**+917**
3	Exposed Surface	8,399.52	0	-8399.52	-100
4	Wetland (marsh)	326.68	312.96	-13.72	-4.2
5	Waterbody	41.24	41.25	+0.01	+0.0
6	Forest land	16871.5	58213.41	+ 41341.91	+245
7	Grass land	230,025.43	1,011,080.3	+781054.9	+339.5
8	Shrub land	1361401.12	604466.84	-756934.3	-55.6
9	Wood land	47,505.05	0	-47505.05	-100
Total		**1,740,731.78**	**1,740,351.08**		

Table 7: ***Present and proposed land use for Dawa Sub-basin (Borena zone)***

The above Table 7 shows several problems of the Borena Zone plan. The proposed land-use plan for the Dawa basin is even more interesting. From environmental points of view, interfering with existing wetlands, shrub and woodlands are prohibited because Ethiopia is a signatory to preserve such ecosystems. Yet, all these land-use types are planned to shrink. At the same time, land use type 'exposed surface' has disappeared by 100% which cannot be true because the exposed surface cannot be rehabilitated within the period of the plan implementation.

Proposed Land Use	Area in ha	% of total
1. Built Up Area	301.70	0.09
2. Built Up Area Buffer	3498.43	0.99
3. Camel	1050.94	0.30
4. Cattle	6682.05	1.88
5. Goat	1733.08	0.49
6. Goats	7606.31	2.14
7. Groundnut	74.72	0.02
8. Haricot Bean	7090.77	2.00
9. Haricot Bean and Groundnut	226.04	0.06
10. Pepper	60470.15	17.05
11. Pepper and Maize	58.55	0.02
12. Pepper, Maize and Haricot Bean	64050.45	18.06
13. Protected Forestry	23007.93	6.49
14. Protective Forestry	12140.60	3.42
15. Protective Forestry / Rock	5782.50	1.63
16. Sesame, Pepper, Maize and Haricot Bean	3163.38	0.89
17. Sheep	147.66	0.04
18. Sorghum and Haricot Bean	3639.38	1.03
19. Sweet Potato	27524.19	7.76
20. Sweet Potato, Coffee, Pepper, Mango, Sorghum, Maize, Haricot Bean, Groundnut, and Banana	576.59	0.16
21. Sweet Potato, Pepper, and Highland Maize	787.93	0.22
22. Sweet Potato, Pepper, Mango, Sorghum, Maize, Haricot Bean, Groundnut, and Banana	6,9819.59	19.68
23. Sweet Potato, Sesame, Pepper, Mango, Haricot Bean and Banana	19569.99	5.52

Proposed Land Use	Area in ha	% of total
24. Sweet Potato, Sesame, Pepper, Mango, Sorghum, Maize, Haricot Bean, Groundnut, and Banana	35,128.67	9.90
25. Sweet Potato, Sorghum, Haricot Bean and Groundnut	565.67	0.16
Grand Total	354,697.28	100.00

Table 8: ***Proposed Land Use Plan of Dakata Sub Basin in East Harrarghe zone***

Land use plan indicated in Table 8 is also more interesting. Land use types of land use plans cannot be designated by crop type or livestock type. This is because livestock cannot represent the type of land use and specific types of crops may be planned

According to the document, the following criteria are applied.

- To retain existing forest land as it is or avoid conversion of forest land to other uses. i.e., areas, where "natural forest" was conflicting with other land use, were assigned to forestry because such areas are demarcated as forest area and cannot be converted into another use.--- yes, this is true in land-use planning. But this approach is contradicting with the conversion plan of "bushland" and "woodland" which is shown in Table 6.
- Watercourses are decided to be buffered by 50 meters on both sides of the riverbank or 100 meters along or parallel to the riverbanks and protected. But we can see that there is no riverine forest land that can protect the sustainability of the rivers in the basin.
- To set aside steep and very steep slopes, the land having slopes greater than a 45-degree slope was assigned permanently under productive forestry or protective forestry based on the fitness with the suitability evaluation results. This might be because such areas are not suitable for agriculture and liable to the risk of erosion hazard. From such land, the community might have access to non-timber forest products such as use the underneath grass in the form of cut and carry mainly during critical fodder shortage time, other non-timber products, or to have access for beehive farming.

Gaps identified and comment under this section:

1. The ILUP document mentions that the number of sample-kebeles is @10% coverage. However, in practice, this coverage is too small to be generalized as representative coverage of the different land-use types of the wide areas of the sub-basin. Besides as the LUP study was conducted basin-based there is no Zonal, Woreda, and Capital city/town land-use plan,
2. This proposed land use presents considerable changes from the present LU, in terms of types and extent. However, it doesn't elucidate the driving factors for the changes proposed; in correspondences to the present land-use types, that makes it difficult to compare and identify which land-use types increased, decreased, or omitted, and in which zone, **some are described as follow for instance:**
    - ***a.*** **Baro sub-basin;** for comparison; the document mentions that about 17 dominant land cover has been identified during the study, as indicated in Table 1-3 above with its area coverage and Percent (%). These land-use types have been decreased from 17 to 15 in the proposed land use shown above. Some land-use types are omitted, like Riverine Forest (60,279Ha), while land-use types like settlement remained the same (11,377) which is illogical. Besides, it is difficult to sort the land use type by zones, at this level in the Baro basin.

b. **Dawa Sub-basin in Borena (Table1-4 above):** Significant increases are observed in built-up areas and its buffer (+917%), forest land (+245), Grassland (+339.5), while some land-use types are significantly decreased, namely; Water-body, **41.24** ha, is omitted. shrublands, woodland, and exposed surface lands are reduced by 55.6%, 100%, and 100%, in the proposed land use plan, respectively. Wetland, though the ecologically sensitive area, its coverage is reduced by 4 percent in the proposed land use plan,

c. **Regarding Daketa, Dawa-Dambel, Erer-Mojo, Fafan-Dintin, and Ramis Sub-basins in East Haraghe (Table1-5 above):** *The* proposed land use plan overlooked *the reality about Chat in East Harrarghe areas, presuming that it is not a strategic crop. However, despite this presumption, chat has already occupied a large proportion of the present land use (during the planning stage) and may continue to be a dominant perennial crop in the future. The reality at present is that Chat* is an important perennial crop and is widely cultivated in the zone. Its cultivation accounts for the highest component of farmer's income in the area. It is grown extensively in the middle altitudes between 1500 and 2100 meters above sea level (masl). East Harrarghe is a center where Chat is grown at a wide range of altitudes, soil types, and climatic conditions. It can tolerate drought conditions for several months. The crop can be harvested around the year, every three months, thereby becoming a source of continuous revenue for the farmers (and earns three-fold of income as compared to the cereal crops per equal plot of land). Cultivation of chat occupies most of the agricultural land and is largely intercropped either with maize or with sorghum. Currently, the majority of the farmers are involved in chat cultivation in this zone. Chat is exported to neighboring countries like Djibouti and Somalia.

   In the intercropping category, Chat has been found to have the largest share of land resulting in the decrease in the yield of important rain-fed cereal and cash crops like maize, sorghum, coffee, etc. and serves as a good substitute (farmers' perception), as it is less vulnerable to drought. Farmers recognized that the cultivation of cereals is expensive, as it requires fertilizers and irrigation comparing with Chat which doesn't require input as such. The expansion of area under chat production has also changed the composition of livestock systems in the region due to decreased fodder availability and less interest in livestock rearing. Given that the crop is perennial, farmers in the area considered this to ensure land entitlement because annual cropland is more affected by land redistribution than land under perennial crops. The preparation of the seedbed required for intercropping with Sorghum provides higher and additional benefits. Thus, intercropping is practiced improving the economy of the farmers.

3. In the Proposed Land Use Plan of the Sub Basins in East Harrarghe zone, the various animals (camel, sheep, goat, etc…), and the various crop types (pepper, sweet potato, sorghum, etc…) are all listed as separate land use types as shown in Table 7 above. This list makes it 25 land-use types, confusing when compared with the standard land use categories. These should have been categorized under crop/ agricultural lands as stratified,

and described in the *ROAD MAP FOR NATIONAL LAND USE PLANNING (Azene Bekele-Tesemma, 2017),*

In the Fafan-Dintin sub-basin the planning team established decision criteria and selected those land-use options (land uses and management actions) and allocate the sub-basin area for different types of use that are:

(1) consistent with government policy, laws, etc.

(2) implementable within the specified planning period.

(3) without serious conflicts.

(4) within the environmental resource limitations; and

(5) widely accepted by the stakeholders.

Accordingly, the proposed land use plan of the sub-basin is summarized below in Table 9. This is taken from Table 1 Proposed Land Use Plan of Fafan-Dintin Sub-basin (which is presented in the Fafan-Dintin sub-basin land-use plan report).

	Proposed Land Use	Area in ha	Percent of total
1. Residential /urban land	Built Up Area	473.71	0.28
	Built Up Area Buffer	4574.96	2.67
Subtotal			**2.95**
2. Range land	Camel	2.29	0.00
	Cattle	96759.37	56.43
	Goat	10482.35	6.11
	sheep	73.67	0.04
Subtotal			**62.58**
3. Agricultural /crop land	Sesame	8363.74	4.88
	Haricot Bean	4546.73	2.65
	Potato	18240.52	10.64
Subtotal			**18.17**
4. Forestry	Fruit Trees - Agro Forestry	2895.74	1.69
	Productive Forestry	61.22	0.04
	Protected Forestry	590.59	0.34
	Protective Forestry	23716.26	13.83
	Protective Forestry / Rock	672.75	0.39
Sub total			**16.29**
	Grand Total	**171453.92**	**100.00**

Table 9. Land use plan of Fafan-Dintin sub-basin

4. *Compared* to the ROAD MAP FOR NATIONAL LAND USE PLANNING (Azene Bekele-Tesemma, 2017), the basin-based land-use plan misses many of the following lands use type such as.

   1) The whole gamut of urban land use types in total,
   2) Bee forage and honey development areas,
   3) Surface mining areas,
   4) Rural villages and small towns,
   5) Historical, cultural, and archaeological sites,
   6) Possible transportation facilities such as roads, airstrips, airports, dry ports (**that may be needed in at least the coming 20 years**)
   7) Woodlands,
   8) Wildlife sanctuaries, national parks
   9) Areas for Industries and warehouses constructions,
   10) Urban parks,
   11) Existing woodlots, green fields, and nurseries,
   12) National parks, regional parks, ecotourism sites,
   13) Service sector developments such as schools, health facilities, cemeteries, and other worshiping facilities,

Pre-requisite subjects considered
Land Qualities (LQs)/characteristics Considered for Evaluation: It has been mentioned in the document that the study team employed the framework of FAO (1983) as guidance for LQ evaluation; that lists down 25 LQs to be considered in *land suitability evaluation for rain-fed agriculture*. Few of these LQs are found to be pertinent in suitability evaluation for the identified land utilization types (LUTs) in the study area.

The document presents in its "Collection of Data and Information" section that; the biophysical resources data used for land suitability evaluation are carefully collected and used for evaluation of selected land utilization types. The collected land quality and characteristics are:

1) **Temperature regime**: **-** Mean monthly and annual temperature,
2) **Moisture availability: -** Monthly rainfall (for reference station), monthly PET (from altitude zones), Length of the growing period,
3) **Frost Hazard: -** Altitude zone and Relative topographic situation,
4) **Drainage conditions; -** Soil drainage class, (But soil depth. which is a very crucial factor in deciding lad capability was not considered)
5) **Nutrient supply: -** Topsoil total nitrogen, available phosphorus, pH, Organic matter content, Subsoil cation exchange capacity, subsoil pH, Soil type,
6) **Rooting Conditions**; - Effective soil depth, the content of coarse fragments, subsoil bulk density, subsoil consistency,

7) **Frequency of flash flooding**; - Frequency of normal flooding,

8) **Sodicity and Flood Hazard Salinity**; - Topsoil and subsoil exchangeable sodium percentage, Topsoil, and subsoil electrical conductivity,

9) **Soil Workability**: - Mean slope gradient, surface stoniness, surface rockiness, topsoil consistency,

10) **Erosion Hazard, mean annual rainfall, Soil unit** (FAO/UNESCO classification), and presence of gully erosion has been collected at field level and soil sample collected at field level has been analyzed in soil testing laboratory,

11) Similarly, data on the **Landcover and present land use** of the study area, the water resources, selected physiological characteristics of crops (as determining ecological requirements), land utilization types (LUTs) and production systems (present and potential), ecological requirements of LUTs, of the Sub-Basin were collected and used for the planning purposes,

12) **Social-economic data**: - population (including age and gender distribution, stakeholder) living conditions (including workload, cultural aspects, traditions, etc.) access to markets costs of production and product prices, socio-economic data of the communities; reliable information on government policy documents, laws, and regulations related to land (Present system of land allocation, land tenure, traditional institutions in related to land institutions and their mandates) and infrastructure, links between institutions support services (extension, etc.), general data and information about infrastructure were collected and presented in the report document of Socio-Economic Study.

The document presents the method of evaluation used was the FAO-system of suitability assessment (FAO, 1976; 2007). The evaluation type adopted is the semi-quantitative evaluation where the physical land suitability is supported by some socioeconomic data that tries to somehow quantify the result of the suitability. The parallel approach to land evaluation has been adopted, in which analysis of the relationships between land and land use proceeds concurrently with economic and social analysis. In suitability class and sub-class assessment, the maximum limitation method was followed. A maximum limitation method implies that if none of the LQs of the LU has severe limitations, the unit is found to be potentially suitable (FAO, 1983). The severity level places land uses into one of the defined physical suitability classes (S1, S2, S3, N1, and N2) based on how well the land use requirements (LURs) of each LU are met by prevailing LQs of each LUT. The final output is physical suitability subclasses with a subscript expressing type of limitations and/or improvements to be considered.

In assigning the suitability classes of each land mapping unit for land use FAO (1976, 2007) recommends 4 levels of structure of land suitability classification consisting of order, class, sub-class, and unit (Table 8).

Category	Status	Definition
Orders S	Suitable	Land on which sustained use of the kind under consideration is expected ***to yield benefit***. Justified input without unacceptable risks or damage to land resources
Class S1	Highly suitable	Land having no significant limitations to the sustained application of a given use or only minor limitations that will not significantly reduce productivity or benefits or will not raise inputs above an acceptable level

Category	Status	Definition
Class S2	Moderately Suitable	Land having limitations which in the aggregate are moderately sever for sustained application of a given user; the limitations will reduce productivity or benefits and increase required inputs to the extent that the overall advantage to be gained from the use although still attractive, will be appreciably inferior to that expected in Class S1 land
Class S3	Marginally suitable	Land having limitation which in the aggregate are severed for sustained application of a given user and will so reduce productivity or benefits or increase required inputs that this expenditure will be only marginally justified
Order N	not suitable	The land which has qualities that appear to preclude sustained use of the kind under consideration
Class N1	Currently unsuitable	Land having limitations that may be surmountable/ corrected in time, but which cannot be corrected with the existing knowledge at a currently acceptable cost. The limitations are severe as to preclude successful sustainable use of land in the given manner.
Class N2	Permanently unsuitable	Land having limitations which appear so be severe as to preclude any possibilities successful sustained use of the land in the give manner

Table 10: ***The Structure of the Land Suitability Classification used by the basin-based land use planner***

Source: FAO Guidelines: Land evaluation for rain-fed agriculture (1983)

Consideration of major land uses that are ratified

The present ILUP study document mentions that; **only Awash and Semen Mountains National Parks have been formally gazette** and legally recognized.

Gaps identified and comment under this section:

- The proposed land-use changes do not show zoning to define parks and other protected areas aimed to conserve, rehabilitate, and restore natural systems and protect against anthropogenic and climate impacts. Clear demarcations of ecological buffer zones were not indicated with maps. Buffers should have been designed for the protection of natural heritage features and ecological functions. Buffers act as a filter to minimize impacts from adjacent land use, providing linkage as a wildlife corridor around or between habitats, functioning as a windbreak to protect sensitive habitat, and contributing to habitat and species diversity (Graham B. and Kalemani Jo M., 2006).
- The document mentions; in its Planning Land Use Buffer Zone Standards, list of some Planning Land Use Buffer Zone Standards as; category A, B, and C. This for instance considers Parks and Conservation Zones (as Category A), which can be adversely impacted by encroachment of rural, rural residential, and urban developments. Impacts include the predation of wildlife. As a ***Method for Reducing Conflicts,*** it recommends a Minimum separation of 200 meters from Category A and B land uses. However, such categorization is merely theoretical and does not describe buffer zones and transition zones with its management systems.
- Protected areas are largely under-valued, and significant opportunities are being missed, such as eco-tourism in national parks and biodiversity conservation. Even though forest demarcation is essential to protect and conserve the existing forests from further deforestation and forest degradation, some of the recently demarcated forests under the jurisdiction of the Oromia Forest and Wildlife Enterprise (OFWE) are being cleared at an alarming rate and changed to 'coffee' farms (FDRE-CEA (2017).
- Babille Elephant sanctuary, covering 276,673Ha of land, is just mentioned in the proposed land use plan of **Erer-Mojo sub-basin** in East Harrarghe without any consideration of its boundary delineation, mapping, and the threats on the sanctuary at present.

- Yayu biosphere reserve, 190,000Ha, under REDD+ Project, registered at UNESCO as Biosphere was not elucidated, (FDRE-SESA, 2017).

Methodology/process of land use planning

According to FAO, 1996, a wide variety of methods are used in land-use planning. They are derived from the natural sciences (climatology, soil science, ecology), from technologies (agriculture, forestry, irrigation engineering), and the social sciences (economics, sociology). Some of the methods, notably land evaluation, are interdisciplinary.

The basic LUP process has been developed in line with national policies, laws, and administrative procedures, but places a greater emphasis on the participation of different groups within the village and allows ample time for different views and interests to be taken into account at the local level and use planning. A particular priority is to facilitate extensive discussions at the village level and amongst different local social groups to ensure that the process engages directly as many as possible of the individual villagers and does not simply operate through the village government and its committees. Therefore, in the land use planning roadmap document, the land users are recommended to be organized and as CCGs and to drive the planning process from the bottom up along with other land use planning groups. This enables villagers to be fully involved in the planning processes. While local communities almost invariably recognize the importance of zoning different land use categories and developing local rules for governing utilization, there is often a lack of knowledge about the formal legal and administrative procedures that need to be followed to guide the process (IIED, 2010).

According to the present basin-based land-use plan report, the study process applied the following methodologies:

1) **Initial stakeholders 'consultation:** In collaboration with the stakeholders, the establishment of achievable goals and objectives for sustainable land use were carried out.
2) The identification and delineation of land, based on comparable natural resource characteristics (climate, elevation, landforms, soils, hydrology), into natural land units or zones.
3) The assessment of the inherent land qualities, and their constraints and potentials, of the identified land units.
4) The identification and characterization of the present forms of land cover and land use.
5) The identification of prospective land utilization types or production systems following the wishes of the stakeholders, government need and policy direction, and the environmental condition of the study area.
6) The identification of the environmental and socio-economic requirements (land use requirements of the land utilization types) of the agreed land utilization types and rating of the land use requirements (LURs) of the land utilization types (LUTs);
7) The matching of the inherent land qualities (2) of with the requirements of the utilization types of (6) ;
8) The formulation of alternative land uses or non-use per land unit or zone because of (vii), suggesting alternative land use options.
9) Experts decision to proceed with an acceptable and recommended land use plan.

10) Stakeholder consultation: the assessment of the alternative land uses against the needs and aspirations of all population groups (to be) involved and affected,

11) Using platforms for negotiation and decision making that include all stakeholders.

12) The identification of policies, strategies, and measures to be taken to move from the current to the recommended land use and with the active participation of all stakeholders.

13) Final land use plan accepted by all parties (stakeholders).

Land suitability evaluation: In the present ILUP study, the FAO land evaluation procedure of land suitability classification was employed. Land suitability is the fitness of a given tract of land for a defined use. In the study two kinds of suitability classification are considered:

- Actual suitability classification.
- Potential suitability classification.

Selection of Land Utilization Types: Base on the present land-use practices, apparent agro-climatic suitability of the area, information from the research station, market and development demands or potentials and government needs or policy consideration; Rainfed, irrigated crops production, Livestock, Forestry and conservation suitabilities for selected land utilization types were evaluated in the present study.

Land suitability rating of specified land use concerning a single land quality expressed in five classes (Radcliff 1989) as highly suitable (S1) > 80 percent of the potential maximum yield obtained, moderately suitable (S2) 60-80 percent of the potential maximum yield obtained, marginally suitable (S3) 40-60 percent of the potential maximum yield obtained, very marginally suitable (S4) 20-40 percent of the maximum yield obtained and not suitable (N) 0-20 percent of the maximum yield obtained.

It has been mentioned in the document that, the procedure of Land Suitability Evaluation was taken from a framework for land evaluation (FAO 1976), The guidelines for evaluating for rain-fed by (FAO, 1983, David J. Radcliff, 1989) and Land evaluation towards revised frameworks (Rome, 2007) and additional details from exiting indigenous experiences for specific crops and land utilization types was also included.

These basic principles considered are:

- *Land suitability is assessed and classified concerning specified kinds of use,*
- *Evaluation requires a comparison of the benefits obtained and the inputs needed on different types of land,*
- *A multidisciplinary approach is required,*
- *Evaluation is made in terms that are relevance to the physical economic and social context of the area concerned,*
- *Suitability refers to use on a sustained basis,*
- *Evaluation involves comparing more than a single kind of use,*
- *Context and environmental concerns,*
- *Sustainability includes productivity, social equity, and environmental aspects,*

Accordingly, land suitability rating of specified land use for a single land quality is expressed in the following **five categories** (Radcliff 1989):

1) **S1:** - highly suitable :> 80percent of the maximum yield.
2) **S2:** - moderately suitable: 60-80 percent of the maximum yield.
3) **S3:** - marginally suitable: 40-60 percent of the maximum yield.
4) **S4:** - very marginally suitable: 20-40 percent of the maximum yield.
5) **N: -** not suitable: 0-20 percent of the maximum yield.

The following Decision criteria were also considered according to the ILUP plan document.

It has been described in the document that; decision criteria are established in the development of selecting the best land-use option that best meets the goals. In the process of planning proposed land use plans, the planning team considerers the following guidelines, principles, normative, facts, and presumptions. According to the ILUP document, decision criteria employed for proposed land use plan determination are as follow.

1) **Environmental characteristics,**
2) **Sustainability,**
3) **Integrated and Holistic Approach,**
4) **Integrated Rural-Urban Development Plans,**
5) **Efficiency,**
6) **Equity and acceptability,**
7) **Land-use planning must be positive,**
8) **Legislation:** implies Local, District, Regional and Federal Laws and regulations that affect land uses. E.g. slope percent greater than 45% is prohibited to be cultivated according to Oromia Region Land Use Declaration.

Regarding the mechanisms used and criteria considered for resolving land use conflicts especially when one category of land becomes a candidate for more than one land use type, the document mentions the following:

- To resolve urban/rural land use conflict within the study area maintain as much as possible the area coverage proposed by the proposed structural plan for the towns. The existing Rural Settlement shall be first proposed on the proposed land use plan as it is.
- Crop suitability **class one (S1) and two (S2)** have relatively better soil fertility status. However, recommending crops alone cannot be sustainable in the production system. The planning team recommended crops as the main production and supplementary livestock production (pastures) i.e. more percentage for crop production, lesser percentage Livestock pastures (animal feed), and others (infrastructure, settlements, etc.). Hence, this production area is distinguished by the planning team as **Crop-Livestock Specialization Zone** in the Proposed Land Use Plan maps.
- The area **class three (S3)** in crop suitability classes is marginal for crop production. To get better production while improving the soil productivity the planning team has agreed to

plan more for livestock feed, lesser percentage crop production, and others (infrastructure, settlement, etc.). This production area is distinguished as **Livestock- Crop Specialization Zone** in the Proposed Land Use Plan map.

- The area which is very **marginal (S4)** for crop production in crop suitability classes is recommended for Productive Forestry by the planning team on the proposed land use plan map.
- The area which **does not fit for productive forestry** and more fragile environment, planned by the planning team for Protective Area on the proposed land use plan map.

Gaps Identified and General Comments:

- In general, it can be concluded that the present ILUP missed the participatory approach from bottom-up. According to the ROAD MAP FOR NATIONAL LAND USE PLANNING (Azene Bekele-Tesemma, 2017), the land evaluation shall be carried out systematically by each land-claiming expert group to determine suitability ranks for each kind of land /they also should hold discussions with villagers to ascertain the local experiences about different types of soil suitable for agricultural production/, followed by producing sector-specific land-use plan (non-reconciled), and finally producing an integrated land-use plan (reconciled). Nevertheless, in the present land-use plan, such procedure was not employed and not elucidated (the document doesn't explain the mechanisms of negotiation to resolve land-use conflicts in the cases when a given piece of land might have become suitable for many more land-use types). Therefore, in the absence of this procedure, the theoretical reference to (FAO, etc…) may not be practical. It seems that decisions were taken only based on experts' intuitive reasoning and judgment based on the surveys undertaken (@10% of the kebeles in the sub-basin).
- The field assessment also revealed that the ILUP conducted by OWWDSE has applied a Top-Down approach and it is obvious that the three different planning actor-groups did not participate. There was no involvement of the organized and capacitated plan-driving communities/beneficiaries. During the field assessment, most of the participants confuse the ILUP with the LLPLUP ongoing in some weredas on small-scale watershed development. Above all, though the OBLAU has structure from the region up to kebele level, none of the zonal, wereda, and kebele level Land Administration and Use (LAU) office experts have participated during the ILUP process. Similarly, the FGD conducted at kebele levels confirmed that the kebele administration council/committee members, including the kebele chairperson, were not involved in the LUP process and there is no system in place to maintain the LUP implementation process, as there is no TC or SC at all levels. No training was provided for the actor-groups, the ILUP study team provided only a one-day awareness creation workshop at some selected centers, Shahsmanne, Adama, and Nekemte, and utilized a few of the zonal, Wereda, and kebele experts as a guide to collect secondary and primary data (this has also been confirmed through discussion with OWWDSE, ILUP project office). The methodology was not transparent and not participatory.

Setup of land use planning enforcement and monitoring mechanisms

Ethiopia has no Land use planning policy. The same is true for the Oromia national regional state. The existing Oromia Bureau of Land Administration and Use (OBLAU) has no land Use Plan framework and legal provisions for ILUP implementation and enforcement (this has also been confirmed through discussion with OWWDSE, ILUP project office). However, in defiance to this fact, the present ILUP study has been instigated, as abruptly ordered by the higher-level officials, in the absence of the land use policy and strong institution with capacitated manpower; where the Bureau has no mandate to organize the various land-related sector Bureaus horizontally. The

Bureau's structure is not capacitated from top to the local levels to guide the land use plan and its implementation. Besides, the staff turnover is alarming as the trained professionals could not stay for a meaningful period to maintain effective medium- and long-term goals of ILUP.

Various studies revealed that, despite the ratification of numerous international environmental conventions and national strong policy provisions; successes so far are limited in Ethiopia in general and in Oromia in particular. Implementation of policies is constrained, among others, by lack of implementation instruments, such as, directives or sector-specific guidelines. The existing regulatory framework has been built without clear arrangements for effective coordination among the various agencies and institutions involved in environmental and natural resources management and conservation, including dispute resolution (Danyo S. et al., (2017).

The frequent restructuring of ministries/bureaus/agencies/institutions with changing responsibilities has been a challenge (FDRE-SESA, 2017). This issue has also been reflected regarding the present ILUP, that change in clients has affected the efficacy of mandate and confidence in implementing agency during the planning process. The clients of the LU Study project have been changed five times in ONRS; from Rural and Agricultural Development of Oromia to Pastoral Development Commission of Oromia to Bureau of Rural Land and Environmental Protection of Oromia, and finally divided into OEFCCA and OBLAU.

Though Oromia has established a Bureau of Land Administration and Use office to implement the regional land laws and has its laws and regulations, its implementations were observed as very weak because of poor institutional structures to handle the land use plan and implementation. The Rural Land Administration and Land Use Proclamation no. 456/2005 states the need to develop a guiding land-use master plan. Nonetheless, the absence of a land-use plan is one of the bottlenecks that have led to the conversion of huge forest lands into agricultural lands. In some cases, there appears ambiguity about the mandate between the regional and federal land management that led to conflicts and yet not resolved (FDRE-SESA, 2017).

To address the challenges with land use planning, the GoE has established an inter-ministerial committee led by the Prime Minister's Office (PMO) and MoANR to develop a new land use policy and national road map by 2018, including related instruments to advise the government on the management of land assets and avoid potential conflicts (Azene Bekele-Tesemma, 2017). However, this newly established committee has not yet issued a policy or program as per its mandate (MoEFCC-SESA, 2017).

The definition of EIA in the proclamation includes both project and strategic level assessments but there is no separate law for **Strategic Environmental Assessment (SEA)** in Ethiopia (MoEFCC-SESA, 2017). The delegation of the EIA report reviewing powers of EPA to sectoral agencies has been found to contradict the basic principle of avoiding conflict of interests in assigning the roles and responsibilities of regulation of environmental protection on the one hand and resources development on the other. This federal level delegation was not accepted by the regional states and in no regional state such delegation has been made. Some regional states (e.g. Oromia) have enacted their own EIA laws. The Oromia Regional State has issued the EIA Proclamation No. 176/2012 on 30 November 2012. It includes both project level and strategic impact assessments. Besides, the absence of mining-specific guidelines for Environmental and Social Impact Assessment (ESIA) and Environmental and Social Management Plans (ESMP) undermines compliance with regulations (MoEFCC-SESA, 2017).

ILDP-SEA Monitoring strategy Gaps:

The present ILUP document has one component that describes SEA (in Section II Volume IV of the ILUP document). However, the M&E section of the document doesn't describe a detailed M&E plan. SEA monitoring should refer to the significant environmental effects that the implementation of the plan or program entails (that was not previously identified), so that appropriate measures may be adopted to avert any significant environmental effects to be remedied at an early stage. There is no supervision programs and planning cycles. The implementation of the ILUP should have been monitored and controlled with the help of a planned M&E system based on commonly fixed indicators. The M&E system should influence the process of its implementation. Therefore, the ILUP document should have elucidated about planning, monitoring, and evaluation (PM&E) and not only about either of them separately. In general, it can be concluded, from the content of the document, that there is:

- ***Lack of consolidated ILUP-SEA program implementation plan*** that provides detailed implementation arrangements including monitoring, reporting, and evaluation (M&E) procedures at each stage of the Program,
- The follow-up strategy was not formulated to depict the responsibilities of various stakeholders and define the required definition of coordination, establishments of the monitoring system with relevant indicators, procedures for regular adjustments to the proposed land use plan using relevant strategic environmental analysis, institutional strengthening, and capacity building.
- ***Lack of well-articulated stakeholders/sectors integration strategy:*** The document didn't elucidate any clear modality for the stakeholders'/sectors' consultative meetings to understand fully and take ownership of the ILUP-SEA implementation activities by discussing the roles, functions, and responsibilities within the decision-making structures, including reporting and communication lines; no mechanism in place for the training of stakeholders and no plan for regular discussions with the community on the land use plan and SEA,
- ***Conservation of biological diversity and cultural heritages were not considered in the land use plan preparation***; there is no zonation and buffer zones for protected areas, parks, biosphere reserves, sanctuaries, cultural heritage sites (such as Naranjilla), etc…. The area coverage of such important sites was not indicated in the land use plan documents including plan maps. This problem may induce negligence and lack of proper care for the protection of the resource and related economic gains as well as may trigger further conflicts over resources. Above all, it has been mentioned in the document that, there is a plan for indiscriminate bush clearing and burning, the entire shift of the woodlands to other land use types and environmentally sensitive area coverage of wetlands and water bodies are reduced in the proposed land use plan,

Recommendations that are given for translocations

The document mentions that experts' field-level observation was conducted to gather information on settlement conditions of the observed area population/scattered or clustered nature; major construction materials, nature of the surface area of the settlement /hillsides, top of a hill, plain land, or undulating surface; type of social services available; and other cultural and traditional places available. However, there is no mention of translocation or resettlement of land users at all

in the document.

