Integrated Land Use Planning (ILUP) Operational Manual

For

Oromia Environmental Protection Authority (OEPA)

Oromia National Regional State Forested Landscape Program (OFLP)

ABT-PCS
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11 April 2022

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Schedule for training Woreda, Zonal and Regional level Land Use Planning Facilitation Staffs

on

Integrated Rural and Urban Land Use Planning

Assumptions in scheduling the training

1. It is assumed that the regional level staffs who were trained in the Training of Trainers (TOT), which was conducted by ABT-PCS will be trainers of the zonal level trainees who, will in turn, be training the Woreda level trainees,

2. It is also assumed that the trainees who came from zonal offices and attended the Regional Level TOT will travel to the different zones to conduct the zonal level training (?). The Oromia Environmental Protection Authority (OEPA) will have to come with its solutions in case the zonal level trainees could not be trainers at zones different from their own..

Assumptions in scheduling the training … continued

The actual integrated Rural land use and Urban Land Use Planning may start after:

a) The training at the zone and Woreda levels are completed for top-down facilitation and excercing their overseeing responsibilites.
b) The professionals in sector disciplines are recruited phase by phase –for timely side-in input
c) All the direct and inirect land users are stratified, organized and enlightened on their roles in integrated land use planning both at :
    i. rural level in Rural Integrated Land Use Planning and
    ii. Urban integrated Land Use Planning

2) Professionals to be involved in the zonal level Training as facilitators of integrated land use planning

1. Sociologist
2. Gender specialist
3. Agronomist
4. Horticulture professional
5. Forestry development /Silviculture specialist
6. Forest industries /forest utilization expert
7. GIS and remote sensing professional
8. Ecology and biodiversity
10. Soil sciences specialist
11. Wildlife and tourism professional
12. Urban land use Planing specialist
13. Aqua-culture and Fisheries
14. Geology and Surface Mining
15. Rangeland/ livestock specialist
16. Herbal medicines /ethnobotanist
17. Environmental protection expert
18. Hydrology and water Catchment specialist

Training program summary

1. Experts from the 18 disciplines, who will all have to come from the regional Land Use Planning office, will be conducted from 02 to 07 May 2022.
2. The zonal level trainees will be trained in 15 separate sessions by the trainers who are trained by ABT-PCS
3. The 36 trainees to be trained as trainers of the zonal level staff will train 425 trainees who are professionals in 18 disciplines. The traines come from 21 zones and three major towns who will be serving as stepping stones for the preparation if the integrated:
   i. Rural land use plans of 21 zones
   ii. Urban land use plans of 21 capital cities of the 21 administrative zones..

Training program summary continued ---

4. There will be 18 different professionals who will be involved in the training from each of the 21 zones (378 trainnes) and the additional 54 (18 * 3) trainnes from three sample cities. This makes the total number of trainees 378 + 78 =456
5. The consulting firm hopes that a comprehensive Integrated Land Use Planning and plan implementation will be effectively facilitated by these Trainees of the TOT upon completion of these (region to Woreda level) cascaded training sessions

Trainees that attend the Training on planning – Central Oromia	Trainees Rural +urban)	144	Venue	Schedul
1) North Shewa	18	36	Sheno town,	02– 07 May
East Shewa	18			
2) South-East Shewa	18	36	Ambo city	16 – 21 May
West Shewa	18			
3) West Harrarge	18	36	Harrarge City	20 – 26 June
East Harrarghe	18			
4) Addis Ababa Zuria	18	18	Ambo city	04– 09 July
5) Adama City (Urban Integrated Land Use Planning)	18	18	Adama - yCity	19 – 24 July 2022
Total Number of Trainees	144	144		

2nd Session Training in preparation for planning, South-West Oromia	136	136	venue	period
6) Arsi	18	**36**	**Asela city**	**01 – 06 August**
West Arsi	18			
7) Bale	18	**36**	**Robe city**	**15-20 August**
East Bale	18			
8) Guji	18	**36**	**Jugi town**	**28 August to 03 Sept.**
West Guji	18			
9) Borena	18	18	**Negele City**	**12 – 17 September**
10) Shashemene City	18	**18**	**Shashemene**	**26 Sept – 01 Oct.**

Trainees that attend the Training on planning ---cont.