It also describes that the land use options for built-up areas (settlements) are decided to be retained "as it is" by delineating a buffer in proportion to the perimeter of the area and type of the Town. i.e., a buffer distance for large (Zonal town) is taken as an area equal to 0.35 X Perimeter, medium town (District Towns) 0.25 X Perimeter, Small (built-up villages) 0.20 X Perimeter. However, such criteria do not accommodate the differences in urban/settlement sizes to be created due to peculiar characteristics of the existing settlements such as those to be translocated and reestablished because of the planned large investments areas, or due to populations of different sizes that are to be created anew due to planned resettlement to be established for translocation of people from national parks and fragile ecosystems. Also, there is no reference given in the basin-based land-use plan document for the validity of the factors used to determine the area extent of the buffer zones. Furthermore, the fact that settlements are decided to be retained "as it is" (first 2 lines of this paragraph) is not understandable. Population growth and settlement expansion is inevitable.

In general, there is no plan for the translocation of any riverine settlement or farm to other sustainable locations mentioned in all of the land-use plan documents.

Schedule for Plan implementation

The document has no implementation schedule. But it mentions as advice that "land-use planning does not end with the preparation of the plan. It must also be implemented. Land use planning without implementation is a waste of time and energy". And suggests the establishment of the following entities, in its Implementation Guideline document, as a future activity to be conducted by somebody else; OWWDSE-Implementation Guideline (2010).

1) The establishment of land resource management groups (LRMGs) or land care groups,
2) Establishment of Multi-disciplinary implementation taskforces,
3) Establishment of District land use planning and management task force
4) Establishment of Regional land-use planning and management task force
5) Arranging of Stakeholder's Negotiation Forum

This clearly shows that the methodology/approach employed by OWWDSE for preparation of the present ILUP is in a contradictory way and missed the principle of integration of participants of the planning actors (organized and capacitated plan-driving communities/beneficiaries, Planning-guide experts, and planning-facilitating institutions in a fused system approach) from the very beginning. OWWDSE proposed the establishment of the various committees/task forces after the finalization of the land use plan and suggested implementation of the ILUP regardless of their prior knowledge and involvement.

OWWDSE's ILUP project office mentioned (during the FGD with the field team) that these task forces were ordered, by the Vice President, to be established, but not performed.

Challenges and opportunities of the land use planning process

Environmental and land use Policy gaps and enforcement challenges:

- the present ILUP study has been conducted, in the absence of the land use policy;
- The OBLAU has no authority to organize the various land-related sector Bureaus horizontally,
- Lack of strong institution with capacitated manpower, the Bureau structure is not capacitated at the local levels to guide land use plan and its implementation,
- The staff turnover is alarming that the trained professionals could not stay for a meaningful period to attain the medium- and long-term goals of ILUP,
- The frequent restructuring of ministries/bureaus/agencies/institutions with changing responsibilities has been a challenge,
- Regarding the present ILUP, change in clients has affected the efficacy of mandate and confidence for implementing agency during the planning process. The clients of the LU Study project have been changed five times; from Rural and Agricultural Development of Oromia to Pastoral Development Commission of Oromia to Bureau of Rural Land and Environmental Protection of Oromia, and finally divided into OEFCCA and OBLAU,
- The Rural Land Administration and Land Use Proclamation no. 456/2005 state the need to develop a guiding land-use master plan. In some cases, there appears ambiguity about the mandate between the regional and federal land management that led to conflicts of interest,

Opportunities:

Though there is no comprehensive and integrated land use plan of the region yet, Oromia Land Administration and Use Bureau has a structure developed from the region up to the kebele levels with the budget. Therefore, it would be good opportunity if this **OBLAU** structure is given the mandate of land use planning and plan-implementation, planning-monitoring in accordance with the ROAD MAP FOR NATIONAL LAND USE PLANNING guideline. This of course needs to be facilitated with several support interventions such as provisions of:

a) A strategic guide for enhancing the capacity and institutionalization of the Common Commodity groups (CCGs) for beneficiary centered planning and implementation of ILDP of OPNRS
b) Generic guide on the roles and responsibilities of land-based investors (investor-CCGs) for the sustenance of ILDP of OPNRS
c) Strategic guide on the preparation of bylaws of the different CCGs for diversified and market-driven implementation of the ILDP of OPNRS
d) A strategic guide for on mainstreaming the diversified and market-driven livelihood projects to the continued regional GTPs,
e) Terms of references for the formulation of strategic environmental and social appraisal (SESA) of the regional and zonal level land use plans and plan implementation projects by world-renown SESA experts
f) Generic guideline on the establishment and running of regional, zonal, and federal level policy advisory forums composed of bureaus and departments (as valid) related to the different land uses identified and planned for implementation
g) Strategic guideline on prioritizing project ideas for value-added implementation of ILDP at regional and zonal levels

h) training manual for trainers who train common commodity production and marketing groups (CCGs) for facilitating market-driven production requirements such as meeting market-quality, market-volume/size, standards, and grades that are compatible with national, regional, and world market requirements, and

i) proper training as soon as possible before the ILUP implementation plan commenced.

Field level investigation

Overview of the Assessment

There is nothing comparable to land that provides the basis for livelihood in Ethiopia at large and in Oromia in particular. Land, therefore, is the main life base of the people. At the beginning of the last century, land and its resources were abundant enough for the people. However, as the population density increased, and the land resources got unwisely used beyond their capacities, productivity per unit area got shrunk. To worsen the matter, land utilization technologies remained static. These called for coming up with a call for using every piece of land according to its resilience (continued sustainability). Therefore, integrated land use planning became an issue.

Anywhere in the world, land use planning is done at administrative boundaries such as national, regional, zonal, Woreda, and Kebele levels. This is mainly because it can be best planned by the involvement of the administrative bodies that can have their offices to facilitate and jurisdiction to enforce its implementation as planned. Also, such land-use plans are conducted by the involvement of the land users who are safeguarded by the law of the country. Also, because a given government office cannot have the expertise that is needed to conduct it, it needs to assemble a team of experts who can conduct integrated land-use planning as a neutral body. When possible, such planning needs to be administered by an institution that has no interest or is not mandated to use it. In these regards, the major intention of this study report was to assess the existence of such an integrated land use plan and to understand if the basin-based land use plan can be perfected by the experts of OEFCCA and its collaborators upon filling the knowledge gaps to be identified in this study. To this effect, assessing the level of perfection of the basin level plans and the capacity of the experts to correct it was studied.

To do so, four zones were selected from Oromia National Regional states of different ecological, climate, and livelihood systems to cover the situation of the region. Accordingly, East Shewa, Ilu Ababor, East Haraghe, and Borana zones were represented down to the Kebele level by letting experts respond to structured questionnaires, FGD discussion checklist. Besides, 47 experts were given a separate structured questionnaire (Annex----) and were subjected to the same focus Group discussion Checklist. some data and information from the sector reports including the watershed plans and reports at zones and woredas level, as well as using office-level reference materials.

In doing so, 47 experts who came from nine most relevant regional offices, that also included, the Oromia Water Works Design and Supervision Enterprise. Therefore, the report in this section is produced based on the findings obtained from the experts who came from these 11 regional offices. Details are given below.

Data type, acquisition, and Methodology

Survey area: As it is already mentioned above, nine sectors, Oromia Bureau of Land Administration and Use, Oromia Bureau of Agriculture and Natural Resource, Oromia Environment, Forest and Climate Change Authority, Oromia Bureau of Culture and Tourism, Oromia Bureau of Water and Energy Resource Development, Oromia Livestock and Fishery resource Development Agency, Oromia Urban planning Institute, Oromia Forest and Wildlife Enterprise and Waterworks Design and Supervision Enterprise of Oromia (WWDSE), were

selected to be assessed for the overall experts' capacity gap and identify if the ILUP was participatory or not with the regional level stakeholders. It was also tried to discuss the way forward for the betterment of the LUP implementation and enforcement. We strived to cover different expertise of the sectors with longer service years, to get information on the planning process if any.

Background information of the respondents: The following section is a summary of background information on the informant experts contacted to fill the structured questionnaire and FGD discussants. The number of experts concerning their sectors and level of education is carefully summarized within ***Table 11*** blow. The Service year of the experts is also summarized and presented in ***Table12***.

Sectors	Number of Experts			Total
	PhD	Master's Degree	First Degree	
Land Administration and Use Bureau	0	3	9	**12**
Forest and Wildlife Enterprise	1	4	1	**6**
Agriculture and Natural Resource	0	2	4	**6**
Environment, Forest, and Climate Change Authority	0	0	2	**2**
Livestock and Fishery Resource Development Agency	0	0	3	**3**
Culture and Tourism Bureau	0	1	5	**6**
Water and Energy Resource Development Bureau	0	2	2	**4**
Urban Planning Institute	0	3	0	**3**
Water Works design & Supervision Enterprise	1	2	2	**5**
Total	**2**	**17**	**28**	**47**

Table 11: ***Summary of the number of experts who participated from different sectors and their education level***

[1]Service years	Number of Experts	Percent representation
< 10 years	9	19.15
10 – 15	11	23.40
15 – 20	8	17.02
20 – 25	5	10.64
25– 30	8	17.02
> 30	6	12.77
Total	**47**	100.00

Table 12: Summary of the number of experts from land-based related offices who participated in the questionnaire interview by year of service

1

Summary of the findings

As it already mentioned above, the experts participated in the filling of the questionnaires and FGD was from various regional level sectors namely: bureaus, authorities, agencies, enterprises, and institutes. In total 47 experts have participated. The gap assessment focused on the knowledge gap of experts in doing land use planning. Most of the questions designed in the questionnaire looked for experts that participated in the past basin-based land use planning. It tried to examine the participatory nature of the same basin-based land use planning. Unfortunately, none of the interviewed regional level experts and focus group discussants have participated on the planning process of the basin-based land-use plan. Except for those from the Bureau of Land Administration and Use and, Water Works Design and Supervision Enterprise (WWDSE) of the Oromia region, none of the others know that Oromia has such a land-use plan prepared. Even from WWDSE, it was only one expert who responded to the structured questionnaire (Annex). Others declined to fill the questionnaire mentioning that we can refer to the plan documents (literature review that we did). They were willing only to participate in the FGD.

The professions/expertise represented during the basin-based planning: The interview questionnaire requested the experts to identify the disciplines that were represented during the basin -based planning process. Experts were requested to identify the disciplines represented in the planning process from the 49 possible choices. Unfortunately, none of the 47 experts tried to indicate any of the line of the professions. They mentioned that they have no information.

Planning parties/actors who participated in the planning process: Integrated land use planning is said to be best conducted by the involvement of different actors namely; plan-driving organized and capacitated communities/beneficiaries (**bottom-up**), Plan-guiding experts (**side-in**), and Plan-facilitating institutions (**top-down**) in a fused system approach. Accordingly, the experts asked to indicate **top-down** institution categories that are represented by experts/authorities, parties that drove the planning process from **bottom-up,** and type of expertise that guided the planning process from **side-in**. However, only one expert from Oromia Water Works Design and Supervision Enterprise tried to mention on two of the actors, bottom-up and side-in actors. He mentioned that all institutions at all levels participated during the planning process. On the other hand, for the side in experts guided the planning process, he mentioned that: soil, agronomy, livestock, GIS, forestry, wildlife, tourism, hydrology, hydrogeology, agro-climate, land degradation, sociology, land evaluation, land use planner and SEA experts types participate on the process. Other ways, the experts from all the other sectors have no information on the actors represented in the planning process while the other experts from the Water Works Design and Supervision Enterprise did not respond to the structured questionnaire mentioning that there are secondary data to refer, just participated on the FGD.

Factors used in rating land suitability: On this point, we raised the question of how the factors, slope classes, and soil-depth classes, were used in rating the land suitability. However, the same expert from the OWWDSE mentioned that this question seems irrelevant for them and recommended to refer their methodology that they used FAO principles for land suitability rating. For example, for soil-depth, the mentioned that the used 0 – 2, 2 – 4, 4 – 8, 8 – 16, 16 – 30, 30 – 50 classes to rate the land suitability following FAO principles. Others kept silent for the know nothing of the planning process.

Land resilience classes: Land resilience classes are the combined effects of slope class and soil-depth categories that can be used for stratifying and negotiating land-use types. So, the experts asked to refer to the land resilience classes presented in the Table-13bellow. The table indicates how the 20 land-resilience indicator-classes could have been used to decide on planning sustainability of the land use types.

Land Resilience Attributes		Slope Categories				
		0 – 6%	>5 – 16%	>16 – 30%	>30 – 45%	>45%
Soil depth classes	Rock or < 20cm	LR 16	LR 17	LR 18	LR 19	LR 20
	20 – 50 cm	LR 9	LR 10	LR 11	LR 12	LR 15
	50 – 100cm	LR 3	LR 4	LR 6	LR 8	LR 14
	>100cm	LR 1	LR 2	LR 5	LR 7	LR 13

Table 13: Land resilience classes

However, even though experts from other sectors do not understand the land resilience classes and still have no information on the prepared plan, the expert from the plan conducted enterprise solidly pointed that the classes of land resilience are irrelevant. He mentioned that the range is too wide, and one cannot see it in FAO principle and mentioned that other factors were used that can be referred from the methodology of the plan document.

Information on agro-climatic zones used: We are also interested in the information how agro-climatic zones (the combined effects of rainfall and altitude) are used in guiding the stratification of lands to put under the different land-use type potentials during the planning process. However, the expert still mentioned that the combined effect of rainfall and altitude is not relevant. He stated that the most important climate parameters are thermal zones, LGP, Frost hazard, etc.

Methods used in reconciling the land-use conflicts: Even after using all distinguishing factors exhaustively, a piece of land may be suited for more than one land use type. In the planning process, the planners may use different methods to resolve such land use overlaps/conflicts. In this case, the experts asked how such a land-use overlap/conflict was resolved in the planning process. As it is already stated above, all the experts from different sectors of the regional level have no information on whatever is done during the planning process. However, the experts from the planning enterprise recommended seeing the decision criteria placed in the plan document.

Scales used in depicting the rural ILUP in rural settings: One of the most important criteria to be seen for a land-use plan is the scale used in depicting the mapping process at different levels. Accordingly, the questionnaire was designed for the question to identify the scales that used to depict the rural integrated land use plan in rural settings. The experts from the enterprise that prepared the plan stated the scales as 1:250,000 for both regional and zonal level rural integrated land use plans and 1:50,000 scales for woreda and special woreda integrated rural land use plans.

Scales used in depicting the urban ILUP in rural settings: No urban land use plan considered in the Oromia Integrated Land Use Plan that was conducted by Oromia Water Works Design and Supervision Enterprise. They underscored that they contracted by/with rural land authorized bodies, not consists of urban authorities. They also mentioned the presence of the Oromia Urban Planning Institute and just left the place vacant thinking that it will be prepared by them. This implies that the question is not relevant to them.

The utility of the existing land use/land cover type maps: At this point, we are interested to look at the utility of the existing land use/land cover types used in the planning process. Accordingly, the plan doers pointed out that the existing land use/land cover was maintained as it was. They also recommended looking back on the decision criteria in the plan document.

Land use land cover attributes considered: The land use/land cover attributes considered in the existing land use/land cover characterization is another issue to refer to or point out. The same expert from the planner mentioned that the attributes considered were cultivated land, vegetation covers, water bodies, settlements, etc. It is still an illusion to expect other experts to react on these questions.

How the land-use conflicts were negotiated and resolved in the planning process

Conflicts may have occurred on land-use. So that it needs some sort of negotiation and resolution methods for these conflicts to be solved in the planning process to make the plan concrete and complete document. However, there is no expert to react on this question since they have no information on any of the planning process, though, the experts from the Water Works Design and Supervision Enterprise recommended to see the decision criteria of the study document.

Approval of the land use plans: Once the study document is prepared and completed; it must be approved by some responsible body. So, the questionnaire format consists a question to identify the approval process of the plan document. However, only the experts from the waterworks design pointed saying that "After all negotiation, it will be approved by an authorized government body while others have no clue on.

The role of Plan-Guiding experts: Here we are interested to identify the role of the Plan-Guide experts who came from land claiming/users institutions. These land claimants are listed as: conservation, wildlife, tourism, natural heritage protection, industry and trade, road, health, and education infrastructure institutions, water supply and sanitation institutions drinking water sources, water resource catchments concerned institutions, and the like. The roles of plan-guiding experts coming from these institutions are asked if the study process engaged them. However, none of the experts from different governmental sectors reacted to this question while the experts from the contractor stated that the plan-guide experts from these institutions engaged in all activities, even though their major role was facilitation and guiding of the plan.

Policies considered in the planning process: As it is already known, there is no land use and land use plan policy at the national level and the regional level as well. All the experts who participated in focus group desiccation agreed that there is no such policy as far as they know. They mentioned that there only land use proclamation and Directions. They mentioned that it is scientifically known that policy derived from the constitution, and then laws derived from a policy from which proclamation derived. But, having proclamations and directions without having policy frameworks and laws surprised them very much. However, they did not state the policy that was considered in the planning process.

On the other hand, the experts from the planning contractor stated that even though there is no policy at the national and regional level for land use and land use planning, there is no legal restriction that prohibits the region from preparing a land-use plan. It is from that point of view that they prepare the plan document in the absence of a land-use plan policy. They also tried to raise the issue of land use framework. For the prepared integrated land-use plan to be implemented, land use framework, land use policy, land use plan institution, and laws should be prepared at the top of it. On the other hand, at the bottom of the plan document, the land development plan should be prepared with the participation of the whole community based on the land use plan document.

Drawbacks and difficulties in producing integrated rural land use plan: Drawbacks or difficulties in producing the integrated rural land use plan are also other areas that we are interested to hear from the mouth of the actors. The expert from the planning contractor (Oromia Water Works Design and Supervision Enterprise) dot down the difficulties he thinks they phased. These are:

- Experts capacity gaps at all level of all disciplines
- Institutional instability
- Experts turnover from office to office and from place to place
- Political will
- Lack of motivation at the various governmental offices
- Lack of land use and/or land use plan policy and so on

Drawbacks and difficulties in producing integrated urban land use plan: This is an irrelevant question for them since they did not consider the urban integrated land use plan in the land use plan study document.

Major differences between land development and ILUP: Integrated land use plan and land development plan are different things and an expert needs to differentiate between the two. To identify if the experts have enough awareness to indicate the difference between the two plans, the questionnaire format consists a question to write four major differences. Accordingly, of the experts who participated in filling the structured questionnaire, only 37.21% of them tried to indicate the difference between Integrated Land Use Plan and Land Development Plan while the preponderance, 62.79%, of them underlined that they have no information/idea or knowledge of the difference. It can be stated in the following pie chart 1.

To mention some of their statements they stated:

- Integrated Land Use Plan is the allocation of land for major uses while the land development plan (project) details allocation uses and management in sustainable ways.
- Integrated Land Use Plan, once gazetted, needs authorized body decision but development plan not.
- ILUP is a long term issue than Land development
- ILUP is general and the land development plan is the detail
- ILUP is expensive than a land development planning
- Integrated Land Use Plan concerned with exchange use of land while the land development plan focused on soil conservation
- ILUP is the base for land development plan
- ILUP deals with the general purpose of a piece of land whereas land development plan depend on productivity
- ILUP is concept development whereas Land development is a detail action plan

The reason why the prepared sub-basin land use plans are not implemented

Had they known the case, the experts were also given the chance to state the reason why the Integrated Land Use Plan that prepared by Oromia Water Works Design and Supervision Enterprise is not implemented. However, only 39.53% of the experts used the chance to give their intentions on the reason why ILUP is not implemented. On the contrary, the majority of them, 60.47%, honestly stated that they have no information that Oromia has such an Integrated Land Use Plan. The probable reasons for not having the plan implemented:

- No land-use frameworks
- No land use or land use plan policy
- No responsible institution for land use
- No land-use laws
- No expert capacity at all levels
- The planning process was not participatory
- Experts knowledge and skill gaps
- Limited awareness at all levels
- Lack of attention by decision-makers at all levels
- No integration between different stakeholders
- Lack of coordination
- Lack of motivation from managerial bodies
- Experts turnover
- Sector heads turnover
- Lack of commitment
- Incomplete or no shapefile

The reason why the ILUP has not been revised: The sub-basin-based integrated land-use plan that was prepared by Oromia Water Works Design and Supervision Enterprise are almost forgotten by Zonal, Woreda, and Kebele level experts and should have been revised. The experts asked the reason why it has not been revised so far. However, only 34.88% of the experts reacted to this question while 65.12% of them mentioned that they have no information/idea concerning the case.

The reason consists of:

- No expert's capacity
- No responsible institutions
- Lack of attention
- Lack of follow up, monitoring and evaluation
- Not easy to perform
- No motivation among the managers

Knowledge gaps in producing integrated Urban Land Use plans

Of the experts who were requested to list down knowledge gaps for conducting Integrated Urban Land Use Plan, 46.51% of the experts gave the possible knowledge gaps while 53.49% of them kept silent that they have no idea about Integrated Urban Land Use Planning. The list of knowledge gaps identified by the experts, 46.51% of them listed the following.

- Use of GIS and remote sensing tools
- Lack of clear planning supportive laws/policies
- Absence of the right expertise
- Non-supportive existing conditions
- Lack of knowledge on how to use participatory planning methods
- Absence of integration between planning actors
- Lack of motivations among the planning actors
- Limited skilled manpower
- Lack of use software for prioritization of
- Political commitment
- Lack of experience
- Lack of clear guidelines

Knowledge gaps that need attention to conduct rural land use plan: To conduct the Integrated Land Use Plan at regional, Zonal, Woreda, and Kebele levels, there are knowledge gaps to be addressed in advance. Accordingly, the experts asked to address or listed down these knowledge gaps that needed to conduct the Integrated Rural Land Use Plan at a different administrative entity. 60.47% of the experts reacted to this question while 39.53% of them kept silent that they have no idea how to conduct an Integrated Rural Land Use Plan. The list of knowledge gaps identified by the experts is bulletined as follows. It can be stated in the following pie chart 5. These are:

- ✓ The importance of land-use plan framework
- ✓ Based on the land use plan framework, appropriate land use/land use plan policy (land use the legal framework)
- ✓ Based on the land use/plan policy, establish appropriate land use institution
- ✓ Based on the land use/plan policy, appropriate land use laws
- ✓ Capacity building
- ✓ Database establishment
- ✓ Basic concepts, principles, approaches, and steps to produce ILUP
- ✓ Basic and overview of socio-economic and biophysical surveying concepts
- ✓ Using Arc GIS software for map preparation and reading
- ✓ GPS manipulation, computer-based training, and data collection methods
- ✓ Global mapping and Arc map working with Arc GIS
- ✓ Preparation of document for land use planning
- ✓ Utilization of existing Land use/land cover
- ✓ Lack of appropriate technology to develop, monitor, and administer natural resources
- ✓ Creating political commitment
- ✓ Preparing Guidelines

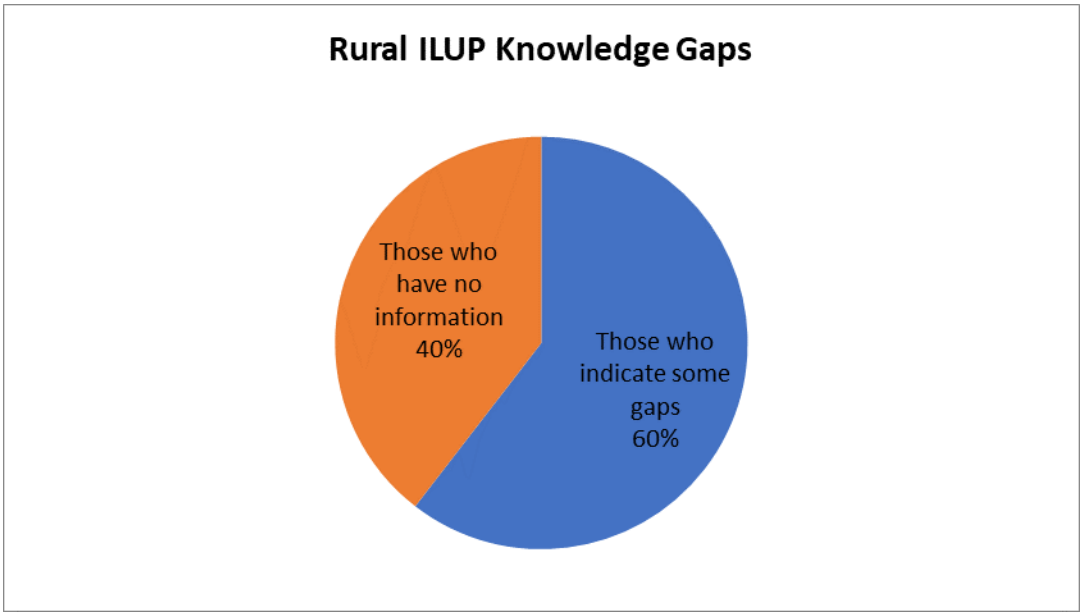


Figure 4. The reaction of experts Urban ILPU knowledge gaps

Additional knowledge gaps of integrated rural and urban land use planning: On this point, the experts asked to discuss/indicate issues that the questionnaire missed in the identification of knowledge gaps in the areas of integrated rural and urban land use planning. The same number of experts in the above case was reacted to this case too. This means,

60.47% of the experts reacted to this question while 39.53% of them kept silent that they have no idea about ILUP conducting. The list of knowledge gaps identified by the experts is bulletined as follows. These are:

- ✓ Importance of database establishment
- ✓ Capacity building
- ✓ Land use plan policy preparation
- ✓ Land use institution establishment
- ✓ Land use/plan laws preparation
- ✓ Land development/project formulation
- ✓ Integration between urban and rural planning
- ✓ Integration between stakeholders

Remarks

To advance the knowledge gaps assessment effort, experts have given wide space to indicate whatever recommendation they need to discuss. These are:

- ✓ Planning a huge land development project that involves the community
- ✓ Training should be given from the scratch
- ✓ Short- and long-term pieces of training should be given
- ✓ Supervision and monitoring and evaluation should be strengthened
- ✓ Creating motivation among managers or decision-makers is very important
- ✓ Establish an institute
- ✓ Create enforcement criteria

Overall findings from Focus Group Decision: Many of the items consisted in the questionnaire related to the availability of ILUP in the region and/or how participatory was the ILUP if any are not been reacted by the experts from sectors except that of the planning contractor, OWWDSE. However, almost all the experts participated in filling the structured questionnaire and FGD discussants are confidently mentioned that either they do not think that there is such an integrated land use plan in the region or no one from their sector did not participate in the planning process. For example, the Bureau of Land Administration and Use of the Region is meant to be a client for the planners, but none of their experts can talk about the planning process. They soundly mentioned that they got no training except some simple presentation and additionally no one from the bureau, as far as the discussion informants know, participated in the planning process. they also boldly stated that they have no capacity even to check, evaluate and monitor if the plan is right or wrong and the planning contractor could not transfer the knowledge and experience, they acquire from the process. On the other hand, the Bureau of Agriculture and Natural Resource is the main stakeholder of the land use and it used to consist of the land administration and use as part of its departments for many years even when the said ILUP started. However, they do not know anything about this document. They emotionally mentioned that had Oromia have an Integrated Land use plan, Adea Agricultural land could not be corrupted and misused for such an industrial construction. Many of our discussants irritably mentioned about this Adea agriculture land to be misused.

The country had been losing many land resources like; forests, water bodies, tourist sites, cultural heritage, and so on due to the lack of an integrated land-use plan. For example, Haromaya Lake was dead and Calalaqa Lake of Shashamane is being gone, Yayo forest is in danger, there are settlements in many tourist areas to list a few. Finally, they honestly stated that we are putting the future generation is at risk, and at the same time, we are not properly using the land in a way we can get the maximum product because of the lack of an Integrated Land Use Plan.

Additionally, almost all the participants do not know how the rural land use planning of the area was conducted. Indicating that land use planning is multidisciplinary, they highlighted the importance of stakeholder's involvement. They explicitly pointed out that they did not engage in the planning activities though they are the major stakeholders of land resources. Most of them even not know that it was conducted.

They stated that many valuable and promising types of research in this country left on the shelf and urged us to strongly handle and aware of every concerned manager and Authority to please give attention to save our future generation. Otherwise, after one year or more no one can raise these issues.

Conclusion and Recommendation

Conclusion: One can find from the results above that the ILUP was not participatory. It did not consider any of the stakeholders. Implementation Experts at the Regional level, who could have been valuable partners of the planning did request to take part in the planning process. As a result, we concluded that the planning process completely ignored the 2/3rd of the actors and conducted the planning process themselves. It is also not known that if it considered all the pre-requisite subjects required to plan land use. On the other hand, it is said to be outdated since it was neither revised nor in action since preparation. This plan ignored the community at large and land-use stakeholders and sectors at governmental bodies thought to be facilitating institutions on the planning process.

On the other hand, environmental deteriorations and land-related conflicts are quite common at all levels and getting intensified because of the absence of a land-use plan and policy. Productions and the nature of society's livelihoods are also attention-seeking problems. The basin-based work could not lay a foundation for ecological sustainability, enactment of food productions, and income of the rural poor people. Though experts, institutions, and wider communities are the major planning actors in the land use planning process, they were not involved in the basin-based study and they have no awareness about the fused approach implying that the ILUP process was not participatory and cannot bring its desired outputs as it appears now. It seems that the planning team themselves did not fully understand the concept of ILUP and it is impossible to say that ILUP was conducted as there is no land-use plan in all administrative units. During the planning process, the planning team missed the universally accepted standards of land use plan.

Finally, it is sad to say that we have many unsuccessful development plans on land without having an integrated land use plan first. For example, thanks to transformation or 'reform' whatever individual calls, our country registered on 'genius book' planting 3.5 million trees within a day without having Integrated Land Use Plan. We are also progressing to plant 5 billion trees a summer in a condition we do not know the status of last year's plantations, ignoring the Integrated Land Use Plan yet. No one thought about where and how to plant, just planted to cover all the uncovered land. I am not criticizing the effort made to solve global warming or

green effects but recommending that it would have been better to have a land-use plan first so that the plantation has to be more effective.

Recommendation: The study was made to assess the capacity, knowledge, and skill gaps of the experts at different Regional level sectors of Oromia National regional state so that to prepare a training manual and syllabus and give ToT with detailed follow-up on the coverage of the actual training. On the other hand, ABT-PCS is also responsible to review the document in such a way to comment for any updates of the plan if necessary. Accordingly, here-below are some recommendations made from the assessment.

1. Land-use Planning frameworks must be prepared or and used
2. Political commitments on land use plan need to be re-ignited
3. Integration and coordination between sectors should be facilitated by the land-use Planning and Implementation Bureau
4. Training manual must be prepared from the scratch on every simple subject like GIS, Socio-economy survey, SEA, GPS manipulation, Computer training, Mapping, and map utilization, Land use plan concepts, principles, approaches and steps, and land use plan pre-requisite subjects should be detailed, in such a way to make everybody understand the definition, value, scopes, steps, process, subject to be considered, participatory level, implementation methods, enforcement subjects, etc., of Integrated Land Use Planning.
5. Appropriate technologies in which lands are evaluated, monitored, and administered must be announced to all concerning sectors and experts
6. The database should be established and transparent to the public
7. The training of trainers and follow up of the actual training to be given by these trainers must be detailed and deeper.
8. Awareness creation to all level land users must be strongly recommended to Authorized bodies.
9. The information from the river-basin plan document must be updated. In some places, the plan was prepared before ten years and it is outdated. At the same time, it is stated that there are areas that the plan did not cover. These imply that the plan needs updating.
10. The land development plan should also be prepared from the integrated Land Use and Development Plan (ILDP) document in such a way to implement the integrated land-use plan.
11. Pilot sampling is also recommended for the implementation of the ILUP

Lastly, but more importantly, for the betterment of the plan implementation, it also recommended that it is better for the plan to be updated/edited to an administrative boundary rather than river basin based.

The case of the East Shewa zone

Introduction

2. The major intention of this study report is to identify the experts' capacity, knowledge, and know-how gaps on overall awareness of the integrated rural and urban land use planning. In the know-how methodical-approach gap assessment, the effort is made to find out how participatory the basin-based land use planning was. Its participatory nature in including the plan-driving communities, planning guide-experts, and plan facilitation experts of relevant institutions were examined. All these findings aim at preparing a focused training manual for filling the gaps in perceived knowledge and expertise as well as in approaches.
3. This report is prepared based on the data collected from the 131 key experts contacted from different stockholders/sectors by distributing structured questionnaires to assess capacity and know-how gaps in exercising integrated and participatory land-use planning in Adama special zone.
4. According to the informants contacted, Oromia Water Works Enterprise is the one that prepared the land use plan at the river basin/watershed level. The gap assessment crew conducted focus group discussions with few experts selected from main sectors of land use those expected to have a strong relationship with the process of basin-based land use plan of East Shewa special zone. This zone is considered from the beginning to assess the connection of the basin-based land-use plan with the problem of urbanization, industrialization, and cereal Production. Accordingly, Lume and Adea woredas of the East Shewa zone were randomly selected. The structured questionnaire distribution and FGD were conducted using sector experts of these woredas in addition to experts at the zonal level. In each woreda, one kebele was considered to conduct a focus group discussion that consists of kebele level experts and kebele management/administration committee.
5. The experts' capacity gaps in facilitation, actual planning, and in preparing plan implementation modalities were assessed by involving the experts from zonal level, two woredas, and two kebeles by using questionnaire interviews and focus group discussions. Their skill and knowledge gap was assessed. We tried to cover all experts of stockholders or sectors at the zonal level and the two woredas, Adea and Lume, as well. To do so, we strived to cover the 33 expertise lines proposed at the preparation stage. Additionally, one kebele from each woreda, Ude and Xade Dildima kebeles respectively, was selected. At zone and woreda level, structured questionnaire and FGD checklists were used to identify the knowledge gaps. However, at the kebele level, only FGD was conducted.
6. The 61 zone level experts and 70 woreda level experts were given the questionnaire to respond. From the 131 possible, 85 of the respondents completed the questionnaires. There were several FGDs conducted at all levels such as Zonal, Woreda, and Kebele levels. Please refer to Figure 2 for the Woredas included.

Background information of the respondents in East Shewa: The following section is a summary of background information on the informant experts contacted to fill the structured questionnaire and FGD discussants. The number of experts selected from different sectors as per their administrative entity is carefully summarized within the Table 14 below, where others represent those minor sectors/offices like Mineral, Women & Youth Affairs, Education, Health, Rural Road, Tourism and Culture, Market Development, Social Affairs and so on. We tried to cover different expertise lines within those sectors.

Sectors	Number of Experts within Entity			Total sum	% by sector
	Zone	Woreda 1	Woreda 2		
1 Land Administration and Use	7	4	5	**16**	**12.21**
2 Agriculture and NR	9	7	6	**22**	**16.79**
3 EFCC	4	5	3	**12**	**9.16**
4 Water & Energy	5	6	2	**13**	**9.92**
5 Livestock and Fishery	3	3	3	**9**	**6.87**
6 Others	33	16	10	**59**	**45.04**
Total	**61**	**41**	**29**	**131**	**100.00**
	46.56	**31.30**	**22.14**	**100.00**	

Table 14. ***Summary of the number of Experts who participated from different disciplines within the East Shewa Zone.*** Source: - Field data collection (March 2020)

Source: - Field data collection by the team of experts deployed for this investigation.

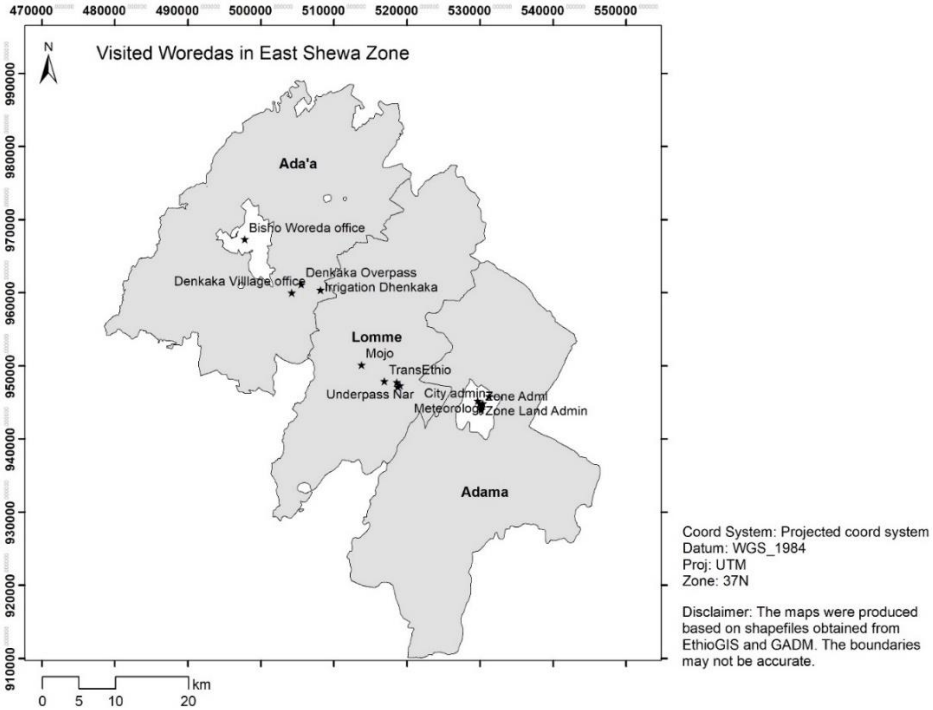


Figure 5. ***Gap Assessment survey areas of East Shewa zone***

Key findings

Understanding the Definition of ILUP:

7. In understanding what ILUP is about, 49.33%, honestly stated that they have no information/idea or knowledge what ILUP means, Others tried to define ILUP as:

   a. "ILUP is a type of land use methods according to its capability."

b. "ILUP means a plan that indicates the effective land use in different purposes to know their management".

c. "ILUP is a participatory planning process which includes all stockholders and sectors from planning to implementation and evaluation."

d. "ILUP is a process using land as its effort or potential and alternative for optimal and use in such a way to improve economic, social and environmental conditions of the community"

e. "ILUP is about the evaluation of every piece of land for its weighed comparative physical potentials and limitations followed by allocation of such pieces of lands for meeting economic, social and environmental *concerns of the current and future generation at best"*

f. "ILUP is allocation of land to meet economic, social, and environmental concerns of the society".

A considerable number of them tried to define in connection with climate change, land use/land cover, soil and water conservation or sustainable land management programs, etc. They used terms like degradation, soil erosion, deforestation, and climate change in their definition.

However, according to the "Roadmap for National Integrated Land Use Planning in Ethiopia by Azene Bekele-Tesemma 2017", 'Integrated land-use planning' is defined as a general term used for evaluating and harmoniously allocating and planning land-use types in an efficient, legal, ethical, and sustainable way, in both rural and urban settings, to address peoples' needs and sustainability of the environment.

Knowledge in involving Group of Actors of ILUP Preparation: The expert's knowledge regarding actors or group of stockholders who participated in the prepared land use plan attested that the plan was prepared by Oromia Water Works Construction years ago. However, most of the experts stated that they do not have any information that the ILUP was prepared. To this effect, it was impossible to know and state who and who were involved in the process. The focus group discussion participants of Tade Dildima kebele concluded that they can't list the group of actors who might have participated in the planning process (if any).

Knowledge in understanding Land Use types in ILUP: The dominant land use/land cover of the entity was asked, and the respondents mentioned the following. The mainland use/land cover of their respective entity is:

1. Cereal production
2. Forest land
3. Settlements
4. Grazing land
5. Shrubs
6. Irrigation
7. Industrial constructions
8. Water bodies and
9. The land that covered by road infrastructures

10. The waterbody is common for Ade'a woreda.

The authenticity of the Land Use Plan: Regarding the opinion of interviewed experts regarding their belief whether their administrative entity has an integrated land-use plan or not, at the zone level, 3.03% of the respondents respond 'yes' there is a plan. The other 97% of the respondents believe that their zone has no integrated land use plan. However, among the respondents who indicated that their zone has ILUP, none of them has information on how the plan was conducted.

The data collected from the woredas experts indicated that 45.24% of them responded that they believe their woreda has ILUP. But later, during the focus group discussion attested that they mistook the local level land use development plan which is conducted with the support of AGP and/or SLM program for ILUP. Otherwise, they stated that there is no ILUP at all or have no information about its presence.

Participatory nature of the Land Use Planning Approach: Participatory and integrated land use planning is said to be best conducted by the involvement of:

a) plan-driving organized and capacitated communities/beneficiaries,

b) Plan-guiding subject-matter professionals/experts, and

c) Plan-facilitating institutions

in a fused system approach.

a) 69.33% of the experts confirmed that this approach is essential,

b) 92.31% of this 69.33 % of the respondents stressed that all three actors are needed in genuine land use planning.

c) 17.33% voted that they do not believe that this training is important.

d) 13.34% of them could not decide.

From those experts who said they believe in the importance of engagement of all the three actors, 77.08% of them ranked the level of the capacity gap of the three land-use planning actors. The result is summarized in Table 15 on the following Page.

	The rank of the level of capacity Gap of the actors											< 50% gap	>50% gap	100% gap
Actors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**				
Planning guide Experts	10	4	3	1	1	1	2	2	0	15	39	19	20	32.61
Facilitating Institutions	11	1	1	1	2	1	0	6	0	16	39	16	23	34.78
Planning-Driving land Users	11	2	2	0	4	0	1	2	2	15	39	19	20	32.61
Interviewees total	33	7	6	2	7	2	3	10	2	46	117	54	63	
% of knowledge gap	28.21	5.98	5.13	1.71	5.98	1.71	2.56	8.55	1.71	39.32	100			
% of knowledge gap	47.01					52.99								

. Table 15: ***The level of the capacity gap of the three actors on land use planning as ranked by the experts***

Understanding of experts about ILUP: Integrated Land Use Plan is about the characterization of every piece of land for its weighed comparative physical potentials and limitations followed by the allocation of such a piece of land for meeting economic, social, and environmental concerns of the current and future generations at best. Experts' opinion on

whether the definition above was well understood and applied in planning the land use in the past in their respective administrative entity the following became evident. There were three options for the experts to choose from. Accordingly,

g. Among the experts who came from different sectors of the East Shewa zone, 60.61% of them underlined that their zone does not have such a land-use plan, and

h. The other 24.24% of them mentioned that they do not believe the definition is understood and applied.

   Therefore, a total of 84.85% of the respondents has indicated that there is no plan and such approach was never applied.

i. The other 15.15% of them said that they strongly believe it is understood and applied.

8. Likewise, the woreda level experts also rate their beliefs as shown in Table 16 below with that of the zone stated above. Please refer to Table 14 for the weight of their responses.

   a. 56% of them said that their woreda does not have such a land-use plan

   b. 33.33% of them believe that such an approach was not understood and applied,

   c. 14.67% of them believe that the approach was understood and applied.

Options	No. of respondents				%	% who indicated that no such land-use plan was produced
	Zone	Woreda 1	Woreda 2	Total		
Those who strongly believe that the approach is understood and applied	5	3	3	11	14.67	0.00
Those who confirmed that such an approach was not used for coming up with the plan	8	8	6	22	29.33	85.33
Those who attest that such a land-use plan does not exist at all	20	11	11	42	56.00	
Total	**33**	**22**	**20**	**75**	**100**	**85.33**

Table 16. ***The response of the respondent experts about the existence of an integrated land use plan and the approach used.***

9. From Table 4 above, it is possible to observe that 85.33 % of the respondents have confirmed that there is no land-use plan and to this effect, the genuine land use planning approach is not used. The balance (14.67%) indicated that the right approach was used, and the plan was produced.

10. After getting informed that land-use planning may entail abandoning a certain unfit land use and replacing it with another best-fitted, more economic, and sustainable land use, the experts were asked to list the advantage and disadvantages. Their list is as follows.

Advantages: The possible advantages of abandoning a certain unfit land use to replace it with another best fitted, more economic, and sustainable land use they list down summarized/listed as below. These are:

- Increasing productivity rate
- Land use sustainability
- Maintaining climate change management and foster climate protection
- Increasing the economical utilization of land
- Increasing land management opportunities
- Sustaining the environment and soil and water conservation
- Decreasing soil erosion and degradation
- Facilitating Natural resource management and sustainable land management

Disadvantages: On the other hand, the possible disadvantages they responded to replacing land with another best fitted, more economic, and sustainable land use are listed as follows. These are:

- It is difficult to apply
- Time taking to implement
- It may cause conflict in the process of replacing
- It may cause social displacement
- It may be too costly
- It may cause loss of some social values
- Decrease farmland size
- May not be understood in society, and so on

Understandings of the Experts About Actors Supposed to Participate in Integrated Land Use Planning? Assuming the experts may play a facilitation role from top-down, the experts were requested to list who to participate in integrated land use planning in explicit terms. Accordingly, 44% of the experts responded that they know nothing on who to participate in integrated land-use planning while many of the rest agreed that: experts, societies, and different government sectors are meant to participate in planning integrated land use. However, the list that the experts stated in one way or another is summarized as follows. These are:

- Experts/professionals
- Society or land users. That consists of the whole community (community leaders, religious leaders, elders, women, and youth)
- Politicians
- Researchers
- Higher educations
- Policymakers

- Government sectors/stockholders
- Guide institutions
- NGOs and

Only two experts stated as: (1. land users 2. Planning guide experts and 3. Facilitating institutions)

Awareness Level of actors: In this section, we tried to assess the rate of the current level of awareness of the land users, the experts, and facilitators about the nature and know-how of land use planning with the perception of the experts. The rating was from 1 to 10 where 1 means the least awareness and 10 is the highest. Accordingly, 40% of the respondents did not react to rate it mentioning that they cannot decide the awareness level of the three integrated land use planning actors. However, the rate of awareness that is labeled by the rest is summarized in Table 17 below.

The capacity building on land use planning is going to be developed for fulfilling the knowledge of land use planning **guide experts**. As we can see it in Table 2, the knowledge gap experts are comparatively the least area of attention. If successful land-use planning is to be conducted the capacity gap in land use planning for all the three kinds of planning actors. If the budget is limited for such manual preparation for all three factors, and if one has to choose one from the three decisive actors, the choice would have been given to building the capacity of Plan-driving land users.

Actors	The rank of the level of awareness of the actors on the nature of land use planning and know-how										
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	
Land Users	19	6	7	1	4	0	1	1	1	5	45
Guide Expert Experts	6	2	2	4	9	3	4	5	3	7	45
Facilitators	7	1	8	5	5	5	1	5	1	7	45
Total respondents	32	9	17	10	18	8	6	11	5	19	135
% value	23.70	6.67	12.59	7.41	13.33	5.93	4.44	8.15	3.70	14.07	100.00
knowledge gap of above 50%											
a) cumulative actors					**63.7**					46.3	100
b) Plan driving land users					**82.22**					17.88	100
c) Plan Guiding experts					**51.11**					48.89	100
c) Plan facilitating experts					**57.78**					42.22	100

Table 17. The level of awareness of the actors of land use planning about nature and know-how as ranked by the respondents

Parts of Integrated Land Use Planning:

Integrated land-use planning has different parts. Knowing the subject to be considered like Pre-requisite subjects, land claimant subjects and plan-enforcement subjects are in part one. The second is ranking the suitability level of each of the subjects to be considered in the participatory planning process. And the third is grading suitability range for suitability ranks and final integrated land-use allocation and planning. In this regard, the experts were asked to identify which of these parts they think is exceedingly difficult to master. In response to this question,

a. Some indicated that three of them are very difficult since they have no information or awareness of the subjects.
b. 24% of them could not dare to indicate which of the three is difficult to master because they do not know any of them.
c. 53.33% of them underscored that knowing the subject to be considered is the very difficult
d. 25.33% of them also stated that ranking the suitability level of each of the subjects to be considered in the planning is very difficult
e. 13.33% of them chose to grade the suitability range and establishing suitability ranks is a very difficult part of the integrated land-use plan.

Knowledge on the importance of training for ILUP actors and whom to be involved: As it is already well stated above in the introduction section, the purpose of this field assessment is to identify the experts' capacity gap and prepare the training manual and facilitate to whom it will be delivered.

a) Importance of the training

11. In this section, we tried to get across the beliefs of the respondents on the importance of the training for the integrated land-use planning actors and the rate of that importance. Accordingly,
    a. 81.33% of the respondents stated that the training is highly important
    b. 8% of them do not believe in the training importance and
    c. About 11% of them did not respond.

b) Whom to be involved in the training

12. It is needed that everyone to be aware and sensitized about the details of Integrated Land Use Planning. However, respondents were asked who to be given priority for the training. In this respect, 26.67 of the respondents could not mention. They have no information on how it goes and afraid that they may mislead the program if they give the wrong list. However, the majority of them listed the following.

- Communities or land users that consists of farmers, community leaders, religious leaders, women, and youth groups

- Different experts
- Government bodies
- Investors
- Policymakers
- Non-governmental organizations

One informant uniquely stated as Land Users, Plan-guide Experts, and Facilitating Institutions should be involved in the training.

The damages that occurred by the absence of ILUP: When requested, if the respondents believe that the absence of land use plan and land use policy has done damage in their administration constituency, 16%, choose to be silent. However, the majority, 68% of the respondents underlined that the absence of the land use plan and land use policy affect their administrative entity while 16% of them denied that there is a lot of land use damage that occurred due to the absence.

What is affected most due to the absence of ILDP? When the respondents are requested to indicate what they think is the most affected, by the **absence** of land use plan and land use policy,

a. 88.24% of them believe that Social transformation, Economic transformation, and Environmental sustenance are all affected negatively by the absence of land use plan and policy while

b. 7.84 of them mentioned that only environmental sustenance is affected and

c. 3.92% of them believe that only the social transformation of their area is affected.

Why having ILUP is important: In this section, an effort was made to identify the three possible reasons for the experts for having an integrated land-use plan. Even though 20% of the respondents did not respond,

a) 53.33% of them mentioned that integrated land-use planning is important to increase production per unit area of land and to improve the economic use of land resources

b) 36% of them mentioned that it is important to diversify income sources from land and water and to avoid/minimize the disruption of interconnected interfaces between human and their environment.

c) 41.33% of them underlined that it is important to increase the resilience of land and productivity against climate change

d) **21.33%** of them stand that having an integrated land use plan is important to guaranty the perpetuation of life (flora and fauna).

Participatory Status of the past efforts on land use planning: On the questionnaire related to the availability of ILUP in the administrative entity, and/or how participatory was (if any plan existed). Almost all the experts who participated in filling the structured questionnaire and FGD discussions, confidently mentioned that ***they do not think that there is such an integrated land use plan in their respective entity***. Many of them were even confused with the term 'development plan and sustainable land use management' that had been prepared by SLM and AGP projects. For the experts who do not know what ILUP means and do not ever dealt with it, it is impossible to talk about which group did participate.

13. According to information obtained from focus group discussions held at all the three administrative entities, '*as it may be reported by other team members'*, almost all the participants do not know how rural land use planning of the area was conducted. Indicating that land use planning is multidisciplinary, they emphasized the importance of stakeholder's involvement. They explicitly pointed out that they were not engaged in planning activities though they are the major stakeholders of land resources. Most of them, do not know that the land use plan is prepared. As a result, they could not discuss issues such as
    a. how the ILUP was prepared,
    b. the major pre-requisite subjects considered,
    c. the major rural land claimant subjects,
    d. major institutions and enforcement subjects considered for the enforcement, and
    e. The use of the rural land use plan, major urban land-use types.
14. In addition to the above, it was difficult for the respondents to briefly describe how a given land unit was decided to be used for one land-use type when it is said to be suitable for more than one land use type. The same is true to describe how it was implemented, and what was recommended. Willingness to accept and move to the new residential sites were the land-use planning cause a shift of residence from such as riverbanks, lakeshores, wildlife habitats, mining areas, wetlands, prime agricultural lands, etc., to safer, more economical (more firm shallow soil-depth) residential sites could not be discussed because they were not experienced. Likewise, they could not list the best social safeguard issues that were considered in such instances!
15. The following section is a summary of background information on the informant experts contacted to fill the structured questionnaire and participate in the FGD discussions. The number of experts from the East Shewa zone, Woredas are summarized in Table 14. shown before, where the word "others" represents those minor sectors/offices like Mineral, Women & Youth Affairs, Education, Health, Rural Road, Tourism and Culture, Market Development, Social Affairs, and so on.

Nearly 47% of the respondents came from the zonal offices while 53 of them came from the Woreda level offices. Five of the professional groups represent 45% of the respondents. 55% of respondents come from many disciplines.

The case of Illuababor zone

Overview of the zone.

16. The knowledge gap assessment in the IlluAba Bora zone in the field of integrated land use planning was conducted by considering two Woredas of the 13 Woredas available. The zone represents Wet Weyna-Dega and Wet Dega agroclimatic zones which are dominated by Coffee and Forest Land use. From these 13 Woredas, Yayo and Alle Woreda are sampled. In addition to Woreda level information, details are studied by considering Achebo and Gumoro kebeles as case study sites.

17. Within these above-indicated zones, the two sampled Woredas and the two kebeles specified above, the perception, capacity, and field of involvements seventy-five experts were requested in the knowledge gap investigation (Table19). Most are in the agriculture and natural resources. Details are given in Tables 19 and 20. Among the 75 totals, six are graduates in master's degrees which is a very good asset for driving the land use process when trained.

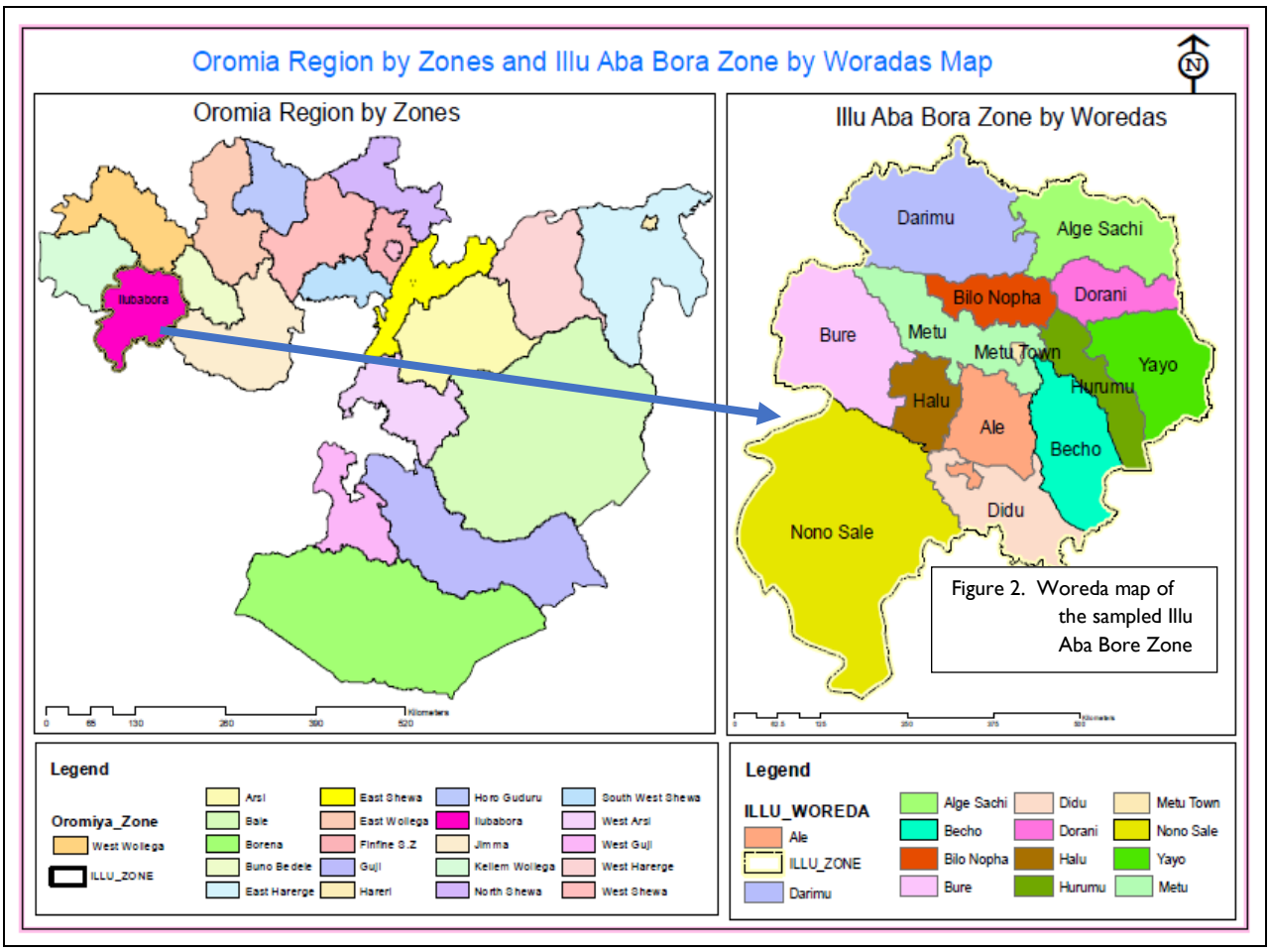


Figure 2. Woreda map of the sampled Illu Aba Bore Zone

Figure 6. ***The location map of the Illuababor zone, and the sampled Woredas***

Sectors	Number of Experts within Entity					Total	Percentage
	Question interview			Focus Group Discussion			
	Zone	Ale Woreda	Yayo Woreda	Gumaro Abo	Hacabo		
Land Administration Use	4	5	3			12	16.00
Agriculture and NR	7	4	5			16	21.33
EFCCA	3	2	3			8	10.67
Water & Energy	2	1	2			5	6.67
Livestock and Fishery	2	4	3			9	12.00
Others/FG discussants	3	4	3	7	8	25	33.33
Total	21	20	19	7	8	75	100.00
	28.00	26.67	25.33	9.33	10.67	100.00	

Table 19: ***Summary of the number of experts who participated from different sectors stationed in Illu Aba Bor zone***

Source: - Field data **collection** (May 2020)

Education level	Number of Experts within Entity			Total	Percent %
	Zone	Ale Woreda	Yayo Woreda		
Master's Degree	3	1	2	6	10.00
First Degree	16	14	15	45	75.00
Diploma/Level	2	5	2	9	15.00
Total	21	20	19	60	100.00
Education level in % from zone and woreda	35.000	33.33	31.67	100.000	

Table 20: ***Summary of the number of Experts who participated in the study with their education level per administrative entity of Illu Aba Bor zone***

Source: - Field data collection (May 2020)

The interviewed experts indicated that Illuababor can be said the breathing lung of Ethiopia. Most parts of the zone are covered by forests and many parts of these forests consist of coffee plantations. Yayo Forest of the zone is registered by UNESCO for its biodiversity. These imply that the livelihood of the community of the zone depended on coffee production. It is the main cash crop of the area followed by honey production, cereal production, and livestock rearing, and so on. It is from these aspects that this zone was selected to represent the consideration of the plan on forest and coffee plantation. However, we randomly selected two woredas from those Woredas affected/effective by the area of interest, forest and coffee plantation, forest land encroachment by cereal production, and Urbanization to some extent. Accordingly, Ale and Yayo woredas of the zone were randomly selected. The structured questionnaire was distributed and FGD was conducted by involving various sector-experts of these Woredas and at zonal levels. Gumaro Abo and Hacabo kebeles were selected from Ale and Yayo Woredas respectively.

The structured questionnaire was distributed to 21 zone level experts and 39 woreda level experts of different disciplines, 60 experts in total completed questionnaires. There also FGD conducted at all levels of the administrative entity, that is, Zone, Woreda, and Kebele levels.

Background information of the respondents

The following section is a summary of background information on the informant experts contacted to fill the structured questionnaire and FGD discussants. The number of experts selected from different sectors per their administrative entity is carefully summarized within the table below, where others represent those minor sectors/offices like Mineral, Women & Youth Affairs, Education, Health, Rural Road, Tourism and Culture, Market Development, Social Affairs and so on, those contributed one or two experts each. It is carefully summarized in Table 21 and 22 below. We tried to cover different expertise lines within those sectors.

Sectors	Total			Total	% involved
	Zone	Ale Woreda	Yayo Woreda		
1. Land Administration Use	4	5	3	**12**	**20.00**
2. Agriculture and NR	7	4	5	**16**	**26.67**
3. EFCCA	3	2	3	**8**	**13.33**
4. Water & Energy	2	1	2	**5**	**8.33**
5. Livestock and Fishery	2	4	3	**9**	**15.00**
6. Others	3	4	3	**10**	**16.67**
7. Total	**21**	**20**	**19**	**60**	**100.00**
Percent of Experts involved	**35.00**	**33.33**	**31.67**	**100.00**	

Table 21: ***Summary of the number of experts who participated from the different sectors of disciplines within the same Illuababor zone***

Source: - Field data collection (May 2020)

Education level	Number of Experts within Entity			Total	Percent
	Zone	Ale Woreda	Yayo Woreda		
Master's Degree	3	1	2	6	10
First Degree	16	14	15	45	75
Diploma/Level	2	5	2	9	15
Total	**21**	**20**	**19**	**60**	**100**

Source: - Field data collection (May 2020)

Table 22. The education level of experts involved in the interview and focus-group discussion

Key findings

Understanding the definitions and actors of ILUP: For experts, defining a term that they are to deal with is especially important. Bearing in mind this, the designed questionnaire format consists a question for experts to define/express the term of interest, Integrated Land Use Plan (ILUP), in their own words. Even though

58.33% of the respondents honestly stated that they have no information/idea or knowledge what ILUP mean,

1 "*Integrated Land Use Planning is a means for effective, efficient, and sustainable utilization of land resources in a way to reduce pressure on land and resource conservation.*"

2 "*Integrated land use planning is the study that all sectors and stakeholders conduct together to solve land and land use-related problems.*"

3 "*ILUP is the evaluation of land suitability for economic, social, and environmental concerns.*"

4 "*It is the systematic and effective utilization of land resources in a sustainable way for future generations.*"

5 "*It is a multidisciplinary team plan which implements a sustainable land use plan.*"

6 "*it is a type of plan every activity including farming, soil and water conservation, animal husbandry, socio-economic activities and the like improved.*"

7 ILUP is the allocation of land to meet economic, social, and environmental concerns of the society,

8 the allocation of land according to its suitability.

On the other hand, a considerable number of them tried to define in connection with climate change, land use/land cover, soil and water conservation, and sustainable land management programs, and so on. They used terms like degradation, soil erosion, deforestation, global warming, and climate change in their definition. While some connected with land certification that the government giving to farmers as assurance for the landowner.

The Group of Actors Participated in ILUP Preparation: At this level, the experts were requested if they know the actors or group of stockholders who participated in the land use plan that is said to be prepared by Oromia Water Works and Design Enterprise years ago. However, most of the experts stated that they do not have any information about this plan.

However, some experts know the prepared plan, but nothing on who participated and how it was prepared. We also tried to find out the case, in focus group discussion, if there may be some information on the process. The response was the same at the zone and woreda level too. But, at the kebele level, they all confirmed that such a planning process was not conducted in their kebele. ***Overall, it seemed reasonable to conclude that the experts at the Kebele level were not participants of any land use planning process***.

Land Use/Land cover: Though the main land cover of the Illuababor zone is known to be Forest land followed by agricultural land, the experts listed the following:

1. Forest land
2. Farmland
3. Agroforestry

4. Grazing land
5. Settlements
6. Mining

Availability of Integrated Land Use Plan: At the zonal level, 33.33% of the respondents believe that their zone has an integrated land use plan while the balance 66.67% do not believe that their zone has a land-use plan. From those 33.33% experts who believed that their zone has a land-use plan, none of them the know-how and by whom the plan was conducted.

However, from the Woreda level experts, 46% of them responded that they believe their Woreda has a land-use plan; yet, none of them know who participated in the planning process and how the land use plan was conducted. Among these Woreda-level experts, nearly 54% of the woreda-level experts do not believe their woredas have the land use plan. Among those who indicated there is a plan, they stressed the following deficiencies of the plan.

a) No expert participated
b) No one knows the subjects considered, who participated, and how it was prepared
c) No one knows who facilitated the planning process at Keble, Woreda Zone, and regional levels
d) The plan document is not yet delivered to zone land administration and uses the office to this date. etc.