West Oromia	162	162		
11) East Wollega	18	36	Nekemt city	10 – 15 October
Nekemt	18			
12) H.G.Wollega	18	36	Kelem	24 – 29 October
West Kelem	18			
13) Woliso	18	36	Wolliso city	06 -11 November
Ambo	18			
14) Fiche	18	18	Fiche city	19– 24 November 2014
AdaA	18	18	Debre-Zeit	26 Nov. to 01 Dec
15) Urban planning :Jima City	18	18	Jima city	08 - 13 Dec 2022

3. Essence of the outcome of the training 3.

A) The purpose of the TOT is dealing with the following.

1. organizing, and building the capacity of the Land Use Planning experts and engaging them as planning facilitation actors
2. Organizing, and building the capacity of Common-commodity production groups (members of the CCGs) as drivers of the ILUP process

➢ ***Though these land users are the center of focus in driving the process, the primarily important targets of the training manual are the ILUP -facilitation actors who are supposed to conduct Training of Trainers.***

Training methods: follow adult teaching and learning principles

- ✓Lecture by using PPT presentation
- ✓Brainstorming, (through case experiences)
- ✓Group presentation on group assignments on conflicting and competing land use types on a given unit of land
- ✓Experience from past ILDP experiences (GPNRS
- ✓Demonstration through field visits
- ✓Reporting on field visit findings and learnings
- ✓Materials required (PPT projector, flip charts, markers (permanent and non-permanent, white board, cards)

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Making the training custom-made

1. Getting to know one another makes the training custom-made, for addressing the learning needs of the trainees and the needs and limitations of the trainees
2. The first step in operational manual for the training is getting to know each other of the trainees and the trainers
3. It allows the to assemble the right examples and in-house and out-door exercises

2. What the regional trainers expect from the zonal level trainees?

- **Participating** --- making the training a two way traffic
- **Communicating** ---- verbally and practically, questions
- **Fostering curiosity** and building the confidence for doing **L** differently
- **Interrupting the facilitator any time you feel** the I am not clear, is over-speeding, or bringing things that contradict with what you know and do not believe in it
- **Being open minded to be liberated** and become an independent thinker and accommodating planning actors for implementable integrated Land Use Planning
- **Taking your own notes** in the language you understand most.
- **Making listening possible in all the trainijg sessions** : No mobile or side conversation

III

The training elements on which the trainers should focus-on at the zonal level trainings

A) Assembling planning inputs and planning sequences

1. **Assembling decadal (past four decades) and classified land use /land cover satellite imagery maps for exclusion, protection, and development of :**

   - ✓ **National parks, lakes and wetlands,**
   - ✓ **heritage sites and sacred sites,**
   - ✓ **sanctuaries and biosphere reserves,**
   - ✓ **Forest priority areas, riverine ecosystems,**
   - ✓ **large-scale farms, etc.**

A. Identification of focus areas and planning sequences ---- ---- continued

2. **Providing training on conceptual understanding and know-how of integrated land use planning, planning supervision and regulatory mechanisms for:**
   a) **creating understanding on the essence of integrated land use planning, and**
   b) **differentiating integrated rural and urban land development plan (often mistaken for Local Level participatory Land Use Planning "LLPPA"),**
3. **Considering the need for tailored to translocate the people from gazetteed parks, controlled hunting areas, riverine lands, etc.**
4. **Considering the needs for relocation plans of inhabitants residing in fragile ecosystems such as protected areas, and other relevant areas**

A. Identification of focus areas and planning sequences ---- ---- continued

5. **Situating established land uses such as the huge cotton farms, sugar estates and their factories in their proper locations at the relevant scale**

6. **Judging the land use potentials and limitations for associating the land to the right land use type in terms of economic, social and environmental sustainability factors at equal footing upon study findings of each of the land use specialists**