The Land Use Planning Approach: After explaining that the genuine participatory and integrated land use planning is best conducted by the involvement of plan-driving organized and capacitated communities/beneficiaries/land users, plan-guiding experts of all the involved disciplines, and Plan-facilitating institutions in a fused system approach, the experts were asked if they believe that this approach is essential. As a result,

- ***71.67%*** ***of the experts confirmed that this approach is essential***
- ***25.00%*** ***of them do not believe in that approach and***
- ***3.33%*** ***of the experts could not decide on whether this approach is essential or not.***

On the other hand, during the assessment of the belief of the experts on the engagement of each of the three actors in the planning process,

- ***75.00%*** ***of them believe that all three actors should be engaged.***
- ***21.67%*** ***of them do not believe that the three actors need to be engaged, and***
- ***3.33%*** ***of them could not decide. Instead, they abstained from deciding.***

From those experts who believed in the importance of the engagement of all the three actors, about 89.00% of them tried to rank the level of the capacity gap of the three actors in their understanding while about 11.00% of them refrained from ranking. A few of them mentioned they have no information. The ranking was from 1 to 10, where 10 mean high and 1 mean low in their engagement. The result is summarized in the table below.

Actors	Rank of the level of capacity Gap of the actors										Sum	% score	
	1	2	3	4	5	6	7	8	9	10			
Planning guide Experts	5	2	4	1	3	1	2	3	4	15	40	37.5	62.5
Facilitating Institutions	4	0	5	2	4	4	3	2	2	14	40	37.5	62.5
Planning-Driving land Users	3	4	2	3	4	2	0	4	4	14	40	40	6.00
Score sum of the three actors	12	6	11	6	11	7	5	9	10	43	120	38.33	61.67
Percent below and above 50% knowledge gap	38.33					61.67					-	100	

Table 23: ***The level of the capacity gap of the three actors on land use planning as ranked by the experts.***

As shown in Table 23 above, the experts' knowledge gap is paramount. Whose knowledge gap is in above 60% range (score 6 to 10), count for 61.67% of the experts. The100 % knowledge gap (In score 10) alone is (43/120) *100 = 35.83 %.

Existence of land use plan of Illuababor zone

Integrated Land Use Plan is about the evaluation of every piece of land for its weighed comparative physical potentials and limitations followed by the allocation of such a piece of land for sustainably meeting economic, social, and environmental concerns of the current and future generations at best. In these regards, the experts were asked for their belief if such was understood and applied in producing the land use in their jurisdiction. There were given three options to choose from. These are: the first is those who strongly believe that it understood and applied, the second is those who believe that such was not used in coming up with the plan and the third is those who don't believe their entity has such a land-use plan. Accordingly, of all the experts who came from the different sectors of the zone responded as follows.,

- 52.38% of them attested that their zone doesn't have such a land-use plan,
- 9.52% of them mentioned that such was not understood and applied,
- 14.29% of them strongly believed that it was understood and applied, and
- 23.81% of them could not tell whether the approach and the method were understood and applied.

The Woreda level experts have also rated their belief as it is shown in table 22 bellow with that of the zone stated above. Roughly stating their responses in percentage,

- 46.15% of them said that their woreda does not have such a land-use plan,
- 12.82% of them believe that the definition is not understood and applied in planning.
- 23.08% of them strongly believe it was understood and applied.

- 17.95% of the Woreda experts could not decide.

All this information is summarized in Table 24 on the following page.

Options	Entity involved in the assessment					Total in %
	Zone	Woreda 1	Woreda 2	Woreda 1 + 2	Total	
Yes, I strongly believe it is understood	3	5	4	9	**12**	20.00
No, such approach and method are not used in coming up with the plan	2	2	3	5	**7**	11.67
No, we do not have such a land use plan at all	11	9	9	18	**29**	48.33
No response	5	4	3	7	**12**	20.00
Total respondents	**21**	**20**	**19**	**36**	**60**	100.00

Table 24: Believe of the experts towards how ILUP understood and considered on the planning

Advantages and disadvantages of ILUP: The respondents were informed that in some instances, land use planning may recommend abandoning a certain unfit land use and replacing it with another best-fitted, more economic, and sustainable land use. Of course, this may have its advantages and disadvantages. In this regard, the experts were asked to list at least two advantages and two disadvantages to the above-discussed issue. However, because they were not involved in the planning process majority could not tell the advantages and disadvantages. However, few respondents gave the following list.

a) Advantages

The possible advantages of abandoning a certain unfit land use to replace it with another best fitted, more economic, and sustainable land use they list down summarized/listed as bellow. These are:

- Increasing productivity rate
- Land use sustainability
- Maintaining climate change management and foster climate protection
- Increasing the economical utilization of land
- Sustaining the environment and soil and water conservation
- Decreasing soil erosion and degradation
- Sustainable land management

b) Disadvantages

On the other hand, the possible disadvantages they responded to on replacing land with another best fitted, more economic, and sustainable land use are listed as follows. These are:

- It is difficult to apply
- Time taking to implement
- It may cause conflict in the process of replacing

- It may cause social displacement
- It may be too costly
- Decrease farmland size
- May not be understood in society, and so on

1. Who is supposed to participate in Integrated Land Use Planning?

We also tried to assess if the experts can list who to participate in integrated land use planning in explicit terms. Accordingly, 37.67% of the experts who participated in the assessment, responded that they know nothing on who to participate in integrated land-use planning while many of the rest agreed that: experts, societies, and different government sectors are meant to participate in planning integrated land use. However, the list that the experts stated in one way or another is summarized as follows. These are:

- Experts
- Society or land users. That consists of the whole community (community leaders, religious leaders, elders, women, and youth)
- Government sectors
- Stakeholders
- Plan Taskforces
- Non-Governmental Organizations

Current-Level of awareness of actors: In this section, we tried to assess the rate of the current level of awareness of the land users, the experts, and facilitators about the nature and know-how of land use planning with the perception of the experts. The rating was from 1 to 10 where 1 means the least awareness and 10 is the highest. Accordingly, 33.33% of the respondents did not indicate any. From those who gave their response to the questionnaire, 64.17% of the informants indicated that the knowledge gap is less than 50%. From the same group of informants, those who indicated the knowledge gap to be greater than 50% are 35.83 %. Please refer to Table 25 below.

Actors	Rank of the level of awareness of the actors on land use planning nature and know-how										
	1	2	3	4	5	6	7	8	9	10	
Land Users	15	2	4	1	3	1	2	3	4	5	40
Experts	14	0	5	2	4	4	3	2	2	4	40
Facilitators	14	4	2	3	4	2	0	4	4	3	40
Total	43	6	11	6	11	7	5	9	10	12	120
Total score in less and greater than 50% of knowledge gap	77					43					120
Percentage of knowledge gap which is less and greater than 50%	64.17					35.83					100

Table 25: ***The level of knowledge gap among 50% and below***

Difficult Parts of Integrated Land Use Planning

Integrated land-use planning has different parts. Knowing the subject to be considered such as Pre-requisite subjects, land claimant subjects, and plan-enforcement subjects is one part. The second is ranking the suitability level of each of the subjects to be considered in planning and the third is grading suitability range for suitability ranks. The experts asked to identify which of these parts they think is difficult. However,

- ✓ 13.33% of them could not indicate any.
- ✓ 50.00% of them reported that knowing the subjects is the difficult part of land use planning.
- ✓ 25.00% of them stated that ranking the suitability level of each land is the exceedingly difficult
- ✓ 11.67% of them indicated that grading the suitability range of lands is difficult

The importance of training for ILUP actors and whom to involve them: As it is already well stated above in the introduction section, this field assessment aims to identify the experts' capacity gap and prepare a training manual and facilitate to whom it will be delivered.

Importance of the training: In this section, the respondents were requested to indicate the importance of the training for the integrated land-use planning actors and the rate of that importance. Accordingly, 86.67% of the respondents stated that the training is incredibly important while 5.00% of them do not believe the training is important. 8.33% of them did not respond.

Whom to be involved in the training: It is needed that everyone to be aware and sensitized about the details of Integrated Land Use Planning. So, we asked the respondents who they think better to be involved in the training to be provided. As a result, 33.33% of the respondents could not tell. They have no information on how it goes and afraid that they may mislead the program if they give the wrong list. Few of them indicated the communities, experts, and different stockholders. The list is summarized as follows:

- Communities or land users that include farmers, community leaders, religious leaders, women, and youth groups
- Various subject-matter experts
- Different stakeholders
- Plan facilitators
- Government institutions
- NGOs
- Deferent committees such as the watershed committee, woreda technical committee, and so on.

The damages occurred by the absence of LUP and land use policy: When the respondents were asked about the impacts of the absence of land use plan and land use policy on their land use, the following became evident.

- 88.33% of the respondents underlined that the absence of the land use plan and land use policy seriously affected their land transformation and sustainability in every direction.
- 5.00%, choose to be silent to respond while only
- 6.67% of them said that there no damage that has occurred due to its absence.

What was affected most due to the absence of land use plan and policy: The questionnaire interview went deeper to know the extent of the impact of the absence of land use plan on their Social transformation, Economic transformation, and Environmental sustenance the following became evident.

- 84.91% of them believe that all Social transformation, Economic transformation, and Environmental sustenance are affected by the absence of land use plan and policy.
- 5.66% of them mentioned that only economic transformation affected most. Yet,
- 9.43% of the participants indicated that social transformation and environmental sustenance will be affected by

The best reasons for having ILUP: The experts have requested the best reasons for having an integrated land-use plan. Though, 8.33% of the respondents did not respond,

- 71.67% of them mentioned that having an integrated land use plan is important to increase production per unit area of land
- 63.33% of them who gave their choice for the reason to improve the economic use of land resources.
- 55.00% of them pointed out that it is important to increase the resilience against climate change
- 38.33% of them mentioned that it is important to diversify income sources from land and water.
- 33.33% of them mentioned that it is important to avoid/minimize the disruption of interconnected interfaces between human and their environment
- 13.33% of them choose to guaranty the perpetuation of life (flora and fauna).

Participatory Status of the Already Prepared ILUP: The other items consisted of the questionnaire related to the availability of ILUP in the administrative entity and/or how participatory was the ILUP if any. However, almost all the experts participated in filling the structured questionnaire, and FGD discussants confidently mentioned that they do not think that there is such an integrated land use plan in their respective entities. Many of them even confused the term with the development plan and sustainable land use management that had been prepared by Sustainable Land Management (SLM) and Agricultural Growth Plan (AGP) projects that is active

in some parts of the region for Soil and Water Conservation (SWC) 'Misooma Sululaa'. For the experts who do not know what ILUP means and do not ever deal with it, it is impossible to talk about the group who participated. Only a few experts have information about the document that was prepared; however, even though they know there was a kind of plan, they say they have neither participated nor had the document at hand.

Additionally, almost all the respondents do not know how the rural land use planning of the area was conducted. However, they indicated that land use planning is multidisciplinary and they additionally indicated the importance of stakeholders' involvement. They all pointed out that they were not engaged in the planning activities though they are the major stakeholders of land resources.

In addition to the above points, the implementation of the ILUP under question cannot be discussed under these conditions.

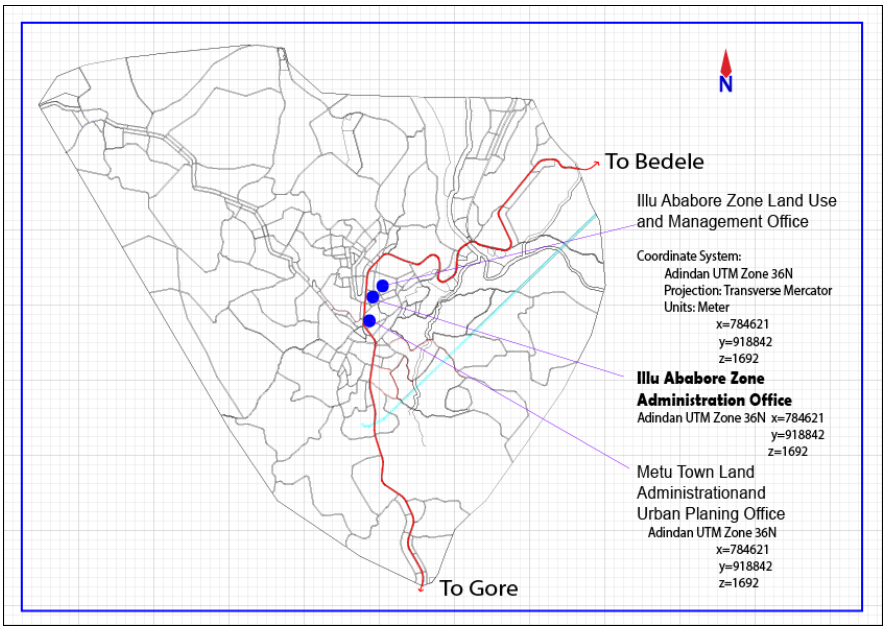


Figure 7. Location map of facilitation offices in Illu Aba Bora zone

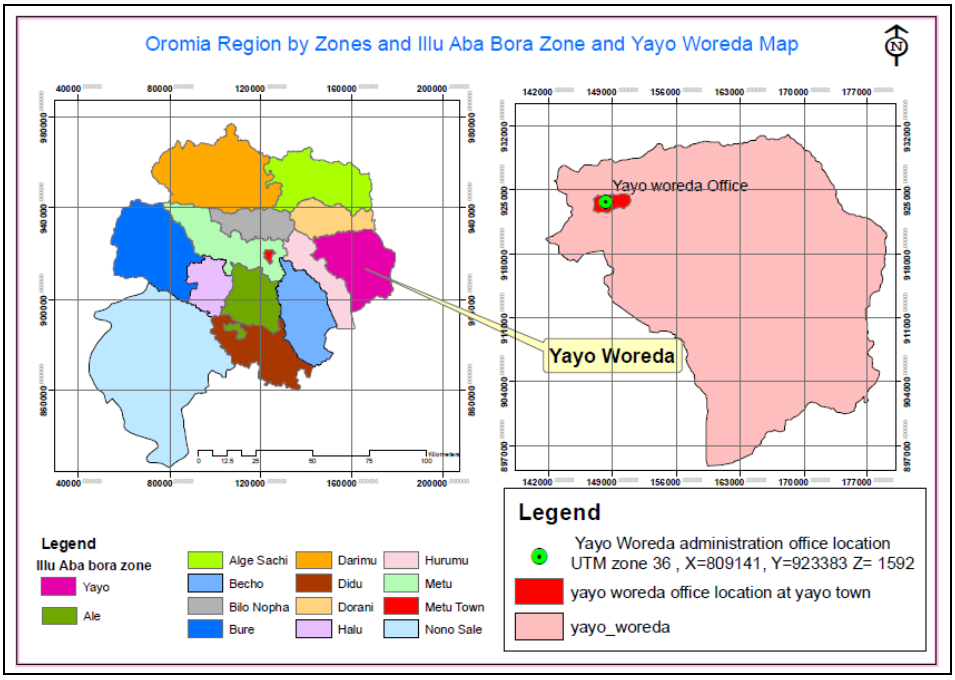


Figure 5. Yayo Woreda map and facilitation office in Illu Aba Bora zone

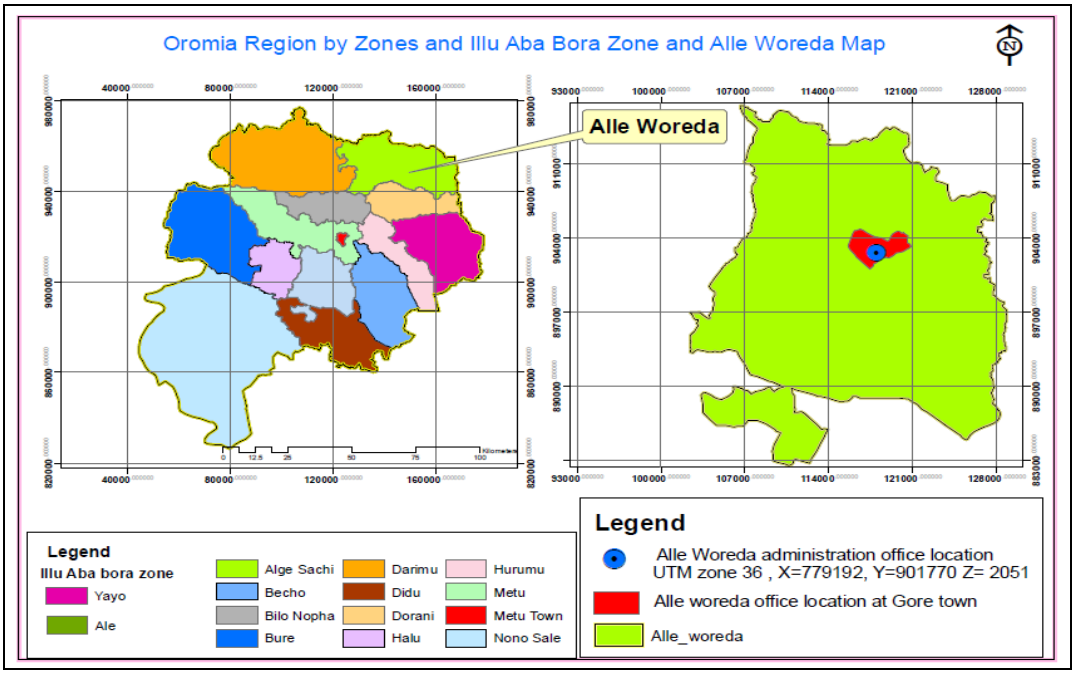


Figure 7. ***Location map of Alle Woreda in Illu Aba Bora zone where the gap assessment study was conducted***

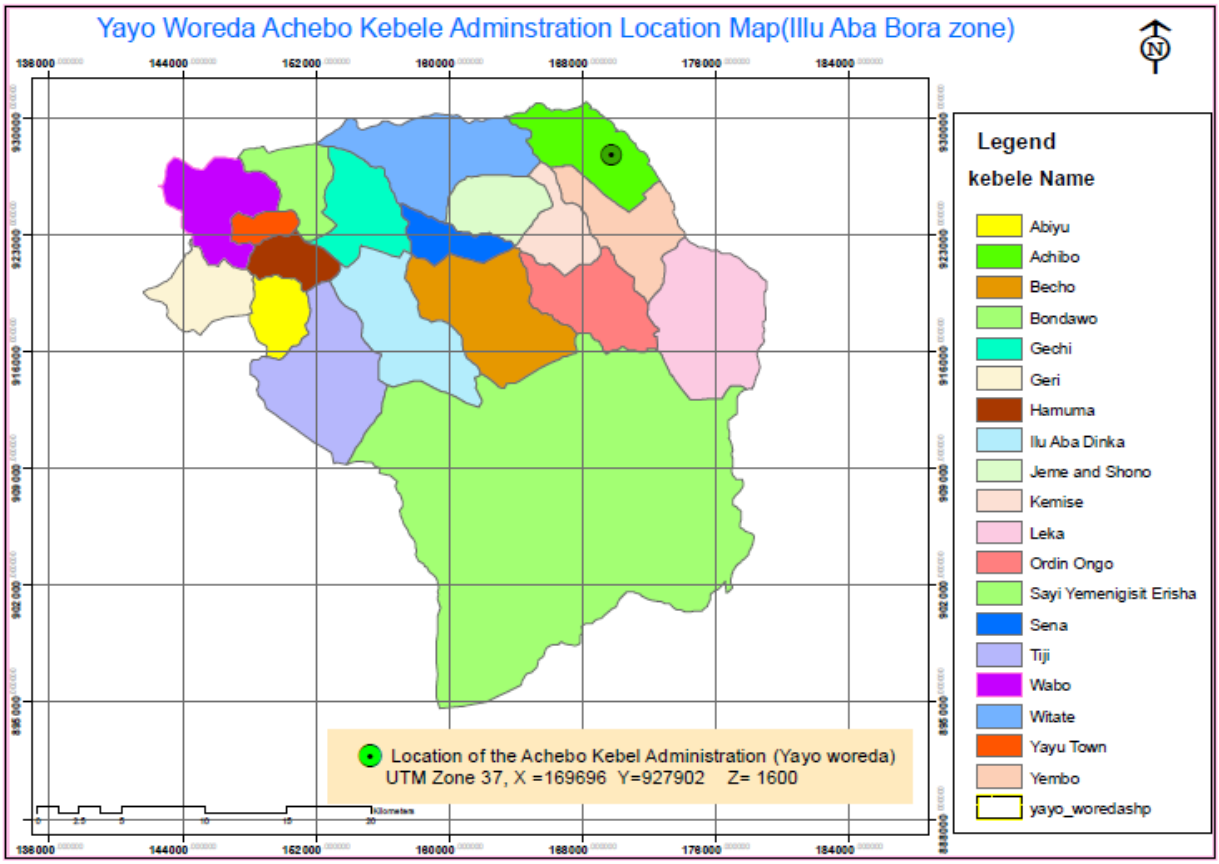


Figure 8: ***Kebele location map of Yayo Woreda of Illu Aba Bora zone.***

The case of East Harrarghe Zone

Overview of the Zone

The dominant attitude of the sampled zone is 1880 meters. However, it varies from 1540 meters altitude in dry mid-highland to 2029 meters altitude Chat and sorghum mixed cultivation, which is not mentioned in the study, and plan document is dominant. Rangeland for livestock fattening seems to be one of the demanded land-uses. The dominance of milk production makes the demand for rangeland important from the socioeconomic point of view. The widely ranging precipitation (between 400 and 1200mili meters) shows the existence of widely ranging land-use types. The

Zone	Woreda	Kebele	Altitude	Agroclimatic zone	Dominant land use
East Harrarghe 1880 400 -1200 PPT	Babille woreda		1671	Dry Weyna Dega, Moist Weyna Dega	Chat and Sorghum cultivation Livestock grazing for fattening and milk production
	Haromaya woreda		2029		
		Edible kebele	1540		
		Tula kebele	1669		

Table 26. Zones, Woredas, and Kebeles of Harrarghe Region that are used to study the knowledge-gap inland

5. As it is already mentioned above, this zone was considered from the beginning to assess the connection of ILUP with the problem of chat (Jima) farm and Cereal Production. As it can be witnessed by anybody who stepped in the zone, chat (Jima) is the dominant cash crop that is widely cultivated in the zone. It is from this aspect that this zone was selected to represent the consideration of the plan on chat (Jima) farm. We randomly selected two woredas from those woredas affected/effective by the area of interest; that is, chat farm, cereal production, and Urbanization to some extent. Accordingly, Babile and Haromaya woredas of the zone were randomly selected. The structured questionnaire distribution and FGD were conducted on different sectors experts of these woredas in addition to experts at the zonal level. In each woreda, we considered one kebele where we conducted a focus group discussion that consists of kebele level experts and kebele management/administration committee. Accordingly, Tula and Adele Waltaha kebeles were selected respectively from Babile and Haromaya woredas.
6. We distributed the structured questionnaire to 21 zone level experts and 52 woreda level experts of different sectors, 73 experts in total completed questionnaires. There also FGD conducted at all levels of the administrative entity, that is, Zone, Woreda, and Kebele levels.

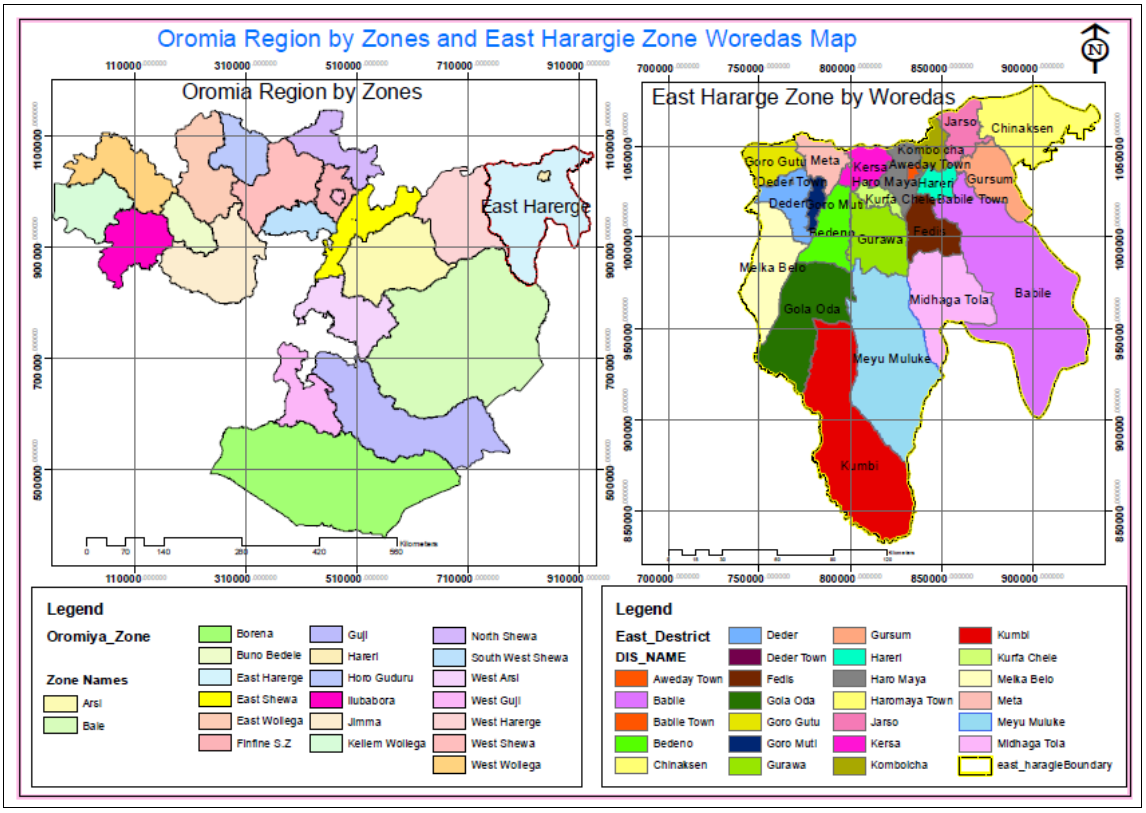


Figure 9: **Location map of the Woredas of East Harrarghe Zone**

Sectors	Total			Other Woredas	%	Percent coverage
	Zone	Babile Woreda	Haromaya Woreda			
1. Land Administration Use	3	5	4		12	12.50
2. Agriculture and NR	3	5	5		13	13.54
3. EFCC	2	4	3		9	9.38
4. Water & Energy	2	3	2		7	7.29
5. Livestock and Fishery	2	4	2		8	8.33
6. Others	9	10	5	23	47	48.96
Total	21	31	21	23	96	100.00
Percent representation	21.88	32.29	21.88	23.96	100.00	

Source: - Field data collection (May 2020)

Table 27. **Summary of the number of Experts who participated from different sectors of East Harrarghe zone**

Background information of the respondents

The following section is a summary of background information on the informant experts contacted to fill the structured questionnaire and FGD discussants. The number of experts selected from different sectors per their administrative entity is carefully summarized within the table below, where others represent those minor sectors/offices like Mineral, Women & Youth Affairs, Education, Health, Rural Road, Tourism and Culture, Market Development, Social Affairs and so on, those contributed one or two experts each. It is carefully summarized in table one below. We tried to cover different expertise lines within those sectors.

Table 28 below also summarizes the experts and their education level per administrative entity.

Education level	**Number of Experts within Entity**			**Total**
	Zone	**Babile Woreda**	**Haromaya woreda**	
Master's Degree	3	0	2	5
First Degree	16	27	17	60
Diploma/Level	2	4	2	8
Total	**21**	**31**	**21**	**73**

Source: - Field data collection (May 2020)

Table 28: ***Summary of the number of Experts participated in the study with their education level per administrative entity***

Key findings

a) Definition of Integrated Land Use Plan (ILUP) and Actors or Groups Participated

For experts, defining a term that they are dealing with is gives a good clue about their understanding of the subject. Bearing in mind this, the designed questionnaire format consisted of a question for experts to define/express the term of interest, Integrated Land Use Plan (ILUP), in their own words.

1. ***49.47% of the respondents honestly stated that they have no information/idea or knowledge of what ILUP*** mean,
2. "*ILUP is **a systematic process of land use** depending on the reality of your geographic and air condition to use nature wisely*"
3. as "*ILUP is **using_land in an integrated way evaluating every piece of land for its physical and potential***".
4. "*ILUP is a type of land use method according to its capability, in which soil type and agroecology study recommended.*"
5. "*it is the process of regulating the use of land to promote more desirable social and environmental outcomes as well as the more effective goal of land use.*"

6. "*ILUP means a plan that indicates the effective land use in different purposes to know their management*".
7. "*It is the evaluation of land for its essential use to meet economic, social, and environmental concerns of current and future generations*.
8. ILUP is the *allocation of land to meet economic, social and environmental concerns of the society*,
9. ***the allocation of land according to its suitability***.

On the other hand, a considerable number of them tried to define in connection with climate change, land use/land cover, soil and water conservation, and sustainable land management programs, and so on. They used terms like degradation, soil erosion, deforestation, global warming, and climate change in their definition. While some connected with ***land certification that the government is giving to farmers as assured landowner***.

b) The Group of Actors Participated in ILUP Preparation

At this level, we asked the experts if they know the actors or groups of stakeholders who participated in the prepared integrated land-use plan that said to be prepared by Oromia Water Works and Design Enterprise years ago. when the experts are asked to list the group of actors who participated in the said plan preparation. However, most of the experts stated that **they do not have any information that the ILUP was prepared.** In such situations, it is impossible to know and state who and who were involved in the process. However, very few experts know the prepared plan, but nothing on who participated and how it was prepared. We also tried to find out the case if there may be some information for the process being implemented in the focus group discussion that we implemented with the experts at all levels of the administrative entity. The response was the same as the mentioned above at zone and woreda level. But, kebele level informants were surprised when we started talking about the land use plan. They all know nothing about if such a planning process being implemented in their kebele. Accordingly, it seems reasonable for the experts not to be able to list the group of actors who participated in the process.

c) Land Use/Landcover

The dominant land use/land cover of the entity was also asked. Even though the majority of the experts left this question unfilled, the responses of some experts organized as follows. However, the mainland cover of East Harrarghe zone is known to be khat (Jima) followed by cereal production. However, their responses areas listed below. These are:

- Chat/Jimua farming
- Cereal production
- Forest land
- Settlements
- Grazing land
- Degraded land
- The land that covered by infrastructures

Availability of Integrated Land Use Plan

This item assesses if the participating expert believes that his/her administrative entity has an integrated land-use plan. Here, it is important to see the experts' responses at the zonal level and woreda level differently. At the zone level, 42.86% of the respondents believe that their zone has integrated land use plan while the rest, 57.14, do not believe it has. However, those experts responded to believe that their zone has ILUP has no information on how and by whom the plan was conducted. When we see at the data collected from the woredas' experts, shows that 38.46% of them believe their woreda has ILUP. But, none of them could tell any about the planning process. On the other hand, 61.54% of the woredas experts do not believe that their woreda has a land-use plan.

Participatory and Integrated Land Use Planning Approach

Participatory and integrated land use planning is said to be best conducted by the involvement of plan-driving organized and capacitated communities/beneficiaries, Plan-guiding experts, and Plan-facilitating institutions in a fused system approach. So, the experts asked if they believe or not that this approach is essential. Accordingly, 68.49% of the experts confirmed that this approach is essential, of which 94.00% of them underscored that all the three actors need to be engaged in the planning. On the contrary, 16.44% voted that they do not believe the importance of the approach and 15.07% of them could not decide.

From those experts who said to believe in the importance of engagement of all the three actors, 36.17% of them ranked the level of the capacity gap of the three land-use planning actors from 1 to 10, where 10 mean high and 1 mean low, while the rest, 63.83%, missed not answering or ranking the level just leaving the place vacant. However, the result is summarized in Table 29 below.

Actors	Rank of the level of capacity Gap of the actors										Total	% of < 50% knowledge gap	% > 50% knowledge gap	Total score
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**				
Planning guide Experts	3	1	0	0	0	0	1	2	0	10	17	7.84	25.49	19.67
Facilitating Institutions	2	0	1	1	3	1	0	0	1	8	17	13.73	19.61	15.69
Planning-Driving land Users	6	0	0	1	0	0	0	1	0	9	17	13.73	19.61	17.65
Total	11	1	1	2	3	1	1	3	1	27	51	**35.3**	**64.71**	**53.01**
Total below and above	**18**					**33**								
Percent of below and above 50% gap	**35.29**					**64.71**					**100**	100		

Table 29: The level of the capacity gap of the three actors on land use planning as ranked by the experts

d) Believe of the experts towards the understanding and consideration of ILUP in planning

Integrated Land Use Plan is about the evaluation of every piece of land for its weighed comparative physical potentials and limitations followed by the allocation of such a piece of land for meeting economic, social, and environmental concerns of the current and future generations at best. To check the scope and how participatory was the ILUP that prepared so far, the experts asked about their belief whether or not the definition above was well understood and applied in planning the land use in their respective administrative entities. There were three options for the experts to choose from. These are: the first is those who strongly believe that it understood and applied, the second is those who believe that such was not used in coming up with the plan and the third is those who don't believe their entity has such a land-use plan. Accordingly, of all the experts came from different sectors of the zone,

1 47.62% of them underlined that their zone doesn't have such a land-use plan and

2 23.81% of them mentioned that they do not believe the definition is understood and applied.

3 only 9.52% of them said that they strongly believe it understood and applied while

4 19.05% of them restricted themselves not to respond.

On the other hand, the woreda level experts also rated their belief as it is shown in Table 2 below with that of the zone stated above. Roughly stating their responses in percentage,

1 44.23% of them said that their woreda does not have such a land-use plan, while

2 7.69% of them believe that the definition is not understood and applied in such a way,

3 15.38% of them strongly believe it is understood and applied.

4 32.69 of the experts from woredas restricted themselves from responding.

	Zone	**Woreda 1**	**Woreda 2**	**Total**	
Yes, I strongly believe it is understood	2	6	2	**10**	**13.7**
No, such an approach is not used in coming up with the plan	5	3	1	**9**	**12.3**
No, we do not have such a land use plan	10	12	11	**33**	**45.2**
No response	4	10	7	**21**	**28.8**
Total	**21**	**31**	**21**	**73**	
Percent	**28.77**	**42.47**	**28.77**	**100**	**100**

Table 30. The belief of the experts towards how ILUP was understood and considered on the planning

Advantages and disadvantages of ILUP

In some instances, land use planning may recommend abandoning a certain unfit land use and replacing it with another best-fitted, more economic, and sustainable land use. This may have its advantages and disadvantages. The experts asked to list at least two advantages and two disadvantages to the above-discussed issues. Since there was no awareness made so far with the experts on land use plan implementation, enforcement, advantages and disadvantages in any way of the planning and not participated the already prepared river basin based integrated land use plan, more than half of them, 50.68%, restricted themselves not to say something on the advantage

from which some mentioned that they have no information on, while 60.55% of them not responded for disadvantage. However, even though it is from a few respondents who came back with the list, their responses summarized as follows.

a. Advantages

The possible advantages of abandoning a certain unfit land use to replace it with another best fitted, more economic, and sustainable land use they list down summarized/listed as below. These are:

1. Increasing productivity rate
2. Land use sustainability
3. Maintaining climate change management and foster climate protection
4. Increasing the economical utilization of land
5. Sustaining the environment and soil and water conservation
6. Decreasing soil erosion and degradation
7. Sustainable land management

b. Disadvantages

On the other hand, the possible disadvantages they responded to replacing land with another best fitted, more economic, and sustainable land use are listed as follows. These are:

1. It is difficult to apply
2. Time taking to implement
3. It may cause conflict in the process of replacing
4. It may cause social displacement
5. It may be too costly
6. Decrease farmland size
7. May not be understood in society, and so on

e) Regarding whom shall be involved in Integrated Land Use Planning?

The experts were requested to list the possible participants in integrated land use planning in detail. Accordingly, 47.95% of the experts could not tell any. The remaining 52.05 % of the respondents listed the following. These are:

1. Experts/professionals
2. Society or land users. That consists of the whole community (community leaders, religious leaders, elders, women, and youth)
3. Government sectors
4. Stakeholders
5. Guide institutions
6. Plan Taskforces

7. Non-Governmental Organizations

f) Current Level of awareness of actors

In this section, we tried to assess the rate of the current level of awareness of the land users, the experts, and facilitators about the nature and know-how of land use planning with the perception of the experts. The rating was from 1 to 10 where 1 means the least awareness and 10 is the highest. Accordingly, 43.84% of the respondents did not react to rate it mentioning that they cannot decide the awareness level of the three integrated land use planning actors. However, the rate of awareness that labeled by the rest summarized in Table 31 below.

	The rank of the level of awareness of the actors on land use planning nature and know-how										
Actors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	
Land Users	11(27%)	3(7%)	5(12%)	0(0%)	2(5%)	2(5%)	3(7%)	1(2%)	0(0%)	14(34%)	
Experts	11(27%)	3(7%)	3(7%)	6(15%)	2(5%)	1(2%)	2(5%)	1(2%)	1(2%)	11(27%)	
Facilitators	13(32%)	4(10%)	6(15%)	1(2%)	4(10%)	4(10%)	0(0%)	0(0%)	2(5%)	7(17%)	
Respondents total	35	10	14	7	8	7	5	2	3	32	123
Respondents in % by category	28.46	8.13	11.38	5.69	6.50	5.69	4.06	1.63	2.44	26.02	
	60.16%					**39.84**					100

Table 31: ***The level of awareness of the actors of land use planning about nature and know-how as ranked by the respondents***

g) Difficult Parts of Integrated Land Use Planning

Integrated land-use planning has different parts. Knowing the subject to be considered like Pre-requisite subjects, land claimant subjects and plan-enforcement subjects are in one part. The second is ranking the suitability level of each of the subjects to be considered in planning and the third is grading suitability range for suitability ranks. The experts asked to identify which of these parts they think is difficult. However,

20.55% of them restrict themselves not to state which is to be difficult, some stating that they know nothing about it some just skip the question. Whereas,

53.42% of them underscored that knowing the subject to be considered is the exceedingly difficult part of the integrated land use planning.

13.70% of them stated that ranking the suitability level of each of the subjects to be considered in the planning part is difficult

12.33% of them choose to grade suitability range for suitability ranks as a difficult part of integrated land-use planning.

The importance of training for ILUP actors and whom to be involved

As it is already well stated above in the introduction section, this field assessment aims to identify the experts' capacity gap and prepare a training manual and facilitate to whom it will be delivered. In this section, we tried to get across the belief of the respondents on the importance of the training for the integrated land-use planning actors and the rate of that importance. Accordingly, 82.19% of the respondents stated that the training is important while 4.11% of them do not believe in the importance of the training 13.7% of them did not respond.

1. Whom to involve in the capacity building training:

It is needed that everyone to be aware and sensitized about the details of Integrated Land Use Planning. So, we asked the respondents who they think better to be involved in the training to be provided. As a result, 45.21% of our respondents restricted themselves not to mention who they think better to involve. They have no information on how it goes and afraid that they may miss leading the program if they give the wrong list. Though the number of the respondents witnessed is different from group to group majority of them indicated Communities, Experts, and different stockholders. However, the list that the other respondents mentioned summarized as follows. These are:

1. Communities or land users that consists of farmers, community leaders, religious leaders, women, and youth groups
2. Different experts
3. Plan Facilitators
4. Government sectors
5. Non-governmental organizations

2. The damages occurred by the absence of LUP and land use policy:

We also tried to look at if the respondents believe that the absence of a land-use plan and land use policy did any damage to their administration entity. A significant proportion of the respondent, 19.18%, yet choose to be silent to respond. However, the majority, 78.08% of the respondents underlined that the absence of the land use plan and land use policy affect their administrative entity negatively while only 2.74% of them said that there no damage occurred to their entity due to its absence.

3. What has been affected most due to the absence of a land-use plan and policy:

We also tried to go deeper to know which they think is the most affected of Social transformation, Economic transformation, and Environmental sustenance, by the absence of land use plan and land use policy. They also have the fourth option to entertain which says all the three. Hence, of those how agreed and the applicability of the damages due to the absence of land use plan and policy,

- 91.23% of them believe that all the three, i.e. Social transformation, Economic transformation, and Environmental sustenance of their entity are all affected by the absence of land use plan and policy
- 3.51% of them mentioned that only environmental sustenance affected most
- 1.75% of them believed that only the Economic transformation of their entity affected.
- 3.51% of them missed choosing the most affected transformation.

Additionally, they stated in the focus group discussion that due to the absence of land use policy, when a piece of land seen to be used out of its suitability, e.g. mining land for grazing or some other purpose, forest or sloppy land for agriculture, etc, they many times missed legal base to defend it.

The reasons why having ILUP is important:

In the identification of the best reasons why we need to have ILDP< the experts listed the following

- 21.92% of the respondents did not report any,
- 63.16% of them indicated that having an integrated land use plan is important to increase production per unit area of land and to improve the economic use of land resources
- 52.63% of them mentioned that it is important to avoid/minimize the disruption of interconnected interfaces between human and their environment.
- 47.37% of them underlined that it is important to increase the land-resilience against climate change and
- 40.35% of them indicate that it is important for diversifying income sources from land and water.
- 24.56 of them chose that having an integrated land use plan is important to guaranty the perpetuation of life (flora and fauna).

4. Participatory Status of the Already Prepared ILUP

The other items consisted of the questionnaire related to the availability of ILUP in the administrative entity and/or how participatory was the ILUP if any. However, almost all the experts participated in filling the structured questionnaire and FGD discussants did confidently mentioned that they do not think that there is such an integrated land use plan in their respective entity. Many of them were even confused with the term with the development plan and sustainable land use management that had been prepared by SLM and AGP projects. For the experts who do not know what ILUP means and do not ever deal with it, it is impossible to talk about which group participated. However, only a few experts say that the document prepared even though no one of them participated.

According to information obtained from focus group discussions held at all the three administrative entities, '*as it may be reported by other team members*', almost all the participants do not know how rural land use planning of the area was conducted. Indicating that land use planning

is multidisciplinary, they highlighted the importance of stakeholder's involvement. They explicitly pointed out that they did not engage in planning activities though they are the major stakeholders of land resources. Most of them even not know that it is prepared. As a result, in the status they are claiming the participatory of the plan in such a way, one cannot talk about the issues like how the ILUP prepared for the entity, the major pre-requisite subjects considered, the major rural land claimant subjects, major institutions and enforcement subjects considered for the enforcement of the use of the rural land use plan, major urban land-use types that were considered and the like concerning the already prepared ILUP.

Additionally, it was difficult for the respondents to briefly describe how a given land unit was decided to be used for one land-use type when it is said to be suitable for more than one land use type. The same is true to describe how it was implemented when there were instances where one land use is required to change and get replaced by a new type of land use, and what was recommended for people to accept and move to the new residential sites were the land-use planning cause a shift of residence from such as riverbanks, lakeshores, wildlife habitats, mining areas, wetlands, prime agricultural lands, etc., to safer, more economical (more firm shallow soil-depth) residential sites. As a result, they could not list the best social safeguard issues considered in such instances.

However, as I have tried to mention above, very few of the participants have seen the document and tried to comment it. As a result, they mentioned that it has many deficiencies. These are:

- It was not participatory
- The study was not gone to specific subjects
- The map is shown in the plan and the physical appearance of the zone does not much.
- The issue was already forgotten since then.
- Awareness was not created at all.
- Conducted before ten years and it is outdated.
- No consideration was given to it even at Land Administration and Use Office of the zone are to list a few.

Above all, this zone, from the beginning, was selected for its specialty on khat (Jima) farm which is said to be the first in agricultural product export these days. But it is sad to say that it was not considered in the prepared integrated land use plan while some crops that do not match with the actual life of the zone included. So that, they stated confidently that it did not represent the zone well.

The finding in the assessment survey indicates that the proposed urban Land-use percentage is as shown below in Table 32.

Urban land-use types	Babille town Urban land use plan	Standard
Pure Residence + Mixed-use, commercial and industry, major social and municipal service	80	40
Road and transport	14	30
Informal green, urban agriculture, recreation, and urban tourism	6%	30
Total	100	100

Table 32. The fallacy of urban land use planning tried for Babille town compared to the standard.

Informal green and urban agriculture are reduced to 6 % when it should have covered 30 % of the urban plan. The same is true for the coverage of the road and transport facilities that is reduced to 14% when the standard is 30%. At the expense of the road network and the area coverage of the built-up areas is double. We are not presenting this to indicate such issues as specific as this. However, it is a very good indicator that there was no urban land use plan attempted in the zone.

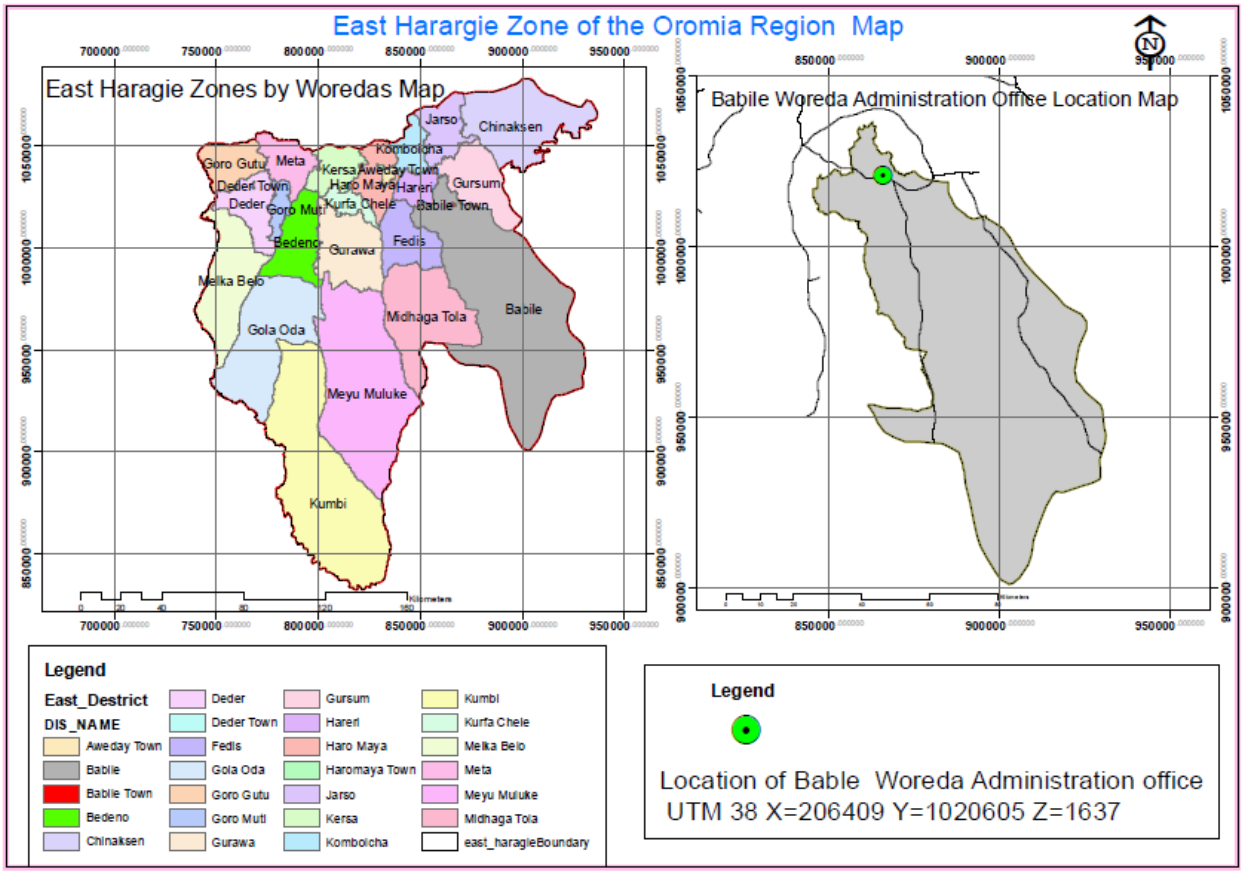


Figure 10. ***Haromaya Woreda:***

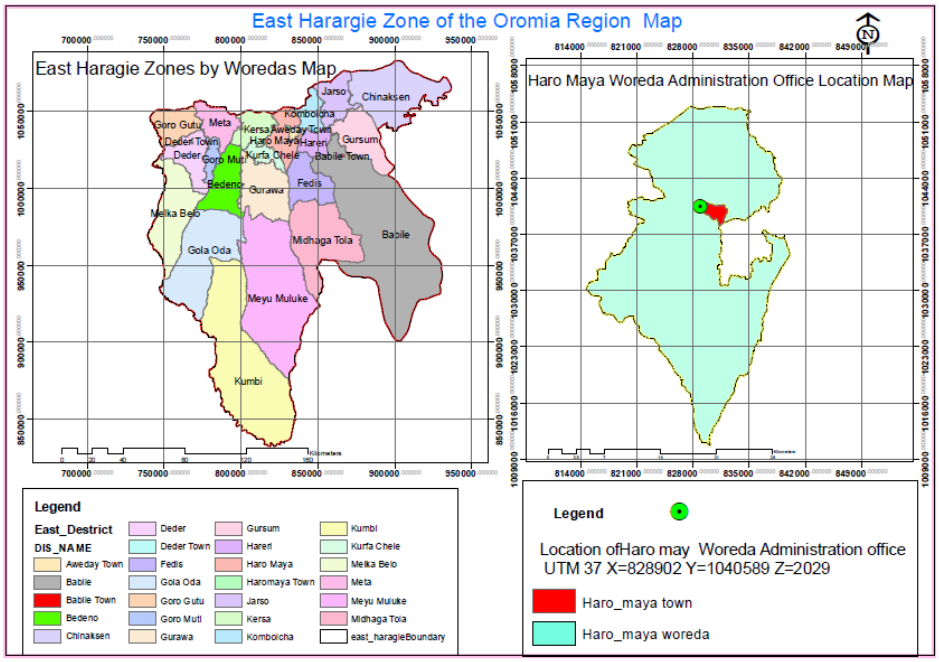


Figure11. ***Map of East Harrarghe zones where Woredas are indicated*** **and Kebeles are listed**

5. Major findings of the kebeles FGD—Haromaya

1. It can be concluded that none of them has any concept about integrated land use planning
2. No one participated during the preparation of the plan. Though they do exist in the Woreda /town no one was invited throughout the planning process
3. They don't have any information on whether the land use policy existed or not. They don't have such document in their procession either
4. They have much information about development plan training and daily follow up by the development agents and health agents on known practice
5. Farmers more prefer chat plantation than other crops because chat plant earns them higher income per year.
6. They indicated that there are lots of common traditional conflict resolution methods and approaches if needed for resolving land-use conflicts
7. Discussants indicated that such an important land use (Chat) was ignored without their knowledge or communicated agreement from the land users

The case of Borena zone

2.6.1 Overview of the Zone

This zone was considered from the beginning to assess the connection of ILUP with the problem of pastoralist since it is the major livelihood of the community of the zone. As it is widely known, the Borana zone is mainly settled by pastoralists and range/grazing land is the largest coverage of the catchment. It was from this aspect that this zone was selected to represent the consideration of the plan on grazing land for the pastoral system. We randomly selected two woredas to absorb the problems encountered concerning grazing land encroachment by cereal production and Urbanization to some extent. Accordingly, Elwoye and Yabalo woredas of the zone were randomly selected. The structured questionnaire distribution and FGD were conducted on different sectors experts of these woredas in addition to experts at the zonal level. In each woreda, we considered one kebele where we conducted a focus group discussion that consists of kebele level experts and kebele management/administration committee. Accordingly, Hidi Ale and Dharito kebeles were selected respectively from Elwaye and Yabalo Woredas.

We distributed the structured questionnaire to 24 zone level experts and 36 woreda level experts from different sectors, 60 experts in total completed questionnaires. There also FGD conducted at all levels of the administrative entity, that is, Zone, Woreda, and Kebele levels.

2.6.2 Background information of the respondents

The following section is a summary of background information on the informant experts contacted to fill the structured questionnaire and FGD discussants. The number of experts selected from different sectors per their administrative entity is carefully summarized within the table below, where others represent those minor sectors/offices like Mineral, Women & Youth Affairs, Education, Health, Rural Road, Tourism and Culture, Market Development, Social Affairs and so on, those contributed one or two experts each. It is carefully summarized in Table 32 below. We tried to cover different expertise lines within those sectors.

Sector	Zone	Woreda			
		Elwaye	Yabalo	Total	Percentage
Land administration	4	6	3	13	21.67
Agriculture and natural resources	5	2	5	12	20
EFCCA	3	2	4	9	15
Water and energy	2	0	2	4	6.67
Livestock and fishery	2	3	3	8	13.13
Others	8	3	3	14	23.23
Total	24	16	20	60	100
Representation percentage	40	26.67	33.33	100	

Table 33: ***Summary of the number of Experts participated from different sectors within the administrative entity***

Source: - Field data collection (May 2020)

Table 33 on the following page summarizes the experts for their education level per administrative entity.

Education level	Number of Experts within Entity			Total	% coverage
	Zone	Elwoye	Yabalo		
Master's Degree	6	0	0	6	10.00
First Degree	18	10	18	46	76.67
Diploma/Level	0	6	2	8	13.33
Total	**24**	**16**	**20**	**60**	**100.00**
% coverage	**40**	**26.67**	**33.33**	**100**	

Table 33: Summary of the number of Experts participated in the study with their education level per administrative entity

Source: - Field data collection (May 2020)

2.6.3 Key findings

h) Definition of ILUP

For experts, defining a term that they are to tackle is very crucial. Bearing in mind this, the designed questionnaire format consists of a question for experts to define/express the term of interest, Integrated Land Use Plan (ILUP), in their own words. Even though 50.00% of the respondents honestly stated that they have no information/idea or knowledge of what ILUP means, others tried to define in one way or another. To mention some of their statements, some said

1 "*ILUP is allocation of a piece of land to meet economic needs, social and cultural welfare of the present and future generation.*"

2 while others tried to define as "*Integrated land use planning is the plan of land management and how to use our land. That means, how to use land in the equal distribution for the benefits of livelihood.*"

3 However, some stated that "*ILUP is about the evaluation of every piece of land for its comparative physical potentials and limitations such as economic and social.*"

4 There also some to define as "*is the system of using land by an integrated system, for example, for agriculture, rangeland, settlement, etc.*"

5 while others stated that "*ILUP means how to protect our resources such as plantation in such a way to reduce soil erosion.*"

6 Still, others stated that "*It is the way of administering land. It is the rule of land to use it appropriately for now and sustain for the future.*"

7 However, some of them tried to mention that "ILUP is allocation of land to meet economic, social and environmental concerns of the society",

8 while some just mentioned only the allocation of land according to its suitability.

On the other hand, a considerable number of them tried to define in connection with climate change, land use/land cover, soil and water conservation, sustainable land management programs, and so on. They used terms like degradation, soil erosion, deforestation, global warming, and climate change in their definition. While some connected with land certification that the government giving to farmers as assure landowner.

i) The Group of Actors Participated in ILUP Preparation

At this level, we asked the experts if they know the actors or group of stakeholders those who participated in the prepared integrated land-use plan that said it was e prepared by Oromia Water Works and Design Enterprise years ago. the experts were asked to list the group of actors who participated in the said plan preparation. However, most of the experts stated that they do not have any information that the ILUP was prepared. In such situations, it is impossible to know and state or list the actors who were involved in the process. However, some experts know the prepared plan, but nothing on who participated and how it was prepared. We also tried to find out the case if there may be some information for the process being implemented in the focus group discussion that we implemented with the experts at all levels of the administrative entity. The response was the same as the mentioned above at zone and woreda level. But, kebele level informants were surprised when we started talking about the land use plan. They all know nothing about if such a planning process being implemented in their kebele. Accordingly, it seems reasonable for the experts not able to list the group of actors who participated in the process.

j) Land Use/Landcover

The dominant land use/land cover of the entity was also asked. Even though the majority of the experts left this question unfilled, the responses of some experts organized as follows. However, the mainland cover of the Borana zone is known to be grazing land followed by forest. However, their responses are listed below. These are:

1. Grazing land
2. Forest land
3. Farmland
4. Settlements
5. Mining
6. Degraded land

k) Availability of Integrated Land Use Plan

This item assesses if the participating expert believes that his/her administrative entity has an integrated land-use plan. Here, it is important to see the experts' responses at the zonal level and woreda level differently. At the zone level, 45.83% of the respondents believe that their zone has integrated land use plan while the rest, 54.17, do not believe it has. However, those experts responded to believe that their zone has ILUP has no information on how and by whom the plan was conducted. When we see at the data collected from the woredas' experts, 55.56% of them responded that they believe their woreda has ILUP. Yet they know nothing about the planning process. These indicate that 44.44% of both woredas experts do not think their woreda has the said plan.

However, two experts of the zonal level land administration and use office experts mentioned in a discussion that we made at their office that they participated in awareness creation given for two or three days at Shashamene. That was about 2002 E.C. and it was after the plan completed. They also stated that they heard to information level that the plan was being implemented from 1998 – 2001 E.C. They also stated that they tried to implement it and could not coup up for the

capability gap. They also underlined that those who give the training are not well capable to do so. As a result, the implementation process stacked as is. Generally, they underlined that the plan:

1. Prepared before the office is established
2. No expert participated
3. No one knows how it was prepared, subjects considered and who participated.
4. They do not know who facilitated
5. The actual and the map on the plan do not match.
6. Is prepared by experts who never know the socio-cultural condition of the area.
7. Is outdated, more than ten years, and not being implemented.

I) Participatory and Integrated Land Use Planning Approach

Participatory and integrated land use planning is said to be best conducted by the involvement of plan-driving organized and capacitated communities/beneficiaries, Plan-guiding experts, and Plan-facilitating institutions in a fused system approach. So, the experts asked if they believe or not that this approach is essential. Accordingly, 58.33% of the experts confirmed that this approach is essential while 18.33% of them do not believe in that approach and 25.00% do not react on being confused to decide what is important and what is not.

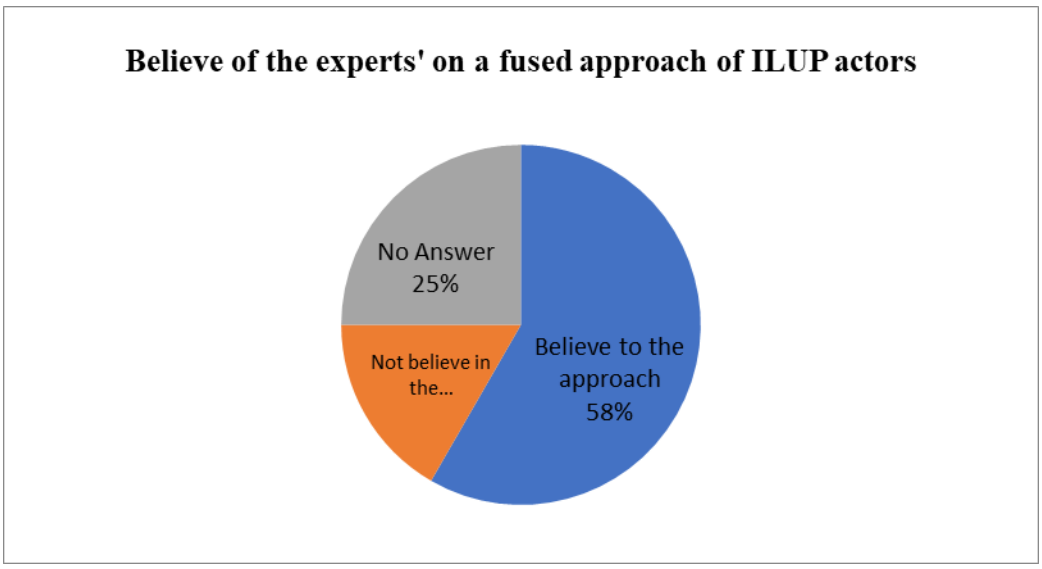


Figure 12. ***Believes of experts on a fused approach participation of the three ILUP actors.***

On the other hand, when we try to assess the engagement of the three actors in the planning process, 58.33% of them believe that it should be while 16.67% of them not believe in the participation of the three actors and 25.00% of them kept silent. Please refer to Figure 12 above.

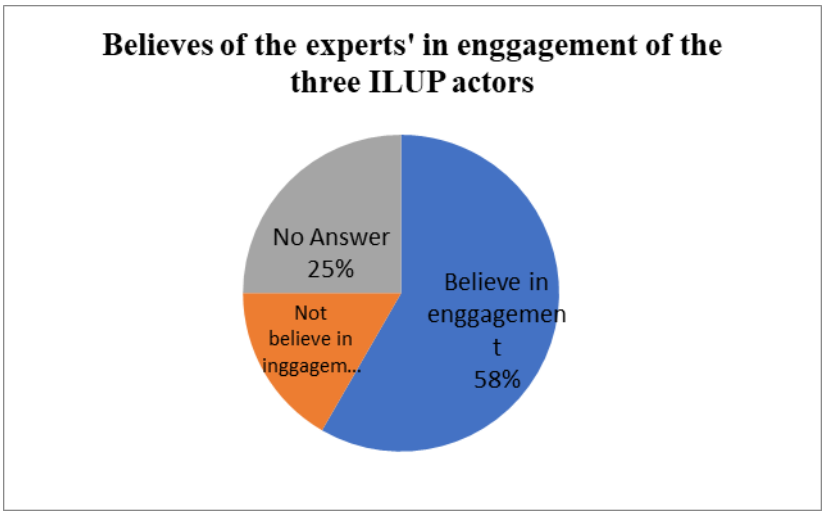


Chart 2: ***Believes of experts on the importance of the three actors' engagement in the planning.***

From those experts who said to believe in the importance of engagement of all the three actors, almost all of them tried to rank the level of the capacity gap of those three actors to their understanding. The ranking was from 1 to 10, where 10 mean high and 1 mean low. The result is summarized in Table 34 below.

Actors	The rank of the level of capacity Gap of the actors										Total	
	1	2	3	4	5	6	7	8	9	10		
Planning guide Experts	5	3	1	1	2	1	1	1	1	19	35	33.33
Facilitating Institutions	5	4	0	0	4	1	2	4	1	14	35	33.33
Planning-Driving land Users	5	1	3	0	3	1	1	1	1	19	35	33.33
	15	8	4	1	9	3	4	6	3	52	105	100
	37					68					105	
	35.24					64.76						100

Table 34: ***The level of the capacity gap of the three actors on land use planning as ranked by the experts***

2.6.4 The belief of the experts towards the understanding the make and nature of ILUP

Integrated Land Use Plan is about the evaluation of every piece of land for its weighed comparative physical potentials and limitations followed by the allocation of such a piece of land for meeting economic, social, and environmental concerns of the current and future generations at best. To check the scope and how participatory was the ILUP that prepared so far, the experts were asked about their belief whether or not the definition above was well understood and applied in planning the land use in their respective administrative entities. There were three options for the experts to choose from. These are: the first is those who strongly believe that it understood and applied, the second is those who believe that such was not used in coming up with the plan and the third is those who don't believe their entity has such a land-use plan. Accordingly, all the experts came from different disciplines in the zone.

50.00% of them underlined that their zone does not have such a land-use plan

33.33% of them mentioned that they do not believe the definition is understood and applied.

12.50% of them said that they strongly believe it understood and applied

4.17% of them restricted themselves not to respond.

On the other hand, the woreda level experts also rate differently as indicated below.