7. **Letting the urban land use planners realize that , Urban Land Use Planning is different from Urban Development Plan**

8. **Producing ranked land use suitability in terms of fitness for a given land use type –say for range development , ecosystem restoration , industrial plantation development, factory built-up, building residence ,etc**

9. **Arbitering between competing land uses and deciding on the best option which is weaner in terms of economic and social benfits as well as longivity of sustainability**

The Objectives of the Trainees (region to Woreda-level implementation facilitators)

1. Transforming the knowledge and expertise of land use planners (side-in, bottom-up and top-down parties) in Oromia Regional State about the **preparation of a coordinated, aligned, and harmonized, land use plan** (ILUP).
2. Training the land use planners on the methods and approaches that are relevant for **facilitating the implementation** of the integrated land-use plans and monitoring the plan-implementation
3. Training the trainers (TOT) who would be involved in training the integrated land use planners (the tripartite parties) on how land use **plans and implementations could be, monitored and evaluated** and **get corrected to become timely**

Unit IV

Terms, and definitions and Getting to know the subject

Understanding the basic terms and definitions

1. **Administrative entity:** **The** Regional States and their capital cities, zones, and their capital cities, Woredas, City of Addis Ababa, Dire-Dawa, or a similar entity entrusted with integrated land use planning.
2. **Environmental objective:** Environmental objectives are broad, overarching principles that should specify the desired direction of environmental change.
3. **Environmental receptors:** Include biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage (including architectural and archaeological) and landscape, etc..... Which serve as one of the third pillars of (ec0n0mic, social environmental) of the ILUP making

Understanding the basic terms and definitions --- continued

4. **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 ground water 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).

Understanding the basic terms and definitions --- continued

5. **Integrated land-use planning:** 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' social, economic and environmental needs on a sustainable basis .

6. **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 in an efficient and ethical way, thus preventing land use conflicts.

Understanding the basic terms and definitions --- continued

7. **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 land resources over a period of time. Land-use policy is an instrument that provides a framework within which government can prepare legislations for controlling defaulting parties of the Lland Use Plan to get the plan implemented

8. **ILUP** National Integrated Land Use and development Planning: It is the rational system of correcting the divergence between care and utilization of land and land resources

Understanding the basic terms and definitions --- continued

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

10. **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.

11. **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.

Understanding the terms and definitions --- continued

12. **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.

13. **Integrated land-use planning:** 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.

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

Understanding the basic terms and definitions --- continued

15. **Administrative entity:** The Regional States, regional capital cities, zones and their capital cities, other strategic towns and cities, Woredas, City of Addis Ababa, Dire-Dawa or a similar entity entrusted with integrated land use planning.

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

17. **Structural plan:** A plan where a frame for the different land-use categories is shown in urban planning. A structural plan indicates assigned places to each land-use sector and special stipulations as the cases may be.

Understanding the basic terms and definitions --- continued

18. **Urban area**: Land designated and planned for urban dwelling in the region, zone, district, or Kebele.

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

20. **Urban sprawl:** Unplanned expansion of urban development that results in inefficient and unsustainable urban development resulting in long and costly physical distances.

21. **Zone of Influence:** The area over which a plan can impact the environment the economy

Unit V
Goals and objectives of this training

1. The training Goal

Having an Integrated Land Use plan (ILUP) at regional, zonal and Woreda levels for ease of success in using *diversified* lands of the Oromia Region for *diversified* economic, social and environmental benefits of the people in each Planning Unit on a *sustainable* basis for generations

Please note: what determines a given unit of land to be allocated for a given land use type are the following

Possibilities for diversification of Income sources and sustainability of weaning gains (productions) are the common denominators of integrated land Use Planning be it in rural or urabn settings