33.33% of them indicated that their woreda does not have such a land-use plan,

11.11% of them believe that the definition is not understood and applied in such a way,

16.67% of them attest that it understood and applied

38.89 of the experts could not tell

Particulars	Zone	Woreda 1	Woreda 2	Total	%
Yes, I strongly believe it is understood	3	2	4	**9**	**15**
No, such is not used in coming up with the plan	8	1	3	**12**	**20**
No, we do not have such a land-use plan	12	6	6	**24**	**40**
No response	1	7	7	**15**	**25**
Total	**24**	**16**	**20**	**60**	**100**
Percentage	**40**	**26.67**	**33.33**	**100**	

Table 35: Believe of the experts towards howILUP understood and considered on the planning

2.6.5 Advantages and disadvantages of ILUP

In some instances, land use planning may recommend abandoning a certain unfit land use and replacing it with another best-fitted, more economic, and sustainable land use. This may have its advantages and disadvantages. The experts asked to list at least two advantages and two disadvantages to the above-discussed issues. Since there was no awareness made so far with the experts on land use plan implementation, enforcement, advantages, and disadvantages in any way of the planning and not participated in the already prepared river basin based integrated land use plan, a very significant proportion of them, 33.33%, restricted themselves not to say something on the advantage from which most of them mentioned that they have no information on, while 41.67% of them not responded for disadvantage. However, even though it is from a few respondents who came back with the list, their responses summarized as follows.

a. Advantages

The possible advantages of abandoning a certain unfit land use to replace it with another best fitted, more economic, and sustainable land use they list down summarized/listed as below. These are:

- Increasing productivity rate
- Land use sustainability
- Maintaining climate change management and foster climate protection
- Increasing the economical utilization of land
- Sustaining the environment and soil and water conservation
- Decreasing soil erosion and degradation
- Sustainable land management

b. Disadvantages

On the other hand, the possible disadvantages they responded to replacing land with another best fitted, more economic, and sustainable land use are listed as follows. These are:

- It is difficult to apply
- Time taking to implement
- It may cause conflict in the process of replacing

- It may cause social displacement
- It may be too costly
- Decrease farmland size
- May not be understood in society, and so on

Who is supposed to participate in Integrated Land Use Planning

We also tried to assess if the experts can list who to participate in integrated land use planning in explicit terms. Accordingly, 33.33% of the experts participated in the assessment responded that they know nothing on who to participate in integrated land-use planning while many of the rest agreed that: experts, societies, and different government sectors are meant to participate in planning integrated land use. However, the list that the experts stated in one way or another is summarized as follows. These are:

- Experts
- Society or land users. That consists of the whole community (community leaders, religious leaders, elders, women, and youth)
- Government sectors
- Stakeholders
- Plan Taskforces
- Non-Governmental Organizations

the current level of awareness of actors

In this section, we tried to assess the rate of the current level of awareness of the land users, the experts, and facilitators about the nature and know-how of land use planning with the perception of the experts. The rating was from 1 to 10 where 1 means the least awareness and 10 is the highest. Accordingly, 31.67% of the respondents did not react to rate it mentioning that they cannot decide the awareness level of the three integrated land use planning actors. However, the rate of awareness that labeled by the rest summarized in Table 36 below.

	Rank of the level of awareness of the actors on land use planning nature and know-how										
Actors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	
Land Users	14(34%)	6(15%)	5(12%)	4(10%)	2(5%)	1(2%)	0(0%)	2(5%)	0(0%)	7(17%)	41
Experts	6(15%)	3(7%)	4(10%)	5(12%)	7(17%)	2(5%)	2(5%)	2(5%)	2(5%)	8(20%)	41
Facilitators	9(22%)	5(12%)	3(7%)	3(7%)	8(20%)	1(2%)	3(7%)	6(15%)	0(5%)	3(7%)	41
Scores on level of awareness	29	14	12	12	17	4	5	10	2	18	123
Level of awareness total from 123 scores	84					39					123
Percent of awareness group	68.29					31.71					100

Table 36: ***The level of awareness of the actors of land use planning about nature and know-how as ranked by the respondents***

Difficult Parts of Integrated Land Use Planning

Integrated land-use planning has different parts. Knowing the subject to be considered like Pre-requisite subjects, land claimant subjects and plan-enforcement subjects are one part. The second is ranking the suitability level of each of the subjects to be considered in planning and the third is grading suitability range for suitability ranks. The experts asked to identify which of these parts they think is exceedingly difficult. However, 30.00% of them restrict themselves not to state which is to be difficult, some stating that they know nothing about it while some just skip the question. Whereas 43.33% of them underscored that knowing the subject to be considered is the difficult part of the integrated land use planning. On the other hand, equal proportion, 13.33% of them stated ranking the suitability level of each of the subjects to be considered, and grading suitability range for suitability ranks as a difficult part of integrated land-use planning. The response is summarized in the diagram as follows.

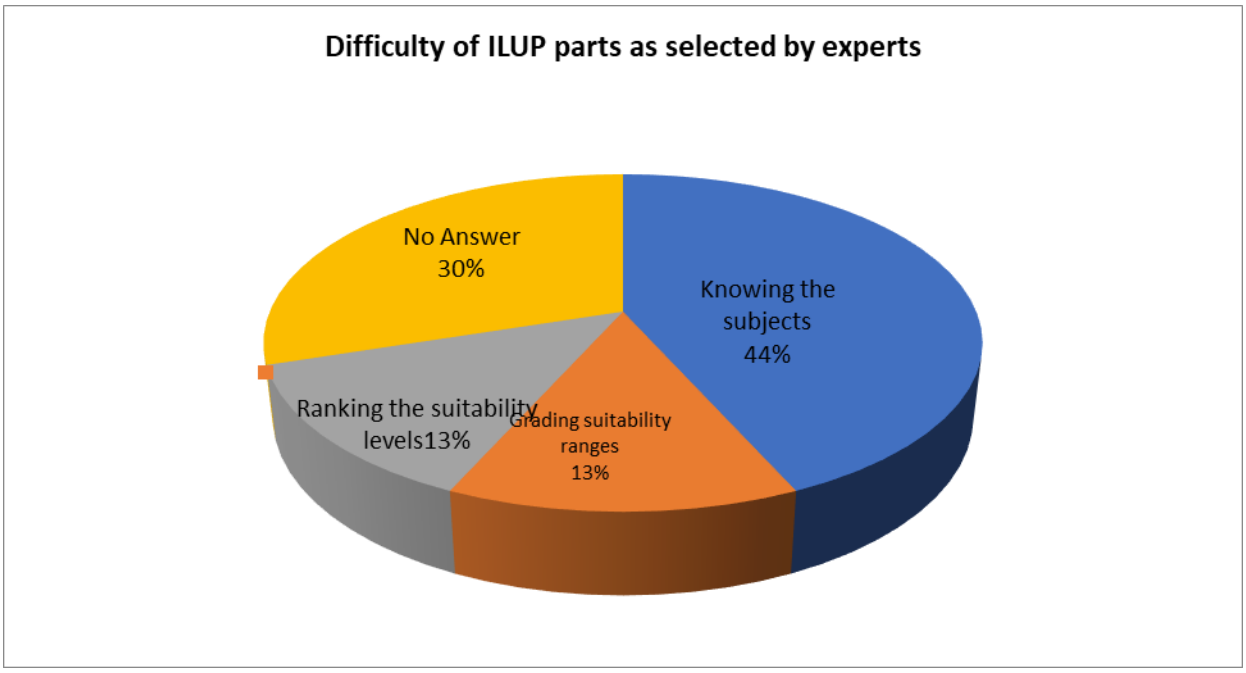


Figure 13. ***Parts of integrated land-use planning that the experts would be difficult to master.***

The importance of training for ILUP actors and whom to be involved

As it is already well stated above in the introduction section, this field assessment aims to identify the experts' capacity gap and prepare a training manual and facilitate to whom it will be delivered.

Importance of the training

In this section, we tried to get across the belief of the respondents on the importance of the training for the integrated land-use planning actors and the rate of that importance. Accordingly, 85.00% of the respondents stated that the training is incredibly important while 6.67% of them do not believe in the importance of the training 8.33% of them did not respond.

Whom to involve in the training

It is needed that everyone to be aware and sensitized about the details of Integrated Land Use Planning. So, we asked the respondents who they think better to be involved in the training to be provided. As a result, 26.67% of our respondents restricted themselves not to mention who they think better to involve. They have no information on how it goes and afraid that they may mislead

the program if they give the wrong list. Though the number of the respondents witnessed is different from group to group majority of them indicated Communities, Experts, and different stockholders. However, the list that the other respondents mentioned summarized as follows. These are:

- Communities or land users that consists of farmers, community leaders, religious leaders, women, and youth groups
- Different experts
- Stakeholders
- Plan Facilitators
- Government sectors
- Non-governmental organizations

The damages occurred by the absence of LUP and land use policy

We also tried to look at if the respondents believe that the absence of a land-use plan and land use policy damaged their administration entity. As a result, the majority, 93.33% of the respondents underlined that the absence of the land use plan and land use policy seriously affected their administrative entity's transformation and sustainability in every direction. However, the almost insignificant proportion of the respondent, 5.00%, yet choose to be silent to respond while only 1.64% of them said that there no damage occurred to their entity due to its absence.

What affected most due to the absence of a land-use plan and policy

We also tried to go deeper to know which they think is the most affected of Social transformation, Economic transformation, and Environmental sustenance, by the absence of land use plan and land use policy. They also have the fourth option to entertain which says all the three. Hence, of those, how agreed and the applicability of the damages due to the absence of land use plan and policy, 83.33% of them believe that all the three, i.e. Social transformation, Economic transformation and Environmental sustenance of their entity are all affected by the absence of land use plan and policy while 5.00% of them mentioned that only economic transformation affected most Yet, social transformation and environmental sustenance of their entity chosen to be affected by only 3.33% of the participants. The rest, 5.00% of them missed choosing the most affected transformation of their entity.

Additionally, they stated on the focus group discussion that due to the absence of land use policy, when a piece of land seen to be used out of its suitability, e.g. mining land for grazing or some other purpose, forest or sloppy land for agriculture, etc, they many times missed legal base to defend it.

The best reasons why having ILUP is important

In this section, we tried to identify the three choices of the experts thinking the best reasons for why having an integrated land use plan for Ethiopia is important. Though 10.00% of the respondents did not respond to the best reasons to have ILUP, 53.33% of them mentioned that having an integrated land use plan is important to increase production per unit area of land and the resilience against climate change. However, 60.00% of them pointed out that it is important to improve the economic use of land resources while 48.33% of them mentioned that it is important to diversify income sources from land and water. Yet, 35.00% of them gone that having an integrated land use plan is important to avoid/minimize the disruption of interconnected interfaces between humans and their environment and 15.00% of them choose to guaranty the perpetuation of life (flora and fauna).

Participatory Status of the Already Prepared ILUP

The other items consisted of the questionnaire related to the availability of ILUP in the administrative entity and/or how participatory was the ILUP if any. However, almost all the experts participated in filling the structured questionnaire and FGD discussants are confidently mentioned that they do not think that there is such an integrated land use plan in their respective entity. Many of them were even confused with the term with the development plan and sustainable land use management that had been prepared by SLM and AGP projects. For the experts who do not know what ILUP means and do not ever deal with it, it is impossible to talk about which group was participated. However, only a few experts say that the document prepared even though no one of them participated.

According to information obtained from focus group discussions held at all the three administrative entities, '*as it may be reported by other team members'*, the Borana zone is the one and the exemplary zone of the region where the Gada System retained and being practiced. This system has a policy on how to administer and use land. That is, e.g. the zone divided into five heads, which have their cultural leaders. In each Dhedas, there are Reras, Ollas, and Elas that are structured down with the community respected leaders called Aba Dheda, Aba Rera, Aba Olla, and Aba Ela respectively. However, the conducted integrated land use plan did not consider this original cultural value into consideration. This implies that the plan was conducted with guests who know nothing about the area and not make the indigenous experts participate so that this indigenous knowledge is considered.

Additionally, almost all the participants do not know how the rural land use planning of the area was conducted. Indicating that land use planning is multidisciplinary, they highlighted the importance of stakeholder's involvement. They explicitly pointed out that they did not engage in the planning activities though they are the major stakeholders of land resources. Most of them even not know that it was conducted. As a result, in the status they are claiming the participatory of the plan in such a way, one cannot talk about the issues like how the ILUP prepared for the entity, the major pre-requisite subjects considered, the major rural land claimant subjects considered, major institutions and enforcement subjects considered for the enforcement of the use of the rural land use plan, major urban land-use types that were considered and the like concerning the already prepared ILUP.

In addition to the above points, it was difficult for the respondents to briefly describe how a given land unit was decided to be used for one land-use type when it is said to be suitable for more than one land-use types. The same is true to describe how it was implemented when there were instances where one land use is required to change and get replaced by a new type of land use, and what was recommended for people to accept and move to the new residential sites were the land-use planning cause a shift of residence from such as riverbanks, lakeshores, wildlife habitats, mining areas, wetlands, prime agricultural lands, etc., to safer, more economical (more firm shallow soil-depth) residential sites. As a result, they could not list the best social safeguard issues considered in such instances.

However, as I have tried to mention above, very few of the participants have seen the document and tried to comment it. As a result, they mentioned that it has many deficiencies. These are:

1. It was not participatory
2. The study was not gone to specific subjects
3. The urban land-use plan was not included.
4. The map is shown in the plan and the physical appearance of the zone does not much.
5. The issue was already forgotten since then.
6. Awareness was not created at all.

7. Conducted before ten years and it is outdated.
8. No consideration was given to it even at Land Administration and Use Office of the zone are to list few.

Above all, as it is already mentioned above, this zone has many historical places and culturally protected areas like Arda Jila, and cultural land uses land administration systems. However, the study experts did not know what these mean to society and not considered it in their study. These and the like make the plan unimplementable and not represent the administrative entity at all.

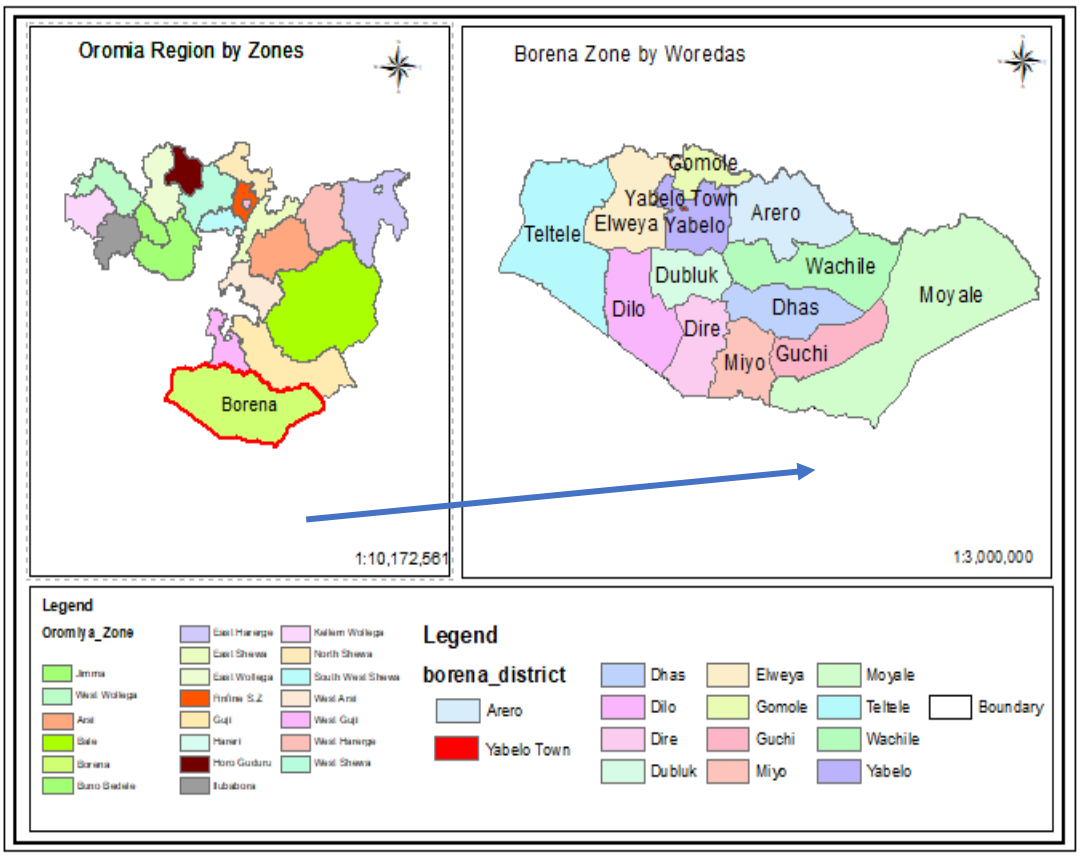


Figure 15: *The Woreda map of the Borena zone*

Figure 16. Focus group discussion at Yabelo town Borena zone

One can easily observe that the urban land use Plan of Yabelo town did not comply with the standard set at the country and international levels as shown above. This was especially bad for the road sector which is made to cover nearly 9 percent as compared to the standard 30% coverage.

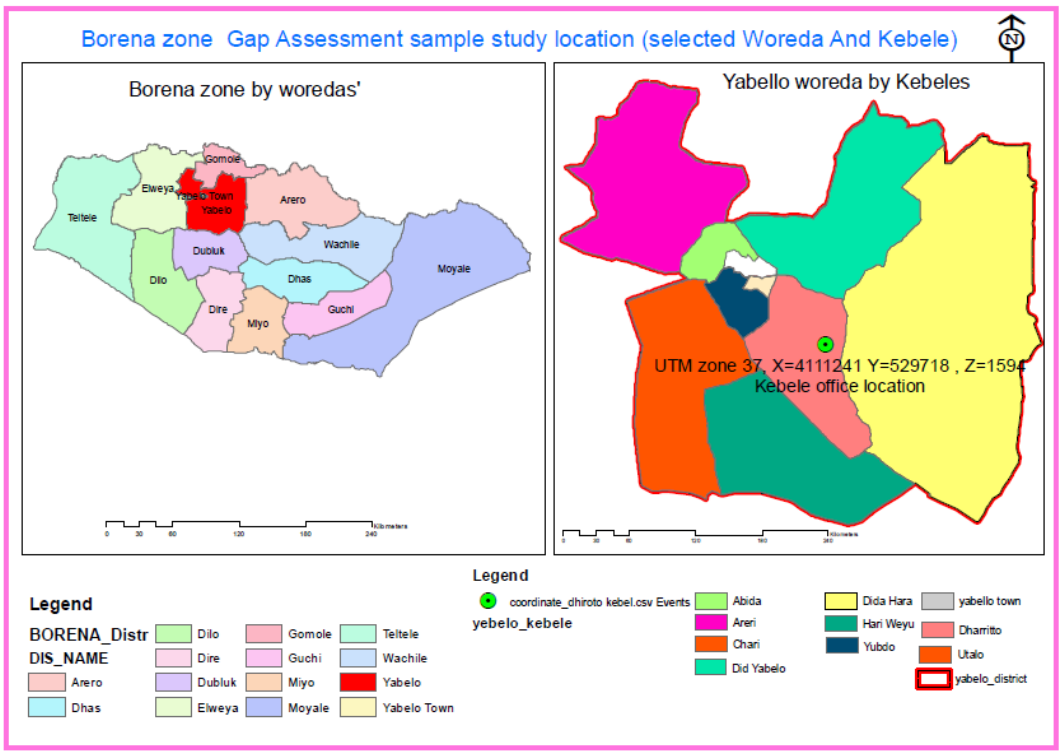


Figure 17. ***The kebele map of Yabelo Woreda in Borena zone.***

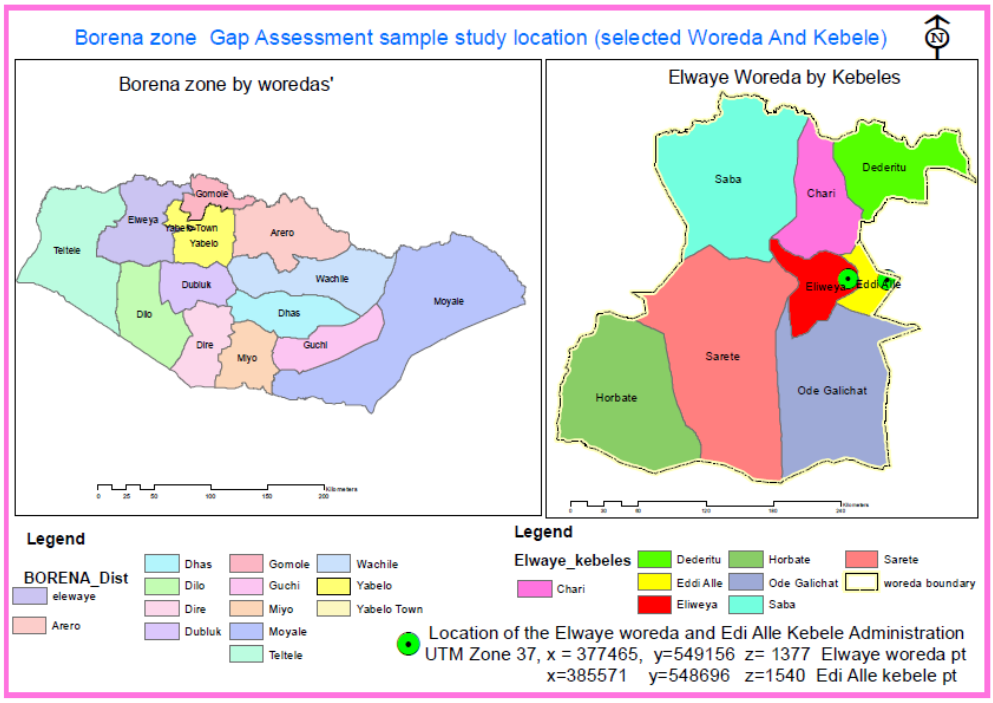


Figure 18. ***The kebele map of Elwaye Woreda in Borena zone.***

The FGD focus group discussion: The meeting was held at Elway Woreda Administration Hall, Borena zone. A primary questionnaire filled than focus group discussion followed shown below

Figure 19. ***Focus group discussion and questionnaire interviews conducted in Elwaye town in Borena zone***

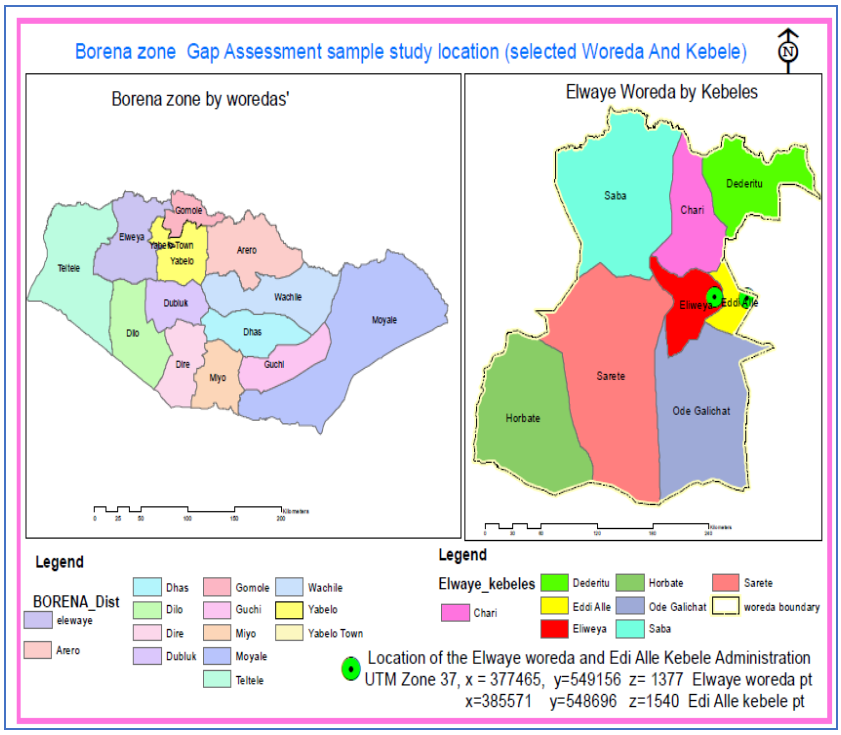


Figure 20. ***Kebele of the Elwaye Woreda in Elwaye Woreda.***

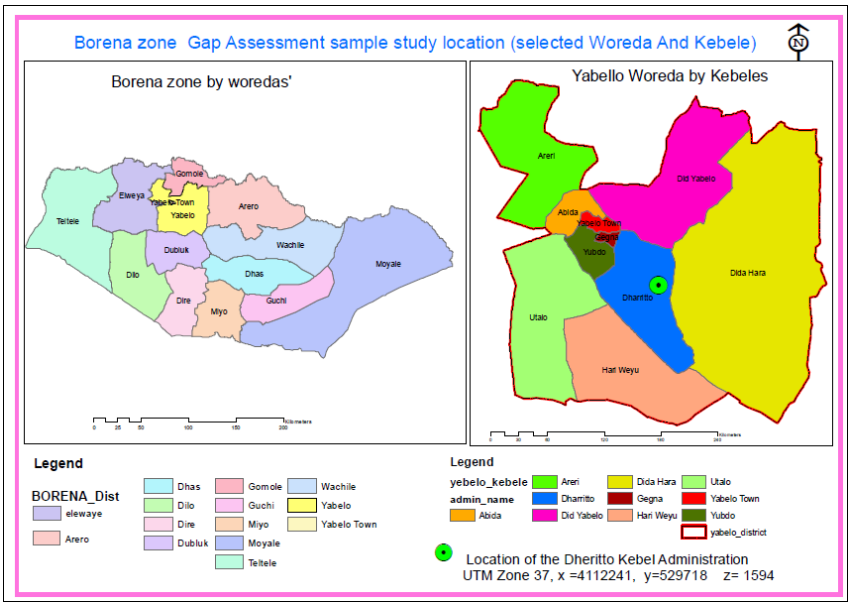


Figure 21. ***Focus group discussion and questionnaire interviews conducted in Yabello woreda***

The summary of the Gap Assessment study targets of the Borena zone is given in **Table 37** below. The table shows that some 82 professional staff were considered in the study. The expertise is limited to categories for conducting comprehensive and integrated land-use planning.

Sectors	Number of Experts within Entity					Total
	Zone	Elwaye	Yabalo	Hidi Ale	Dharito	
1. Land Utilization and land Administration Use	4	6	3			**13**
2. Agriculture and NR	5	2	5			**12**
3. EFCCA	3	2	4			**9**

4. Water & Energy	2	0	2			**4**
5. Livestock and Fishery	2	3	3			**8**
6. Others	8	3	3	7	15	**36**
Total	**24**	**16**	**20**	**7**	**15**	**82**

Source: - Field data collection (May 2020)

Table 37. Type of professions and number of experts that were targeted in Borena zone

Education level	**Number of Experts within Entity**			**Total**
	Zone	**Elwoye**	**Yabalo**	
Master's Degree	6	0	0	6
First Degree	18	10	18	46
Diploma/Level	0	6	2	8
Total	**24**	**16**	**20**	**60**

Source: - Field data collection (May 2020)

Table 38. ***Level of expertise of the target respondents of this knowledge gap investigation*** **of the Borena Zone**

3. Conclusion and Recommendation

1. The Responsibility Was Not Handled by the Right Custodian

The guardian of the land use planning agenda had an interest in utilizing the land while it could have been owned by land-neutral institutions such as the Oromia Bureau of Land Administration and Use (**OBLAU**). Certainly, land use planning is not an agenda that can be given to bureaus that have the same political portfolio and to those bureaus that have an interest in owning and manipulating land for their line of responsibilities.
In the case of the Oromia Land Use Plan, first, the program was rightly initiated and owned *by the office of the president.* This was because there was an urgent need for a Land Use Plan by Accelerated and Sustainable Development to End Poverty (PASDEP). This was an excellent opportunity that the program was initiated and owned by the President's office which has an all-serving mandate. Unfortunately, soon, it missed track when it took water as an entry point and when this highest-level ownership of land use planning could not continue. The study and planning became partial or incomplete.

2. The Planning Responsibility Was Given to *Only One* Of The Three Important Planning Partners

Land use plans are best planned through continued and concerted involvement of the three formidable partners at least until the plan is completed. These are

a) **Plan-guiding professional consultants**: professionals of every sector of the land use element that are mobilized from several disciplines (**coming from side-in),**

b) **Plan-facilitating guardian authorities**/experts that come from **top-down institutions** who represent custodian land users

c) **Plan-driving land users** (farmers, residents, and investors) that come from bottom-up

As it can be witnessed in Figure --- below, from the three parties that need to be involved in the participatory ILDP preparation process, only the party w☑(.) mark tried to do the planning with minimum consultation of land users. Because of such an approach, the plan was not well-rooted both among the facilitation and implementation groups.

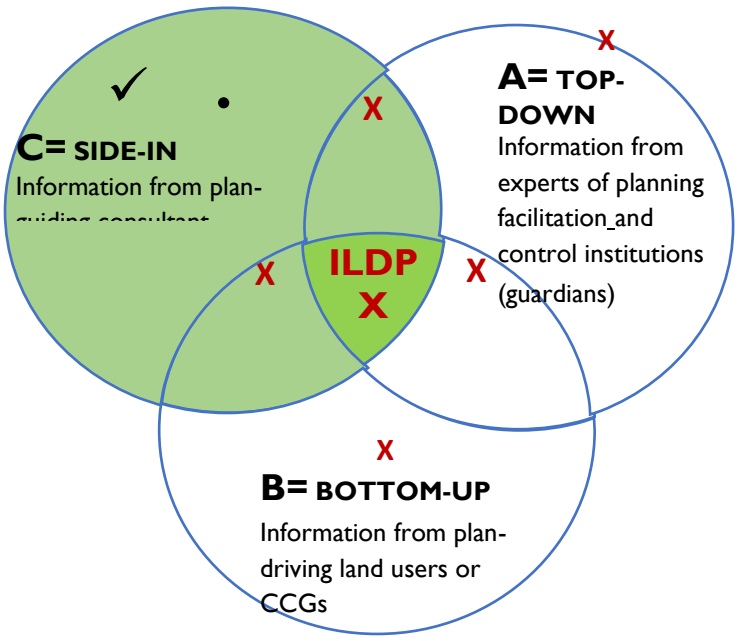


Figure 25. Action-groups from which the integrated land use and development plan (ILDP) is to be born

However, the resource assessment and land use planning conducted by Oromia Water Works Design and Supervision Enterprise OWWDSE, did not include the two important planning partners. The first basic plan and implementation facilitator group (**A** in figure above) had not be on the facilitation seat to furnish with national and regional level issues to be considered in plan.

According to our studies, none of the important land use planning facilitation experts from the following institutions were involved in the land use planning and facilitation work. This is not related to the frequent staff reshuffles and turnover because our comment is based on staff who have not been reshuffled or who have been serving in their same office for more than 15 years. Few of such institutions from where the potential land use planning facilitation experts could have been included are:

1) Bureau of Water and Energy Resource Development of Oromia
2) Bureau of Culture and Tourism of Oromia
3) Oromia Forest and Wildlife Enterprise
4) Oromia Livestock and Fishery Resource Development Agency
5) Oromia Environment, Forest, and Climate Change Authority (OEFCCA)
6) Oromia Urban land-use Planning Institute
7) Bureau of Land Administration and Use (BLAU) of Oromia
8) Bureau of Agriculture and Natural Resource of Oromia

Similar to the exclusion of experts from planning facilitation and oversite institutions, land users including investors, farming households, and Kebele-residents (in urban settings) that are shown as important partners "B in the figure at the previous page)" were not involved in driving the land use plan.

The neglect of inclusion of all the relevant planning partners such as the planning facilitation and oversite experts from government institutions, as well as the land users and investors, the land-use plan could not be implemented. The plan remained foreign both to the facilitation institutions and the land users.

3. The remoteness of the study and planning process

As it has been stressed in "2" above, the plan was conducted by the expert without the involvement of the information from the land use facilitation institutions and the real land users. Instead, it appeared pre-made agenda-driven and opinion of the side-in professionals Because the facilitation and oversite institutions were not involved in the land use planning process, all the forest districts could not be considered and mapped as forest enterprise possessions. For instance, from those who are using land and /or custodian land users the following have not been included in the land use plan in their respective river-basins.

a) Mojo-forest district, Awash national park, Mojo-sugar Estate, Metehara Sugar Estate, and the land of associated factories -- -----in **East Shewa zone**

b) The 5 forest districts such as Sele-nono, Gebre-dima, Bedelle, Bure and **Yayu** biosphere reserve -------in **Illuababor zone**

c) Jarso-Gursum and Garamuleta forest districts plus the federally administered Babille

Elephant sanctuary ------ in **East Harrarghe zone**

d) Yabelo-Arero forest district, world-recognized Yabelo Wildlife sanctuary, Borena wildlife park **------ in Borena zone**

On the other hand, the study and planning report claims that it has used the standard comprehensive participatory planning approach which is shown in the figure below.

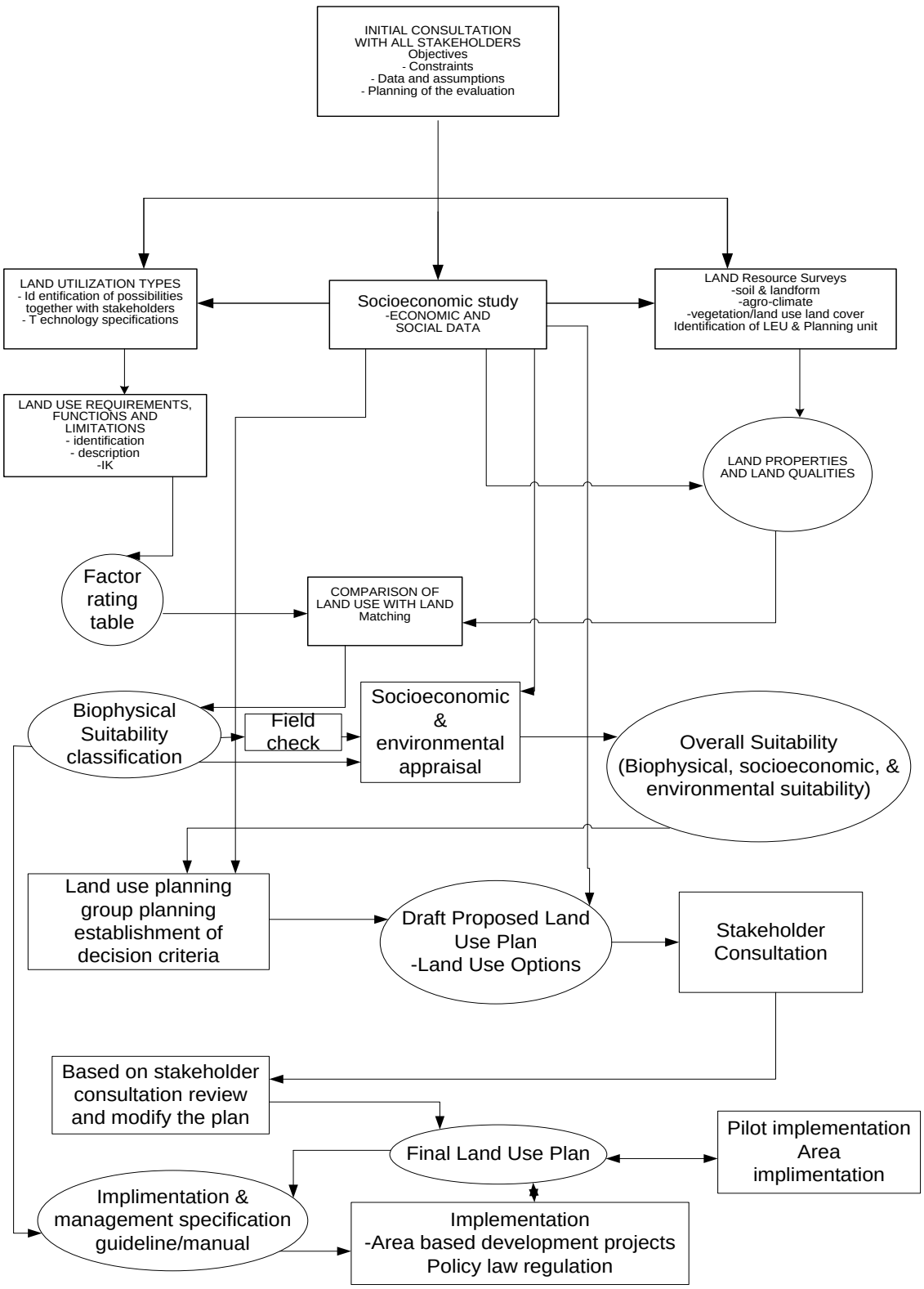


Figure 26. ***Ideal flow chart and action points of the three actors who make the ILDP***

This is an ideal flow-chart that shows the planning steps and procedures included in the report but is not used in the study and planning process. However, from the questionnaire interview and focus group discussions, we were able to see that such a flow chart was never used.

4. The Study and Plan Could Not Avoid Preconceptions.

As shown in the land use plans of the river basins, it looks the expert-team has decided on the number and type of land uses to consider and it has tried to match its wish-list land uses to the land type instead of being dictated by the land capability/quality potential in addressing the economic, social and environmental sustainability concerns. As shown in Table 2 of the Proposed Land Use Plan of Dakata Sub Basin, there are only 4 major land-use types. **However as presented in the plan report, it looks a crop-suitability plan report**

Our categorization	Proposed Land Use? In the Dakata Sub-basin (East Harrarghe)	Area in ha	% of total
1. Residential land	Built-Up Area	301.70	0.09
	Built-Up Area Buffer	3498.43	0.99
	Sub total	**3800.13**	**1.08**
2. Rangeland.	Camel	1050.94	0.30
	Cattle	6682.05	1.88
	Goat	1733.08	0.49
	Goats	7606.31	2.14
	Sheep	147.66	0.04
	sub-total		**4.85**
3. Agricultural land. (this seems to be taken from crop suitability plan)	Groundnut	74.72	0.02
	Haricot Bean	7090.77	2.00
	Haricot Bean and Groundnut	226.04	0.06
	Pepper	60470.15	17.05
	Pepper and Maize	58.55	0.02
	Pepper, Maize and Haricot Bean	64050.45	18.06
	Sesame, Pepper, Maize and Haricot Bean	3163.38	0.89
	Sorghum and Haricot Bean	3639.38	1.03
	Sweet Potato	27524.19	7.76
	Sweet Potato, Coffee, Pepper, Mango, Sorghum, Maize, Haricot Bean, Groundnut, and Banana	576.59	0.16
	Sweet Potato, Pepper, and Highland Maize	787.93	0.22
	Sweet Potato, Pepper, Mango, Sorghum, Maize, Haricot Bean, Groundnut, and Banana	69819.59	19.68
	Sweet Potato, Sesame, Pepper, Mango, Haricot Bean and Banana	19569.99	5.52
	Sweet Potato, Sesame, Pepper, Mango, Sorghum, Maize, Haricot Bean, Groundnut, and Banana	35128.67	9.90
	Sweet Potato, Sorghum, Haricot Bean and Groundnut	565.67	0.16
	Sub-total		**82.53**
4. Forest land	Protected Forestry	23007.93	6.49
	Protective Forestry	12140.60	3.42
	Protective Forestry / Rock	5782.50	1.63
	Subtotal		**11.54**
	Grand Total	354,697.28	100.00
	Area in km^2	3,546.9728	

Table 39. Taken from Daketa sub-basin final land use plan report

The right land-use planning approach is identifying the comparative potentials and limitations of every piece of land, ranking it by suitability level, and passing judgment on their relative/comparative suitability grades and finally coming in a planning studio where comparative value of suitability can be negotiated, debated and decided to be allocated for relatively best-competing land use in consideration of economic, social, and environmental sustainability significance. However, in this study and planning process were determined based on,

a) *Environmental characteristics*,

b) Existing development and man-made features and proximity to existing development

c) A technological introduction

d) The potential impact of development on historically, culturally significant, or scenic sites

e) Availability and capacity of community facilities.

f) Regulatory restrictions on land development

In the meantime, we have been reinformed our review must have missed the land use plan report that for sure exists. Our critiques stressed that this must be because we did not do our literature reviews thoroughly. We acknowledged the critique and inquired about all the literature that the Oromia Bureau of Land Administration can provide us. Unfortunately, all that we have been given anew was all that we have reviewed. Therefore, for sure, there is no comprehensive resources assessment and integrated land use planning conducted even at river-basin levels.

However, in **Section II** of the study reports, there are 10 resource assessment study documents reported as below.

i. Volume I: Soil survey
ii. Volume II: Land use /Land cover and change detection
iii. Volume III: Agro-climate
iv. Volume IV: Agronomy
v. Volume V: Forestry and Wildlife assessment
vi. Volume VI: Hydrology and water resource assessment
vii. Volume VII: Hydrogeology
viii. Volume VIII: Livestock and feed assessment
ix. Volume IX: Socioeconomic survey and analysis
x. Volume X: Land degradation and Erosion hazard assessment

2. Usually, and according to the ILDP road map document, in an integrated land use planning process, both rural settlements and urban land use of cities, (large, medium, and small

towns), interfaces between rural and urban land uses as development advances are predicted, planned and mapped with waste management sites and associated water supply catchments.

3. Besides, natural heritage sites, ethno botanical catchments, possible areas for investments and related settlement areas, rural and urban roads are not studied and mapped. Similarly,

   a) Mojo-forest district, Awash national park, Mojo-sugar Estate, Metehara Sugar Estate, and factories associated -- -----in **East Shewa Zone**.

   b) Five forest districts such as Sele-nono, Gebre-Dima, Bedelle, Bure -------in **Illuababor zone;**

   c) Jarso-Gursum and Garamuleta forest districts plus federally administered Babille Elephant sanctuary ------ in **East Harrarghe zone,** and

   d) Yabelo-Arero forest district, Borena Wildlife Park **------ in Borena zone,** were not **considered** even at the resources assessment level**.**

4. There is no time zone for the plan revision and the service period was provided in the study. - merely it was a development plan for selected land use/land cover types

5. A plan map does not exist for any of the planning units. Even if there was a plan, it could not have been useful because it does not show all land use plans comprehensively

6. None of the experts of the Oromia Forest and Wildlife Enterprise participated—even after a request to participate freely

7. The study and the plan are too old to resurrect and embolden:

The study was activated, in 2008, in five zones: Borana, Harrarghe (East and West), and Oromia Special Zone Surrounding Finfinnee. The study was Basin-based that covered 12 sub-basins throughout the Oromia region and the last study was conducted at Illuababor zone which was completed in 2018. To this effect, the plan document is about 13 years since it was incepted and started. Please note that the zones that are sampled in this study (shown in boldface) are among both early-studied and planned (**Borena** and **East Harrarghe**) as well as the lately studied and planned zone (**Illuababor**). In both cases, the studies are obsolete. Also, it is sad that OWWDSE does not possess the shapefile or the georeferenced ***plan map data*** *of any land-use plan that can be used as an input for revising the Integrated Land Use Plan (ILUP*)[2]. This is unfortunate; and is beyond the control of this consulting firm.

According to the plan document, the initial client of the Land Use Study project was the ***Pastoral Development*** Commission of Oromia. Later, however, the role and responsibilities about Land Use Planning Study were transferred to the ***Bureau of Land and Environmental Protection of Oromia*** which was later also divided into two: ***OBLAU and OEFCCA***. In this ownership, it is inevitable that the last version of the land use plan document has been finalized and handed over to the OBLAU in **2018** which we have repeatedly reviewed in search of a

[2] Oral communication between investigating experts and OWWDSE

land-use plan and to identify the knowledge gap in conducting integrated land use plan. There is no land-use plan at all. Therefore, the knowledge gap in the land use planning is all-embracing

This very purpose of this knowledge gap assessment is a miss-of-focus. The very purpose of this knowledge gap assessment was identifying the missing knowledge needed for the successful facilitation of the integrated land use planning in the Oromia regional state.

However, in the plan report document, it is reported that all the stakeholders are involved in the study. But, among those 385 individuals we interviewed and /or discussed-with (at Kebele/Woreda, zone and headquarter levels), According to the focus group discussions and key informant interviews conducted, none of such experts from HQ to Kebele-level were made part of the planning process. In such a case, all the knowledge and information about integrated land-use planning ***methods, approaches, know-how, integration, and trade-off analysis procedures and principles are all practically lacking.***

The integrated land use plan was missing several land-use types that must have been considered in integrated land planning. The agenda seemed to be **derailed** from non-biased and all-serving planning purposes when the planning ownership was wrongly taken out of the President's office. Instead, the planning purpose seemed to be appropriated to fit the agenda of selected land users. For instance, how come rural settlement and urban land use planning was not made part of the detailed land-use planning process? How come land use such as national parks, sanctuaries, biodiversity conservation areas, controlled-hunting areas, large and small state farms, enterprises such as the Awash Sugar Estates, and similar investment areas are not considered in the land use plan? How come other land-use types such as geothermal sites, fishery and crocodile farms, honey-bee development and honey production possibilities, livestock enterprises, and rangelands are not included in the plan? In general, the watershed-based land use planning seemed to address agricultural lands at large instead of valuing lands as they fit another development possibilism under which lands can be judged for the sustainability of the environment and serving the very purpose of social, economic, and environmental needs of the current and future generations.

The land-use plan is conducted several years ago. It has never been revised. As we indicated it earlier, It cannot be revised either because there is no shapefile data that is kept for this very purpose. It had no owner. And no one seemed to be bothered for these many years.

Land use for which lands are planned is out of context. For instance, how come lands fit for mangoes, coffee plantations are planned on the same piece of land for potatoes, maize, and sorghum? The criteria used for characterizing the potential of the lands as they are fit for sustained, economic, and social benefits are not known.

The very purpose of this assignment is not evaluation the land use planning, processing, and the knowledge of the enterprise that conducted the planning Therefore, ABT-PCS would not like to go any further in characterizing the planning process and the plan. This does not do any purpose for the assignment because we are not going to prepare a training manual for fulfilling the planning knowledge gap of the Oromia Water Works Design and Supervision Enterprise (OWWDSE). Instead, it is identifying the Knowledge gaps of the experts who do wait for it at

regional, zonal, Woreda, and kebele level OBLAU and EFCCA experts. Unfortunately, their knowledge in integrated land use planning is close to zero. It is not a gap. It is wholesome of knowledge need.

5. **There is no comprehensive land-use plan of the Oromia region both at the basin-level or administrative level.**

1. One can conclude that the integrated land use and development plan does not exist for several reasons that have been shown in many sections of this report. For sure, ILUP did not exist. For the most part, it is a scope-limited and crop suitability plan instead of land use plan.
2. In a true land-use plan, the land-use-type is determined based on the land's physical land capability to remain effectively productive under a given land use type (productivity and sustainability). It provides a relatively highest contribution to economic gain, social benefits, and environmental sustainability.
3. The land-use type to be set aside for any piece of land depends on the inherent characteristic of the land. For instance, lands with shallow soil may be preferably set aside for range development that they can be allocated for plantation forest development or horticultural farm. Unfortunately, in any of the land-use planning considerations, it was worrying to observe that no soil-depth information was collected and not considered in defining the type of land use.
4. However, in this land-use planning process, the decision on the choice of land-use type seems to be predetermined at the office level. It seems it was prepared to answer where camel, sheep, cattle, or goat can be grown. Of course, it was the same defining the land for growing crops. This is a crop-suitability study which is mostly done on agricultural lands or rangelands that are primarily defined by the land use plan earlier on. The prepared land use plan was not exhaustive on these types of land uses
5. The land-use planning, which was conducted earlier, was not participatory. It did not consider the various stockholders such as the experts at the deferent administrative entity and the communities, resident development facilitators. It completely ignored the community at large, the land users. It also is not known t if it has considered all the subjects required to plan land use. On the other hand, it also did not start from the grassroots, the land users, and awareness was created neither from bottom-up nor from side-in. This plan ignored the community /land user's custodian governmental bodies thought to be facilitating institutions on the planning process.
6. Government-administered land uses such as the 36 forest development districts, federally-administered national parks, and biodiversity protection areas, important water catchments, and other production areas such as incense and gum production areas, aquaculture development areas, sites for current and future settlements to be defined in considerations of land developments were ignored.
7. Land use planning is visionary and tries to predict what would happen in 20 or thirty years. Therefore, the Land-use plan is prepared to serve for a period of 5, 10, 15,

20, etc., years to be revised in line with the GTP periods. No lifespan was defined for the prepared land-use plan.

8. Land use planning is visionary. It tries to predict the whereabouts of investment in many of the land uses and plans associated roads, air-strips, associated settlements, etc. This land-use plan was ignorant of all these and many more.

9. The terminologies used in defining the different kinds of land uses were not standardized even in considerations of forest types, wildlife habitats, and agricultural lands. Camel, cattle, and sheep cannot substitute the land-use type. In modern livestock keeping, feed is brought to livestock instead of livestock going to the feed. You can raise them all in a cut-and-carry system if needed. We have never seen livestock standing for the type of land in determining a land-use plan.

10. Usually, if there is a genuine land use planning, there is an album of maps that adjoins the land use plan at the planning scale. We were not able to get any "Album-of-maps" that illustrates the whereabouts of the different land uses even at the river basin level.

11. The most decisive factors to be considered in land use planning are the ***comparative*** legacy of the lands are soil depth, rainfall regime, slope category, altitudinal zone, and existing land use concerning national, regional, and international commitments and/or obligations. In this land-use planning, no such comparisons were considered in determining the best land-use type for a given piece of land. When two or more land-use types are neck to neck in terms of their fitness upon inherent land characteristics, the second level of judgment criteria in allocation of land use is the comparative contribution of the candidate land use in economic significance, notable social benefits. All these are determined in a planning studio where the planning actors debate and reason out. Such efforts were not seen in making the basin-based land-use plan.

12. The same is true of the types of crops. Crops such as sorghum, haricot bean, potato, barley, or wheat or sesame do not define land in land use planning. All must all do well on lands that meet the criteria of agricultural land. Therefore, such a plan is a crop suitability plan within the agricultural land arena. The choice is on crop suitability within the agricultural land. Therefore, plans such as those indicated in Table 10 of the Fafan-Dintin sub-basin (shown on the next page) cannot be considered as a land-use plan.

13. This study was made to assess the capacity, knowledge, and skill gaps of the experts who are at the frontline for implementing the integrated land use and development plan (if there has been any).and to use this skill/knowledge gap finding as a springboard for preparing training manual and syllabus and finally to give training for those who are to be deployed for training their subordinates. In this connection, ABT-PCS has been responsible to review the land-use planning related documents and to interview likely target-trainees for their level of the knowledge gap. We have found out that the knowledge to be built and the planning exercise to back up will be entirely anew. In such a situation, the content and scope of the training manual need to be much comprehensive, and the support requires more expertise as well as time for which ABT-PCS is not contracted.

14. As we have discussed it in detail in the entire body of this Knowledge Gap Assessment document, though the understanding about the scope and coverage as well as methodology logic of land use planning seems to be well understood, the study and planning firm was not keen to follow its methodology and scope of work that itself presented in the study documents. For instance, the ideal flow chart shown in Figure 26 is an excellent approach if it were genuinely used.

Many more fallouts can be mentioned. However, the purpose of this study is not to examine the land use planning quality of the basin level-plan. Therefore, we have focused only on those factors that have contributed to knowledge-gap in land use planning.

4. Recommendations /Consequential Suggestions

1. The integrated land use planning needs to be conducted anew. The Oromia Bureau of Land Administration and Use is better placed to guide the planning process from top-down. At least the major land users would have to be identified and be given the chance in driving the planning process. Land use planning experts of every necessary discipline need to be engaged in guiding the planning process.
2. The major training topics in integrated land use planning, enforcement, and implementation may be the following. However, this is the whole gamut of land use planning instead of gap-filling trining.:
    I. Introduction, study approach, and methodology
        i. ILDP Framework
        ii. scope of the land use plan,
        iii. principles of land use planning
        iv. planning context
        v. planning approach and methodology
    II. Organizing basic integrated planning inputs
        i. organizing basic social information
        ii. Organizing the metrological information
        iii. organizing the physical land information
    III. Self-specific land use plans of rural lands
        i. self-specific (non-reconciled) rural land use plan and development plan
        ii. Rural infrastructure land use plans
    IV. Integrated and reconciled rural land use plans
        i. Negotiated integrated land use plans
        ii. Reconciled land use plans of specific lands
        iii. Agreed and integrated land use plans
    V. Integrated urban land use plans
        i. Difference between urban development plans and urban land use plans
        ii. Attributes of urban land use plans
        iii. planning scales for
    VI. Plan facilitation and enforcement
        i. Facilitation and enforcement institutions
        ii. Monitoring and evaluation
        iii. Geodetic system design and use

iv. Policy, land tenure and law in Land use enforcement

3. The land-use planning and development training needs to be conducted on an on-job basis while the experts are at the same time involved in the planning process.
4. The training of trainers and follow up in the actual training to be given by these trainers must be detailed and in-depth.
5. Awareness creation to all level land users must be done.
6. The development plan document must be updated. In some places, even the plan in question was prepared before ten years and it is outdated. At the same time, it is stated that there are areas that the plan did not cover. These imply that the plan needs updating.
7. Lastly, but more importantly, for the betterment of the plan implementation, we recommended that it is better for the plan to be prepared at an administrative boundary level rather than river basin based. Few of the information may be salvaged to serve in the new land-use planning

End of the report

2 Appendix 1: Questioner for the Rapid Capacity Gap Assessment on the Level of Perception and Behavior of Integrated Land Use Planning Actors at Zonal, Woreda and Kebele Levels

1. Name of the Respondent or Code No. ---------- ---------- Date:----------

2. Address: Region: ----------Zone) ---------- ----------Woreda, ----------

3. Education level (Please circle): Ph. D. M. Sc. B.Sc. Diploma

4. Specific field of studies (please list) ----------

5. Gender (please circle) : ---- Male, ----Female. 6) UTM location: X) ---------- Y) ---------- Z) ----------

Issues and responses on Capacity Gap Assessment on planning integrated land use

1. In your understanding, what is an integrated land use planning (ILUP)? who are supposed to be the actors? Which and which were the group of actors that participated? Who

   1) Define ILUP:----------

   ----

   2) List the groups of actors who participated?

   i. Group 1. ----------

   ii. Group 2.
   ……

   iii. Group 3,
   ……

   iv. List any other group ----------

   ----

2. Do you believe your **region, zone, woreda, city/town** has an Integrated Land-Use Plan?

   a) Yes, b) No

3.	Please briefly indicate how the land use planning was conducted for the region, zone, woreda, kebele? If you were not involved, who and who got involved? Please list their group ---------- ---------- ---------- ----------	b) For the Region ……. ------- ---------- ---------- b) for the zone …… ……. -------- ---------- ---------- ---------- c) For the Woreda …….…….. ---------- ---------- ---------- ----------
4.	What are the major **pre-requisite subjects** considered for urban/rural land use planning	1) ---------- 2)---------- 3) ---------- 4)---------- 4) ---------- 6)---------- 7. ---------- 8)----------
5.	What are the major **Rural-land-claimant subjects** considered for Rural land use planning	1) ---------- 2)---------- 5) ---------- 4)---------- 6) ---------- 6)---------- 7---------- 8)---------- 9)---------- 10) ---------- 11) ---------- 12) ----------

13) ---------- 14) ----------

6.	What are the major **institution and enforcement subjects** considered for enforcement of the use of Rural land use planning	1) ---------- 2)---------- 7) ---------- 4)---------- 8) ---------- 6)---------- 7---------- 8)---------- 9)---------- 10) ---------- 11) ---------- 12) ---------- 2) 13) ----------14) ----------
7.	What are the major **urban land use types that were** considered in producing Urban Land Use plan	1) ---------- 2)---------- 9) ---------- 4)---------- 10)---------- 6)---------- 7)---------- 8)---------- 9)---------- 10) ---------- 11) ---------- 12) ---------- 13) ----------14) ----------

8. Participatory and integrated Land use planning is best conducted:

By the involvement of plan-driving organized and capacitated communities/beneficiaries, Planning-guide experts, and planning-facilitating institutions in a fused system approach.

1) Do you believe such an approach is essential? 1) Yes 2)No

2) Do you believe all three actors are important to be engaged in planning? 2a) yes 2b) no

3) If you choose "yes" on the above, may you rank the level of capacity gap (**in the rank of 10 to 1; where 10 is high and 1 is low**) which is inherent in each of the land use planning actors?

3) The capacity gap of:

a) Planning-guide experts --------

b) Facilitating institutions ---------

c) Planning-driving land users -------

--

9. **ILUP** is about the evaluation of every piece of land for its weighed comparative physical potentials and limitations followed by the allocation of such a piece of land for meeting economic, social, and environmental concerns of the current and future generations at best. Do you believe this is understood and applied in planning integrated land use in your **region, zone, Woreda, and/city or town**? (Please underline the entity to show from where you are**.**

i. Yes, I strongly believe it is understood

ii. No, such is not used in coming up with the plan

iii. No, we don't have such a land use plan

10. Do you believe training the land use planning actors on participatory land-use planning is important?

a) Yes, b) Not really

If yes, how important: y highly

11. What part of the integrated land-use planning is very difficult?

1.Knowing the subjects to be considered

a) Pre-requisite subjects, b) land-claimant subjects c) plan-enforcement subjects

2.Ranking the suitability level of each of the subjects to be considered in planning

3) grading suitability range for suitability ranks:

12. When a given land unit is said to be suitable for more than one land use type, how was that land decided to be used for one land use type?

Please describe! ----------

---

13. In some instances, land use planning may recommend abandoning a certain unfit land use and replacing it with another best-fitted, more economic, and sustainable land use. What are the advantages? what are the disadvantages of doing this? Please list at least two in each

Advantages:

Disadvantages:

14. When there were instances where one land use is required to change and get replaced by a new type of land use type, how was this implemented? please describe the procedure?

15. The land-use planning may cause a shift in your residence from such as riverbanks, lakeshores, wildlife habitats, mining areas, wetlands, prime agricultural lands, etc., to safer, more economical (more firm shallow soil-depth) residential sites. For people to accept and move to these new residential sites, what was recommended? Please list the 5 best social safeguard issues considered in such instances!

1.
2.
3.
4.
5.

16. In explicit terms, who shall participate in integrated land use planning? Please list the 5 best

1.
2.
3.

17. We want everyone to be aware and sensitized about the details of Integrated Land Use Planning. Who shall be involved in this training?

1.
2.
3.
4.

18. If you were to rate the level of the current level of awareness of the land users, the experts, and facilitators about the nature and know-how of land use planning, which will be your rating? Please note that 1 means the least and 10 means the highest. Circle your choice.

Land users: 1, … 2, … 3, … 4, ... 5, ----- 6, ----- 7, ---- 8, ---- 9, ---- 10, -----

Experts: 1, … 2, … 3, … 4, ... 5, ---- 6, ----- 7, ---- 8, ---- 9, ---- 10, --------

Facilitators: 1), … 2, … 3, … 4, ... 5, ---- 6, ----- 7, ---- 8, ---- 9, ---- 10, ------

19. Do you believe the absence of land use plan and land use policy have done damages in the region, zone, Woreda, town (where applicable)?

a) Yes:
b) No

20. Which do you think is most affected by the **absence** of Integrated land use

a) Social transformation
d) All the three

plan and policy?

b) Economic transformation

c) Environmental sustenance

21. Which three of the following are the best reasons for having an integrated land use plan? Please circle the three best!

a) To increase production per unit area of land
b) To diversify income sources from land and water
c) To increase the resilience against climate change
d) To improve the economic use of land resources
e) To guaranty the perpetuation of life (flora and fauna)
f) To avoid/minimize the disruption of interconnected interfaces between humans and their environment

22. You know there is no land use planning and enforcement policy both at national and regional government levels

What mechanism did you use to bypass this hurdle?

23. In principle Bureau of Land Administration and Use (BoLAU) is to facilitate planning and enforcing its implementation at administrative level

Is

3 Appendix 2: Questionnaire for the Regional Level Experts Who, would Have Participated in The Integrated Land Use Planning

1) Gender of the Respondent ----------. Education Level: ----------

2) Field of studies:---------- Year of service ----------

3) Name of the Office you are coming from……

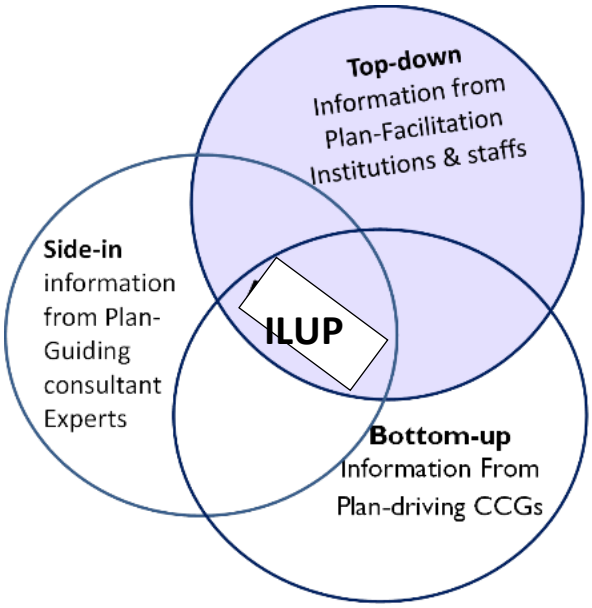
THE QUESTIONAIRE:

4) Which disciplines were represented during the planning by the experts? please circle the number.

1. Aquaculture and fishery
2. Biodiversity-
3. Biosphere reserve protection and use
4. Cemetery development
5. Coffee production
6. Education infrastructure
7. Ethno-botany and herbal medicine
8. Fiber crop production
9. Fishery development
10. Forestry
11. Geology
12. GIS and remote sensing
13. Gum and resin production
14. Health infrastructure construction
15. Heritage site development,
16. Horticulture
17. Hydrology
18. Industries
19. Institutions
26. Cartography and mapping
27. Eco-tourism
28. Investment
29. Marine ecology
30. Meteorology
31. Mineralogy and surface mining 3
32. Natural heritage protection and development
33. Policy and law
34. Population statistics
35. Rainfed agriculture
36. Root and tuber crop production
37. Rural roads
38. Settlement
39. Spice and condiment production
40. Strategic Environmental Assessment
41. Surface mining
42. Terrestrial ecology
43. Tourism
44. Urban land-use planning

20. Irrigation agriculture
21. Livestock and livestock feed development
22. Large scale farms
23. Rural and Urban Environment
24. Sociology
25. Wildlife parks, reserves,
45. Urban planning and expansion
46. Urban roads
47. Water supply
48. Watershed management
49. Wetlands/swamps protection/development

5) Which group of actors participated in the planning process? Please indicate your response using the blank space by the side of the figure provided on the next page.



ILUP means: Integrated Land Use plan at Rural and Urban settings

a) Please indicate a few of the **Top-down** institution-category that are represented by experts/authorities and **that facilitated** in the planning process.

i) ----------

ii) ----------

iii) ----------

b) Please provide the parties that **drove** the planning process from **bottom-up**.

i) _____

ii) _____

c) Please provide type of expertise that **guided the** planning process from **Side-in**.

iii) _____

iv) _____

v) ----------

6) How was each of the factors below was used in rating land suitability by:

a. Slope classes, (indicate the most two for each slope range)

i. 0-30% for ---------- and ----------

ii. 30 -45% for ---------- and ----------

iii. >45% for ---------- and ----------

b. soil-depth classes,

i. 0- 20 cm for ---------- and ----------

ii. 20 – 50cm for ---------- and ----------

iii. 50 -100 cm for ----------

iv. > 100 cm for ---------- and ----------

7) If you have used the combined effects of slope class and soil depth categories (land Resilience Classes) for stratifying and negotiating land-use type, please refer to the Land Resilience Classes in the Table at the following page and indicate how these 20 land resilience indicator-classes were used to decide on planning sustainability of the land use type.

Land Resilience Attributes		Slope categories				
		0-6%	>5 - 16%	>16 - 30%	>30 - 45%	>45%
Soil depth classes	Rock or <20 cm	LR 16	LR17	1R18	LR 19	LR20
	20 – 50cm	LR9	LR10	LR11	LR12	LR15
	50 – 100cm	LR3	LR4	LR6	LR8	LR14
	>100 cm	LR1	LR2	LR5	LR7	LR13

LR stands for Land Resilience

a) LR1 to LR 6 for _____,

_____ _____,and

_____

b) LR7 to LR8 for _____,

_____ and

_____

c) LR 9 – LR 12 for_____,and _____

d) LR 13 to LR 15 for

_____, _____ ,

_____, and _____

e) LR 16 -LR 18 for _____,

_____ and _____

f) LR 19 and LR 20 for

_____ and _____

8) How was the information on agro-climatic zones (the combined effects of rainfall and altitude) used in guiding the stratification of lands to put under the different land use type potentials? Please narrate!

_____

---

9) Even after using all distinguishing factors exhaustively, a piece of land may be suited for more than one land use type. In such a case how was such land use overlap/conflict resolved in the planning process? Please explain the methods used in reconciling the land-use conflicts

a) ---

b) ---

c) ---

d)

10) Which scales were used in depicting the rural integrated land use plans in rural settings?

a. regional integrated land use Plan ---

b. Zonal level integrated rural land use plans ---

c. Woreda level integrated land use plans ---

d. Special Woreda Integrated land Use plans ---

11) Which scales were used in depicting the Urban Integrated Land Use Plans in a rural setting?

a. Urban land use Plans of Cities ----------

b. Urban integrated rural land use plans of towns ----------

c. Rural settlements: ----------

12) What was the utility of the existing land use /land cover type maps?