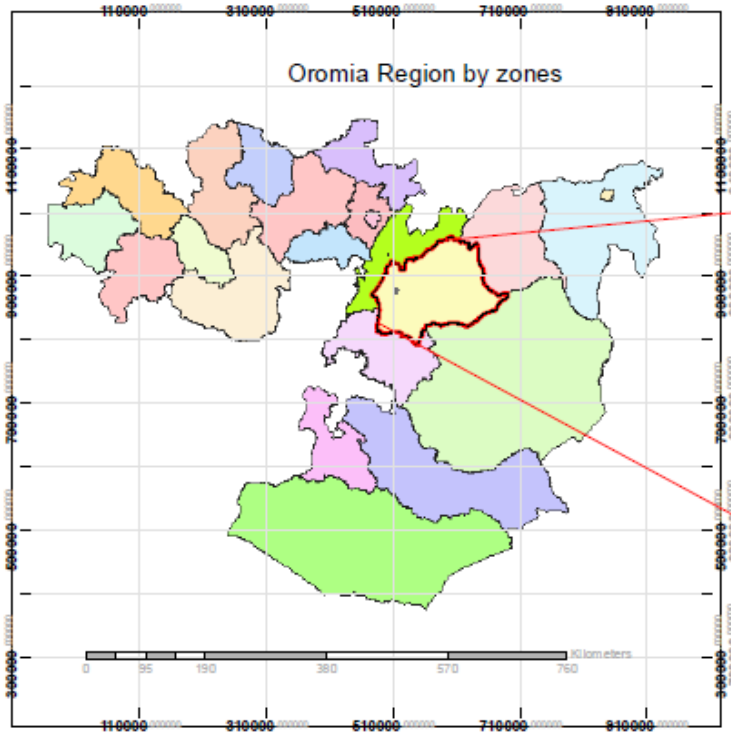
What determines what type of land use is to be allocated on a given unit of land is the potential of the land for offering most rewarding income sources and the assurance from the inherent characteristic of the land for the longevity of production

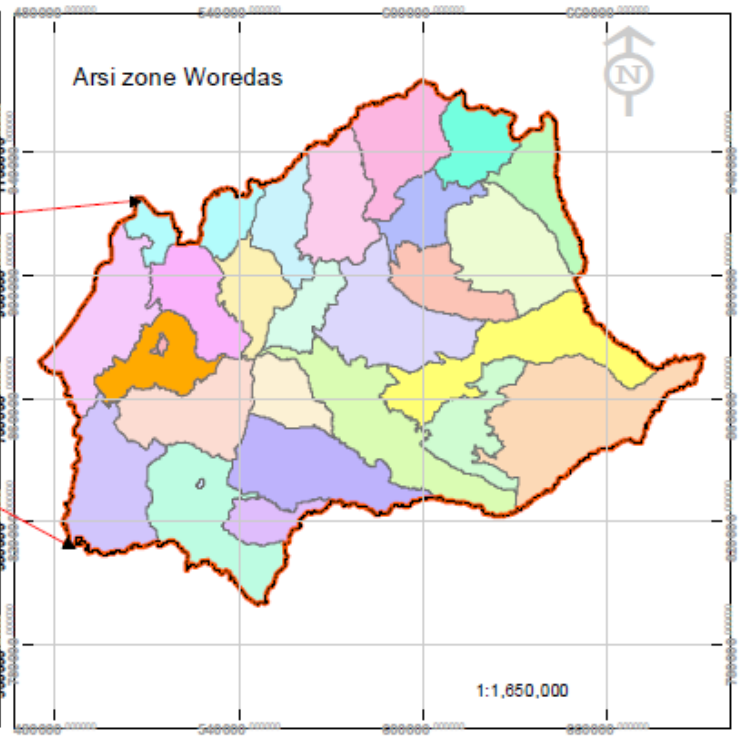
2. The training objective

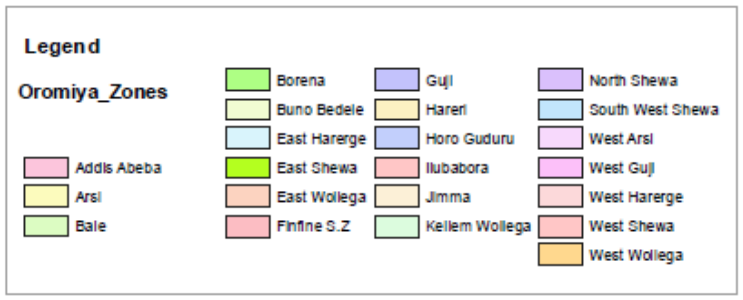
Building the capacity of the rural and urban land use planning experts of Oromia region in Integrated Land Use Planning so that they in turn, can:

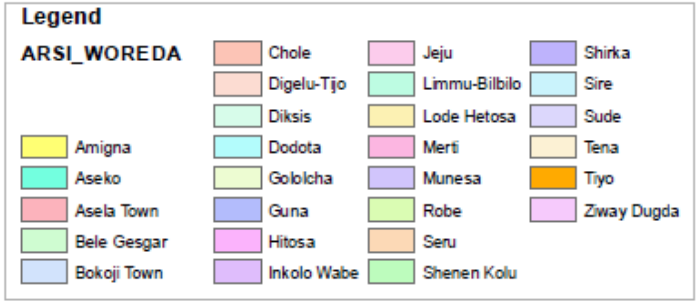
1) **Train zonal and Woreda level experts for their effective and committed facilitation of rural and urban integrated land use planning in their respective planning units**
2) **Facilitate the production of integrated land use plan for the entire region**
3) **Supervise and guide implementation of the integrated land use plan for economic, social and environmental benefits of the entire region on a sustainable basis**
4) **Effectively monitor implementation of the integrated land use plan and take legal actions on defaulters of the land use plan**

3. Coverage of ILUP in Oromia regional State









Determining Planning Units.

- ✓ Regional level ILUP for Oromia regional @I : 250,000
- ✓ 21 Zones of Oromia @ a scale of 1:50,000
- ✓ 21 towns/cities of Oromia and additional strategic towns to be investigated @ a scale of 1:5,000

Region, zone and Woreda as ILUP Unit

This presentation is not authority on boundaries

4. Central and driving agenda of the ILUP Process

Sustainably transforming the land-resources of Oromia Region through optimal use of the land resources of the region thorough provision of coordinated, aligned and harmonized, landuse and development master plan as a guide for economic, social, and environmental benefits of the people and perpetuation of all life forms

5. Three basic targeted contributions of the ILUP

1. **Supporting economic transformation by allocating land according to its production potential and avoiding landuse conflicts**

2. **Enabling speeded-up and improved social transformation of Oromia Region by indicating social-benefiting economic growth centers**

3. **Guarantying perpetuating sustainable environment in Oromia Region by delineating crucial ecological-biomes and heritage regions**

6. GUIDING PRINCIPLE IN ILUP MAKING AND ENFORCEMENT

ILUP *is a guide for:*

careful, optimal and responsible use of land as an entity entrusted to the current generation

to be able to transfer it to the next* at least at the quality that this current generation borrowed it*;

while, at the same time, the land and its resources do effectively contribute to the sustainable* economic growth *and continued* social transformation *of the current generation.


The fate of Land uses which missed integrated land-use is very similar to many of our lands central highlands of Ethiopia ;

8. Implications of the ILUP

ILUP is the rational system of correcting the divergence between care and utilization of land and land resources in accordance with their production potentials on a sustainable basis.