---

13) Which land use land cover attributes were considered in the existing land use /land cover characterization?

---

14) how were the land-use conflicts negotiated and resolved in the land use planning process?

---

15) Who approved these land-use plans?

---

16) What was the role of the Plan-Guiding experts who came from land claiming institutions /and or users' institutions such as conservation, wildlife, tourism, natural heritage protection, industry and trade, road infrastructure, health infrastructure institutions, education infrastructure institutions, water-supply, and sanitation institutions, drinking water sources, water resource catchment-concerned institutions in the planning process? This is to say, was it driving? Was it guiding? Was it facilitating? Please specify!!

---

17) Which policies were considered in doing the land use planning?

i. _____

ii. ----------

iii. ----------

iv. ----------

18) When there were Integrated Rural land-use plans, who approved these land-use plans?

---

19) What were the drawbacks or the difficulties in producing the Integrated **Rural** Land Use plans?

1.
2.
3.
4.

20) Please do the same for Integrated Urban Land Use Plans that are parts of the ILUP

1.
2.
3.
4.

21) Please indicate at least four major differences between a Land Development Plan and an Integrated Land Use Plan?

1.
2.
3.
4.

22) Why is that the basin-based integrated land use plans that were prepared by Oromia Water Works Enterprise have not been implemented? Please provide at least four reasons.?

1.
2.
3.
4.

23) The basin-based integrated land use plans that were prepared by Water Works Enterprise are almost forgotten by Zonal, Woreda and Kebele level experts and should have been revised. Why is that they have not been revised?

---

24) ---

Please detail the knowledge gaps in producing Integrated **Urban Land Use** plans to be prepared.

1.
2.
3.

25) If the Integrated Rural Land Use Plan is to be conducted at regional, zonal, Woreda, and kebele-levels, which knowledge gaps need to be addressed in advance? Give details.

1.
2.
3.
4.

26) Please indicate issues that the questionnaire missed issues in the identification of Knowledge gaps in the areas of Integrated Rural and Urban Land Use Planning.

- ✓ _____
- ✓ _____
- ✓ ---
- ✓ ---
- ✓ ---

27) Please indicate any other remark you may have in advancing the Knowledge Gap Assessment Effort in the space below.

4 Appendix- 3: List of respondents to the Questionnaire Interview and Focus Group discussions

1. ***List of regional level experts who participated in the Questionnaire Interview (Annex --) and the FGD checklist (annex ---)***

Name of the participants	Profession	Education Level	Year of service	Cell phone
a) Experts from Bureau of Land Administration and Use of Oromia				
1. Seid	NRM	BSc.	30	0982097649
2. Samuel Gada	Plant Science	BSc	28	0900835086
3. Gamachu Yadata	GIS	BA	10	0917852304
4. Belay Getachew	Rural Development	MSc.	15	0913878653
5. Zinash G/Wold	Urban Management	MA	28	0911115202
6. Iyob Adunya	Urban Plan Development	BSc	8	0913459545
7. Ahmed Yusuf	Urban Land & Real Estate Management	MA	19	09157436
8. Abduraman Munir	ULM&S	BA	8	0921735448
9. Mazgabu Olana	Business Management	BA	10	0924430599
10. Olani Namomsa	Geography & Env. Scie.	BA	10	0932449212
11. Masgabu Cala	Geography & Env. Scie.	BA	5	0921631898
12. Dimshasha Alemayehu	Law	LLB	8	0916013704
b) Experts from Forest and Wildlife Enterprise of Oromia				
13. Birhanu Jilcha	Wildlife Management	BSc	28	0911957530
14. Girma Darsu	Conservation Biology	MSc	22	0917975899
15. Mengistu Tadesse	Geography & Env. Mgt.	MSc	12	0928007086
16. Bekele Tsegaye	Ecological & Systematic Ziology (Biology)	PhD	35	0911154235
17. Taressa Dandena	Biology	MSc	29	0911633598
18. Chemere Zewude	Integrated Water Shade Mgt	MSc	25	0911071588
c) Experts from Bureau of Agriculture and Natural Resource of Oromia				
19. Belaynesh Sori	Soil & Water Conservation	BSc	10	0941150642
20. Tadesse Wayuma	Plant Science	BSc	15	0909602431
21. Amanuel Hailu	Horticulture	MSc	23	0911109409
22. Yadata Korme	Water Shade & NRM	BA	15	0911758778
23. Takele H/Mariam	Horticulture	BSc	20	0917840270
24. Adisu Waqayo	Land Resource Mgt & Env. Protection	MSc	9	0912160049

d) Experts from Oromia Environment, Forest, and Climate Change Authority				
25. Cali Ayele	Geography & Env. Study	BA	12	0904193100
26. Bekele Adunya	Forestry	BSc	6	0954513330
e) Experts from Oromia Livestock and Fishery Resource Development Agency				
27. Tayech Gudisa	Animal Sceince	BSc	15	0923786184
28. Birhanu Tilahun	Animal Health	DVM	25	0911014669
29. XXX	Animal Sceince	BSc	15	
f) Experts from Bureau of Culture and Tourism of Oromia				
30. Fantahun Tadesse	MBA	MA	17	0911984743
31. Sahali Mamma	History & Heritage Mgt	BA	10	0913357381
32. Dereje Jabessa	Anthropology	BA	8	0922282672
33. Ebnemelek Assefa	Management	BA	25	0911885048
34. Mamo Kumsa	History & Heritage Mgt	BA	8	0923490558
35. Bekam Kaba	Tourism Development	BA	6	0917049051
g) Experts from Bureau of Water and Energy Resource Development of Oromia				
36. Fiqadu Labecha	Hydrogeology	MSc	35	0911404392
37. Keiredin Dadhi	Hydrogeology	MSc	27	0911840416
38. Fiseha Tilahun	NRM	BSc	12	0913992725
39. Muhamed Aman	Water Engineer	BSc	11	0948332787
h) Experts from Oromia Urban land use Planning Institute				
40. Melese Firdisa	Urban Planner and Designer	MSc	14	0920125180
41. Dhufera Dano	Environmental Planning	MSc	18	0911569668
42. Shelema Abebe			20	0911306818
i) Experts from Oromia Water Works Design and Supervision Enterprise				
43. Abdana Dheressa	Soil Science	PhD	22	09113122l5
44. Tesfaye Kebede	Agronomy	MSc	32	0911794317
45. Nuguse Birmaji	Engineer	BSc	30	
46. Taye Tadesse	Socio-economist	MSc	34	0911184508
47. Lata Abate	Environmentalist	BSc	12	

a.

2. List of the East Shewa Zone sectoral offices' experts Interviewed

Name of the Expert	Specialization	Specialization	Expertise Line
48. SeifuTulu	Environment, Forest, and Climate Change	Biologist	Biodiversity expert
49. Fantale Boru		NRM	land degradation/conservation expert
50. Bariso Balda		Environmentalist	Industrial, water and air pollution expert
51. Ahmed Aman		Agricultural Economist	
52. Niguse Hailu	Land Administration and Use	Economist	
53. Kifle Fayisa		Land Administration	
54. Gabre Shibeshi		Irrigation	
55. Abdurahman Negash		Civil Engineer	
56. Muhamed Abdurahman		Law	Plan enforcement policy and law expert
57. Birhanu Wossene		Urban Land Reform	
58. Taso Nadhi		NRM	
59. Bogale Tufa	Mining	Environmentalist	
60. Kifalew Bayisa		Geologist	
61. Meron Kuma		Sociologist	
62. Ketema Gudeta	Water and Energy	Hydro geologist	
63. Tadele Girma		Socio-Economist	
64. Mita Muhamed		Physics	
65. Emebet Fetene		Hydraulic Engineer	
66. Tigist Amare		Hydrologist	
67. Motuma Tolasa	Agriculture and Natural Resource	Extension	
68. Derese		Agronomist	
69. Wolde Ibsa		Horticulture	
70. Teshome		Soil and Water Conservation	
71. Mulu		GIS	
72. Samuel		Land use Land Cover	
73. Kibebu Legesse		Irrigation	
74. Shimellis Hunde		Social Participation	
75. Addis		Research and design	
76. Tesfaye Moroda	Livestock	Animal Husbandry	
77. Guluma Asefa (VDM)		Veterinary	
78. Ararsa Shumi		Extension	
79. Mohammad Jundo	Culture and Tourism	Sociologist	

80. Sofia Mohammad		History	
81. Lammi Kebede		Tourism Management	0917095971
82. Daniel Eshetu		Language	
83. Fantaye Bekana	Investment office	Bus. Management	0904741414
84. Dereje Jirre		Statistician	
85. Aloya Ahimed		Management Info. Syst.	
86. Fantu Tufa		Management	
87. Zenebech Bekele	Enterprises & Industrial Development office	HRM	
88. Getahun Feyisa		Pub. Admin.	
89. Kaba Bayata		Management	0910254576
90. Yesufu Ibrahim	Urban & Housing Development office	Urban Planning	0911751464
91. Frezer Abara		Urban Environment & CC	
92. Getachew Bijiga		Urban Planning	
93. Tesfaye Demisie	Health office	Public Health	
94. Masresha		Environmental Health	
95. Naol Hirko		B.M	
96. Zerfu		Pharmacy	0913713897: Abera Mammo
97. Sisay Teshome	Education office	Biology	
98. Abera Desalegn		Geography	
99. Bashir Ibrahim		Civil Engineering	
100. Teshome Edao		Educ. Planning	0911843613
101. Samuel Taye	Market	Animal Science	
102. Dereje Worku		Bus. Admin	
103. Zewude Abebe		Sociologist	0911865222
104. Fajiso Babsa	Rural Road	Law	0923677115
105. Abdissa Hirko	Meteorology	Metrology	
106. Getachew Kebede		Metrology	

List of the experts who have participated in the FGD conducted at East Shewa Zonal Agricultural Office and Culture and Tourism

Name of participants	Profession	Sector
107. Niguse Hailu	Economist	Land Administration and Use
108. Ketema Gudeta	Hydro geologist	Water and Energy
109. Tigist Amare	Hydrologist	"
110. Ahmed Aman	Agricultural Economist	Environment, Forest, and Climate Change
111. Motuma Tolasa	Extension expert	Agriculture and Natural Resource
112. Derese	Agronomist	"
113. Wolde Ibsa	Horticulture expert	"
114. Teshome	Soil and water Conservation	"

115. Samuel	Land use Land Cover	“
116. Kibebu Legesse	Irrigation engineer	“
117. Shimellis Hunde	Social Participation	“
118. Addis	Research and design	“
119. Mohammad Jundo	Sociologist	Culture and Tourism
120. Sofia Mohammad	History	“
121. Lammi Kebede	Tourism Management	“
122. Daniel Eshetu	Language	“

List of the participants of the FGD conducted at East Shewa Zone, Lume Wereda; Tadde-Dildima kebele

Name of the Participant	**Responsibility**
123. Shiferaw Gebeyehu	Kebele Chairperson
124. Zenebe Tekalign	DA
125. Mengistu Tabor	V/Chairperson
126. Kifile Mosie	Communication
127. Tafese Aboyo	Youth secretariat
128. Ashenafi Lema	Committee member
129. Senayit Ketema	Spokes person
130. Zeleke Mamo	Women Affairs
131. Aman Nagawo	Admin and security
132. Alemayehu Ketema	Organization

2) Illuababor zone respondents

List of Zonal level FGD Attendants, Ilu Aba Bora Zone

No	Name of the participants	Sector	Education Level	Responsibility	Cell phone
133.	Alemayehu Bulti	LAU	1st Degree	Team Leader	0935033732
134.	Wondewosen	Town Admin	1st Degree	Urban Plan	
135.	Habtamu Workine	Water & En.	1st Degree	Geographer	
136.	Tarekegn Molla	LAU	1st Degree	Agri Economics	0917171446
137.	Tarekegn Tena		1st Degree	Expert	
138.	Muhamed Asefa	Culture & Tu	1st Degree	Expert	
139.	Bogale		1st Degree	Expert	
140.	Getachew Galata	EFCCA	1st Degree	NRM	0917965975
141.	Abdu Nuresa	ANR	1st Degree	Horticulture	0913295569
142.	Addisu Nigusse	ANR	1st Degree	AgriEconomics	0911034008

143.	Birhanu Irana	ANR	1st Degree	Horticulture	0911909811
144.	Bogale Mekonen	Irrigation	1st Degree	Economics	0911909811
145.	Endalu Dasu	Water	M.Sc.	Envir. Engineer	0954568111
146.	Kebede Regasa	Irrigation	1st Degree	Rural Dev.	0930422935
147.	Solomon Chekol	Agriculture	1st Degree	NRM	0910068470
148.	Tesfaye Degefa	Livestock	1st Degree	Animal Science	0913802670
149.	Turuwork Tesfaye	Mining	1st Degree	Sociology	0917384812
150.	Bantayehu Fiqadu	LAU	1st Degree	GIS Expert	
151.	Wondimu Badasa	Livestock	1st Degree	Animal Science	0900312799
152.	Wubit Siraji	Agriculture	M.Sc.	Agribusiness	0917384892
153.	Zaytuna Kedir	Agriculture	1st Degree	Agri Extension	0983504745

List of Questionnaire filling participants and FGD attendants, I/A/Bora, Ale Woreda

154.	Kenbon Asfaw	Water & En.		Mining Investigator	0941711359
155.	Girma Mekonin	Education		Plan Expert	0901617647
156.	Wondimu Biru	Livestock		Fishery Expert	0917607723
157.	Tadelech Mulugeta	Livestock		Animal Feed Expert	0913380301
158.	Meseret Workineh	Livestock		Animal Health	0911876457
159.	Mengistu Maca	EFCCA		Environmentalist	0917113945
160.	Alemayehu Mekonin	Rural Road		Surveyor	0906556174
161.	Ayele Gamada	Agriculture		Extension	0931068148
162.	Tigist Birhanu	LAU		Expert	0934265957
163.	Asowe Gudar	LAU		Expert	0991658352
164.	Gurmesa Qixesa	EFCCA		Forestry	0917113758
165.	Adisu Lenco	LAU		Processor	0932017545
166.	Ayana Kebede	LAU		NRM	0913384944
167.	Andualem Alemu	Agriculture		NRM	0917781865
168.	Badhasa Dagafa	Culture		Team Leader	0917219102
169.	Besufikad Ayele	Education		School Financing	0972202381
170.	Gezahang Gesese	Livestock		Animal Husbandry	0917341008
171.	Wondimagen Workineh	Agriculture		SLM FP	0912161943
172.	Demelaw Tariku	Agriculture		Irrigation	0917868870
173.	Habtamu Workineh	LAU		Geographer	0913043914

List of Questionnaire filling participants and FGD attendants, I/A/Bora, Yayo Woreda

174.	Belachew Tamiru		1st Degree	Management	
175.	Temesgen Ljalem	Health	Diploma	Expert	
176.	Amare Iniyew	Water & En.	1st Degree	Water Supply Expert	
177.	Kasahun Etefa	LAU	Diploma	Surveying Expert	

178.	Abaynesh Mulune	EFCCA	1st Degree	NRM Expert	
179.	Desalegn Mekone	EFCCA	1st Degree	Expert	
180.	Tarekegn Debela		Diploma	Expert	
181.	Tamene Teshome		1st Degree	Expert	
182.	Melkamu Kasahun		Diploma	Expert	
183.	Seifu Fedhasa		1st Degree	Expert	
184.	Tagel Befkadu		1st Degree	Geography Expert	
185.	Abera Habte		1st Degree	Agri Extension	
186.	Getachew Wakjira		1st Degree	Expert	
187.	Tilahun Afwork		1st Degree	Animal Sc. Expert	
188.	Ayinalem Birhanu	Town Admin	1st Degree	Urban Expert	
189.	Musa Adem	Agriculture	1st Degree	Rural Dev. Expert	
190.	Girma Gamtessa	Agriculture	1st Degree	Rural Devn't	0913298299
191.	Hirpho Morkata	Agriculture	1st Degree	Soil Fertility	0939306761
192.	Wonde Safo	Agriculture	1st Degree	Agronomy	0913338579

List of FGD attendants, I/A/Bora, Ale Woreda, Gumaro Abo Kebele

193.	Habtamu Kebede	Kebele		Admin
194.	Nasir Muhamed	Kebele		Manager
195.	Belay Degaga	Kebele		Committee Member
196.	Rata Kebede	Kebele		Committee Member
197.	Menen Wondimu	Kebele	Diploma	DA
198.	Marsha Nagu	Kebele	Diploma	DA
199.	Zewuditu Bekele	Kebele	Diploma	DA

List of FGD attendants, I/A/Bora, Ale Woreda, Hacabo Kebele

200.	Habtamu Erana	Kebele		Admin.
201.	Indale Ijigu	Kebele		Manager
202.	Fedhasa Lagasa	Kebele		Committee Member
203.	Muhamed Hussein	Kebele		Committee Member
204.	Hailu Bitawu	Kebele		Committee Member
205.	Kemal Hasan	Kebele		Committee Member
206.	Getachew Mihret	Kebele	Diploma	DA
207.	Henok Habtamu	Kebele	Diploma	LAU Expert

3) East Harrarghe Respondents

List of Questionnaire filling participants and FGD attendants, East Hararge Zone

208.	Abdulaziz Zaynu	Investment	1st Degree	Expert	0973742339
209.	Israel Wakene	Agriculture	1st Degree	Expert	0915130939
210.	Sh/gizaw D/Work	Livestock	DVM	Expert	0925256223
211.	Ketema Girma	Agriculture	1st Degree	Expert	0913729597
212.	Usumael Muhamd	Agriculture	M.Sc.	Process Owner	0947180608
213.	Habtamu Tesfaye	LAU	MA	Process Owner	0973582968
214.	Bedri Muhamed	Road Auth.	1st Degree	Engineer	0911251468
215.	Marga Xita	Water & En.	1st Degree	Geologist	0912735271
216.	Rahel Kebede	LAU	Level 5	Surveyor	0920894400
217.	Nuradin Abubakar	LAU	1st Degree	Land Admin	0913202554
218.	Bonsa Tamasgen	Mineral	1st Degree	Process Owner	0911815733
219.	Merid Tadesse	Education	M.Sc.	Process Owner	0912224683
220.	Hamza Umar	Plan Institute	1st Degree	Urban Planer	0912949067
221.	Firehiwot Tesfaye	Sport	1st Degree	Expert	0920268795
222.	Kebebush Tadele	Sport	1st Degree	Expert	0902506585
223.	Abinet Teshome	EFCCA	1st Degree	Team Leader	0920147560
224.	Abdulaziz Ahmed	EFCCA	1st Degree	Team Leader	0902589553
225.	Tadele Bekele	EFCCA	1st Degree	Expert	0953520838
226.	Muhamed Muzamil	Livestock	1st Degree	Animal Feed	0919085060
227.	Shambel Dhuguma	Zone Admin	1st Degree	Administration	0924216081
228.	Maka Sh.Asmama	Health Office	1st Degree	Plan & Program	0922508520

List of Questionnaire filling participants and FGD attendants, E/Hararge, Babile

229.	Muhamed Hasan	LAU	1st Degree	Team Leader	0915139304
230.	Mengistu Tsige	LAU	1st Degree	Team Leader	0970312156
231.	Tedros Worku	LAU	1st Degree	Land Use Plan expert	0933404913
232.	Darimyelesh Mamo	Investment	1st Degree	Expert	0912873592
233.	Jemal Adam	Mining	1st Degree	Geologist	0921069736
234.	Efrem Tesfaye	Water & En.	1st Degree	Energy Expert	0920465379
235.	Ibro Muktar	Water & En.	1st Degree	Hydrologist	0919090764
236.	Moges Abate	Agriculture	Diploma	Agronomist	0913395983
237.	Muhamed Abdi	Agriculture	1st Degree	Irrigation	0920052754
238.	Usmael Ali	Agriculture	1st Degree	Extension	0943935288
239.	Mawardi Abdi	Tourism	1st Degree	Tourism Heritage	0974824402
240.	Sadam Abdu	Tourism	1st Degree	Cultural Heritage	0909956506
241.	Hitbarek Tesfaye	Rural Road	Diploma	Road Expert	0933259345
242.	Rahima Ahmed	EFCCA	1st Degree	Forestry	0952799133

243.	Adisalem Wubshet	EFCCA	1st Degree	Climate Change	0912185199
244.	Asladin Isak	EFCCA	1st Degree	Biodiversity Con.	0982545795
245.	Yalew Shawul	EFCCA	1st Degree	Environment	0921869168
246.	Ahmedtofik Muhamed	Agriculture	1st Degree	Horticulture	0963068602
247.	Fikadu Tefera	Health	1st Degree	Project FP	0902050787
248.	Muhamed Ahmed	Education	1st Degree	Project FP	0974647040
249.	Sisay G/Igzaber	Livestock	1st Degree	Expert	0994734989
250.	Zarihun Nagasa	Livestock	1st Degree	Forage	0912911789
251.	Selamawit Hasan	LAU	1st Degree	GIS Expert	
252.	Mubarek Adem	Market Dev.	1st Degree	Expert	0992947490
253.	Mengistu Tsige	Agriculture	1st Degree	Expert	0970312156
254.	Nure Ziyad	Livestock	1st Degree	Expert	0933333320
255.	Abdi Ahmed	Livestock	1st Degree	Expert	
256.	Ahmed Taher	Water & En.	1st Degree	Expert	0921153061
257.	Yasin Mume	LAU	1st Degree	Law Expert	
258.	Abdi Ibro	Social Affairs	1st Degree	Expert	0982886550
259.	Abduselam Kalif	Agriculture	1st Degree	Expert	0921869285

List of Questionnaire filling participants and FGD attendants, E/Hararge, Haromaya

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261.	Muhamed Umer	LAU		Land Use Expert	0909418245
262.	Ibsa Bakar	LAU		Land Use Expert	0913542177
263.	Jemal Usman	Agriculture		Team Leader	0909421558
264.	Tuji Jamal	Rural Road		Plan Expert	0982610930
265.	Hamza Mahamed	Agriculture		Extension	0913218781
266.	Samuel Aregay	Health		Plan Expert	0921853170
267.	Damtew Bedilu	Livestock		Animal Husbandry	0934015599
268.	Mustefa Abdi	LAU		Expert	0913186400
269.	Shumus Talib	Water & En.		Expert	0910506061
270.	Jemal Yusuf	Water & En.		Expert	0913425029
271.	Yared Bekele	Agriculture		Team Leader	0913144797
272.	Elias Mustefa	EFCCA		Expert	0912214047
273.	Umer Abdi	EFCCA		Expert	0910097596
274.	Nibras Ahmed	Agriculture		Expert	09206941l2
275.	Muhamed Abdulishe	EFCCA		Environmentalist	0912761384
276.	Ahmedsham Abduselam	Mining		Expert	0946426153
277.	Abdulselam Ali	Livestock		Coordinator	0912057671
278.	Zakir Muhamed	Agriculture		Irrigation	0912045078

279.	Umer Muhamed	Social Affers		Expert	0915181601
280.	Abdisha Ahmed	Culture & T.		Expert	0915792642

List of FGD attendants, East Harage, Babile Woreda, Tula Kebele

281.	Yohannis Tsegaye	Kebele	1st Degree	DA	0912744187
282.	Idris Amme	Kebele		Vice Admin	0934328419
283.	Rahida Umare	Kebele		Committee Member	0992101929
284.	Harun Ahmed	Kebele		Kebele Admin	0915092937
285.	Abas Kamil	Kebele	10+3	Manager	0936600251
286.	Mamad Abdi	Kebele		Committee Member	0975755440
287.	Ibrahim Bale	Kebele	Diploma	LAU Expert	0923191554
288.	Ahmed Muhammed	Kebele		Committee Member	

List of FGD attendants, East Hararge, Haromaya Woreda, Adele Waltaha Kebele

289.	Abduselam Mamad	Kebele		Kebele Manager	
290.	Jemal Abrahim	Kebele		Committee Member	
291.	Fetia Ahmed	Kebele		Committee Member	
292.	Seada Abrahim	Kebele		HEW	
293.	Aliyi Idris	Kebele		Vice Admin.	
294.	Tofiq Muhamed	Kebele		Committee Member	
295.	Dini Mume	Kebele		Admin	
296.	Abdi Siraj	Kebele		Committee Member	
297.	Abir Aliyi	Kebele		Farmer	
298.	Tedi Yitagezu	Kebele		LAU Expert	
299.	Miskiya Aliyi	Kebele		Committee Member	
300.	Nuria Bakar	Kebele		Committee Member	
301.	Zeynaba Kaka	Kebele		Committee Member	
302.	Amina Muhamed	Kebele	Diploma	DA	
303.	Iftu Muhamed	Kebele	Diploma	DA	

List of Questionnaire filling participants and FGD attendants, Borana Zone

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305.	Habtamu Soboqa	Agriculture	1st Degree	Dep't Head	0901541601
306.	Luko Beko	Agriculture	1st Degree	Team Leader	0911965501
307.	Bule Dhalan	Culture & T.	1st Degree	Expert	0919423729
308.	Dida Garbole	Culture & T.	MA	Team Leader	0937218870
309.	Galma Kuna	Mining	1st Degree	Team Leader	0913245674
310.	Halake Alex	Agriculture	1st Degree	Extension	0910217310
311.	Fedhesa Assefa	LAU	1st Degree	Team Leader	0912024385
312.	Solomon Takle	LAU	M.Sc.	Team Leader	0935932489

313.	Temesgen Alemu	Water & En.	M.Sc.	Team Leader	0942500470
314.	Mihretu Mohamed	Water & En.	M.Sc.	Team Leader	0915165601
315.	Darge Negassa	Market	1st Degree	Team Leader	0911827943
316.	Tadasa Dabale	Livestock	M.Sc.	Animal Feed	0942487805
317.	Addisu Tunu	Education	M.A	Expert	0986747058
318.	Guyo Liban	MMM	1st Degree	Expert	0915007238
319.	Kiya Arero	Agriculture	1st Degree	Expert	0913485141
320.	Edaso Benkere	Investment	1st Degree	Expert	0910012428
321.	Mesele Iticha	LAU	1st Degree	Process Owner	0911758426
322.	Wogene Tadese	LAU	1st Degree	Process Owner	0913678857
323.	Dhadacha Boru	Health	1st Degree	Expert	0916459734
324.	Mebratu Melkageng	Livestock	1st Degree	Expert	0921068671
325.	Silo Dida	EFCCA	1st Degree	Team Leader	0916178742
326.	Luka Haile	EFCCA	1st Degree	Team Leader	0913335411
327.	Tadesse Yayehyirad	EFCCA	1st Degree	Team Leader	0926245672
328.	Malicha Boru	LAU	Level IV	Surveying	0980648429
329.	Galma Sosura	Investment	1st Degree	Office Head	0916382577
330.	Dida Duba	Agriculture	1st Degree	Water shade Expert	0910874956
331.	Belay Magarsa	Education	1st Degree	Plan Expert	0913594766
332.	Befikadu Bifa	LAU	1st Degree	Process Owner	0919423494
333.	Wario Boru	EFCCA	Level IV	Team Leader	0924702683
334.	Bonaya Dhenge	Agriculture	1st Degree	Irrigation Team L.	0934541707
335.	Kadiro Muhammed	LAU	1st Degree	Plan Expert	0926826732
336.	Jilo Daka	Livestock	1st Degree	Team Leader	0913957554
337.	Abebe Teshome	Livestock	1st Degree	Range Land Team L.	0932641885
338.	Malicha Abayo	LAU	Level IV	Process Owner	0985565846
339.	Boru Dida	Livestock	Level IV	Expert	0928784236
340.	Duba Galgalo	LAU	1st Degree	Expert	0916936018
341.	Gababa Gayo	Health	1st Degree	Expert	0913401293
342.	Galgalo Wario	EFCCA	Diploma	Expert	0955949196
343.	Guyo Ari	LAU	Level IV	Team Leader	0916995339

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345.	Dambola Guracha	EFCCA	1st Degree	Expert	0926824041
346.	Wario Waqo	EFCCA	1st Degree	Plan Expert	0937452206
347.	Mohamed Kedir	Investment	1st Degree	Team Leader	0932577207
348.	Waqo Guracha	Finance	1st Degree	Plan Expert	0916984360

349.	Boru Wario	Education	1st Degree	Office Vice Head	0916522572
350.	Halake Dhiba	LAU	1st Degree	Expert	0986475611
351.	Nure Halake	EFCCA	1st Degree	Expert	0925667540
352.	Abdulmenan Husein	Agriculture	1st Degree	Expert	0916143518
353.	Yidnekachew Tesfaye	Agriculture	1st Degree	Expert	0911772193
354.	Zelalem Zegeye	Livestock	1st Degree	Expert	0916876092
355.	Jeilan Mohamed	Agriculture	1st Degree	Expert	0912485734
356.	Dr. Wario Ermias	Livestock	1st Degree	Office Head	0910106965
357.	Halake Dida	EFCCA	1st Degree	Expert	0903080445
358.	Gashahun W/Charkos	Water & En.	Diploma	Expert	0910760948
359.	Idaa Tasama	Water & En.	Diploma	Expert	0924751370
360.	Jatani Guyo	Agriculture	1st Degree	Expert	0926421559
361.	Bonaya Arero	LAU	1st Degree	Expert	0937329507
362.	Genet Tesfaye	Agriculture	1st Degree	Expert	0916851816
363.	Gutata Bosho	Livestock	1st Degree	Expert	0931682605
364.	Sar Jaldessa	Kebele		LAU Expert	0926278522
365.	Sora Xache	Kebele		Committee Member	
366.	Dhaki Dalacha	Kebele		Committee Member	0994355286
367.	Debano Dhenge	Kebele		Manager	0901542464
368.	Tari Shana	Kebele		Vice Admin	0919288342
369.	Galma Boru	Kebele		Committee Member	
370.	Roba Abduba	Kebele		Committee Member	0961387444

List of FGD attendants, Borana, Yabalo Woreda, Dharito Kebele

371.	Kanu Dida	Kebele		Admin	0913518958
372.	Jatani Boru	Kebele		Committee Member	0904781357
373.	Shama Sora	Kebele		Vice Admin	0972683947
374.	Hordofa Galgalo	Kebele		Committee Member	0916382502
375.	Abduba Halake	Kebele		Committee Member	0987238700
376.	Dhoko Guyo	Kebele		Committee Member	0932620940
377.	Bute Qamphe	Kebele		Committee Member	0930742344
378.	Galma Liban	Kebele		Committee Member	0916382487
379.	Abduba Arero	Kebele		Committee Member	0986475163
380.	Kanu Guya	Kebele		Committee Member	0936846280
381.	Abayo Ishetu	Kebele	10+2	Manager	0968443520
382.	Huqa Halake	Kebele	Diploma	DA	0926561009
383.	Dida Ubba	Kebele		Committee Member	0955949222
384.	Eliyas Gubo	Kebele		Committee Member	0960907002

385.	Guracha Huqa	Kebele	Committee Member	0946315174

5 Annex 4.: Questions for the field-deployed consultants themselves

When you conduct the field-level investigations,

1) What was the drawback of the gap assessment exercise?

2) Do you think:

   a. Integrated Urban Land Use plan was conducted? ----------

   b. Integrated Urban Land Use plan was conducted? ----------.

3) Do you believe what has been planned is different from a Land Development Plan under the given land use types? Give reasons based on your field investigations!

4) Which of the above Group-1 questions/issues were addressed effectively?

5) Which of the Group-1 questions or issues were overlooked?

6) Which wones of the Group-1 questions are not considered due to: lack of knowledge? Please be specific and detail.

7) Which ones of the Group-1 questions are not considered in your interviewing because the work was not a land-use plan?

8) If the Integrated Land Use Plan (not Development Plan) is to be conducted at regional, zonal, Woreda, and kebele-levels, which three most pressing knowledge gaps need to be addressed in advance?

   a. ----------

   b. ----------

   c. ----------.

[i] Actually, land use planning is evaluating every piece of land for which it can contribute the most reward for economic, social, and environmental welling of the country on sustainable basis.