Benefits

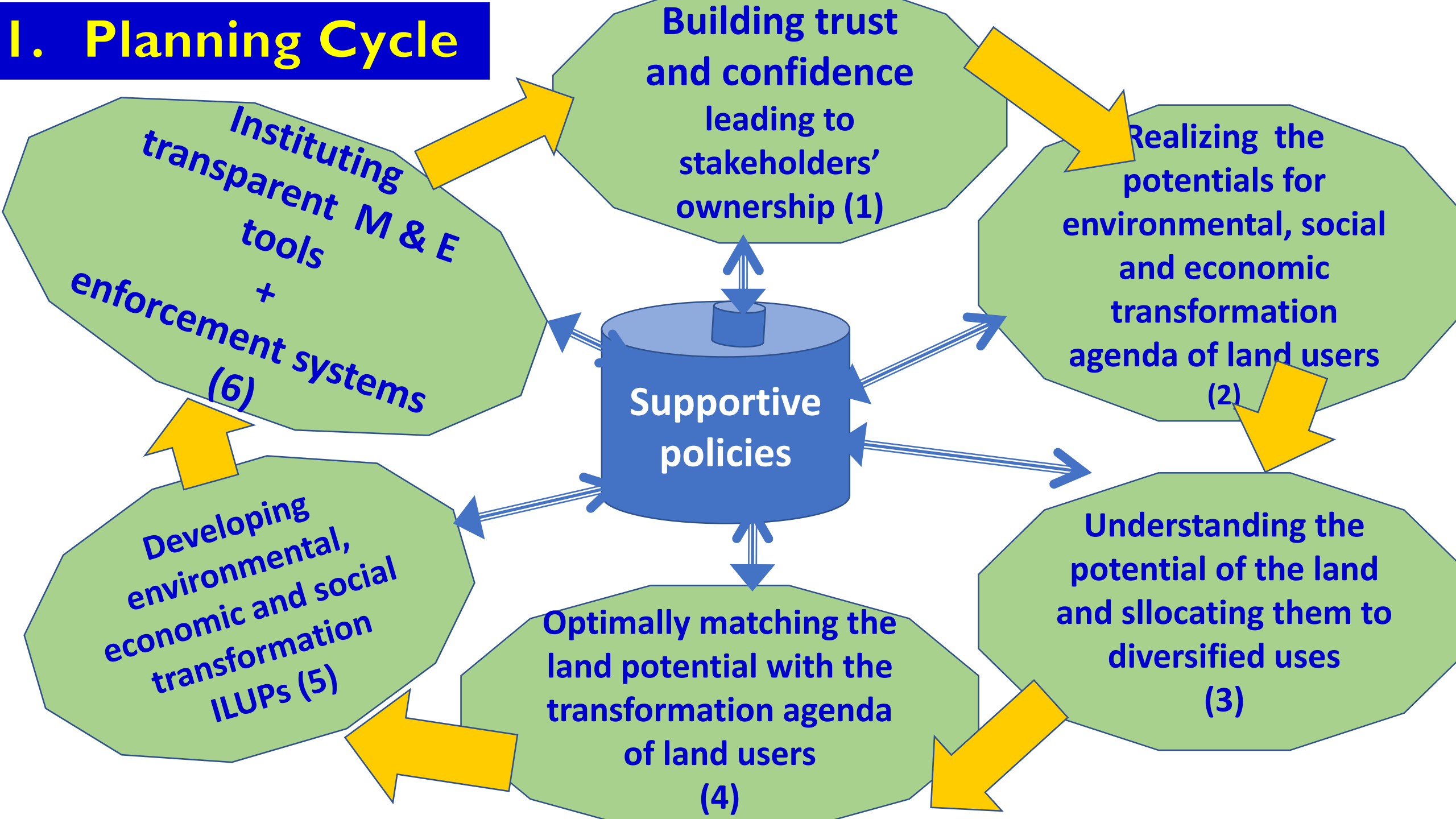
1. **The production base will remain sustained**
2. **The diversified economic, and social empowerment possibilities will be used exhaustively for food security and livelihood improvement continually**

9. How will the ILUP's of each and every planning unit address the social, economic and environmental transformation agenda?

- Build the capacity of the staffs in conducting regional, zonal and Woreda-level land use plans and enforcement of these plans
- Build the capacity of organizational and value-addition capacities of each and every CCGs as stakeholders and drivers of the ILUP
- Improve the capacities of the CCG management in business Planning, business re-engineering and processing (value-adding) on each of the CCG projects to be financed tlhrough basket funding and own contributions
- Developing and seeking agreement on Common framework of engagement (CFE) and CCG bylaws for each of the CCGs to be organized and empowered

Unit VI
Planning cycle and planning actors

I. Planning Cycle



2. Organizing planning actors

a) **Organizing and building the capacity of the Plan Facilitation Institutions and their experts allocated at all levels (region to Woreda),**

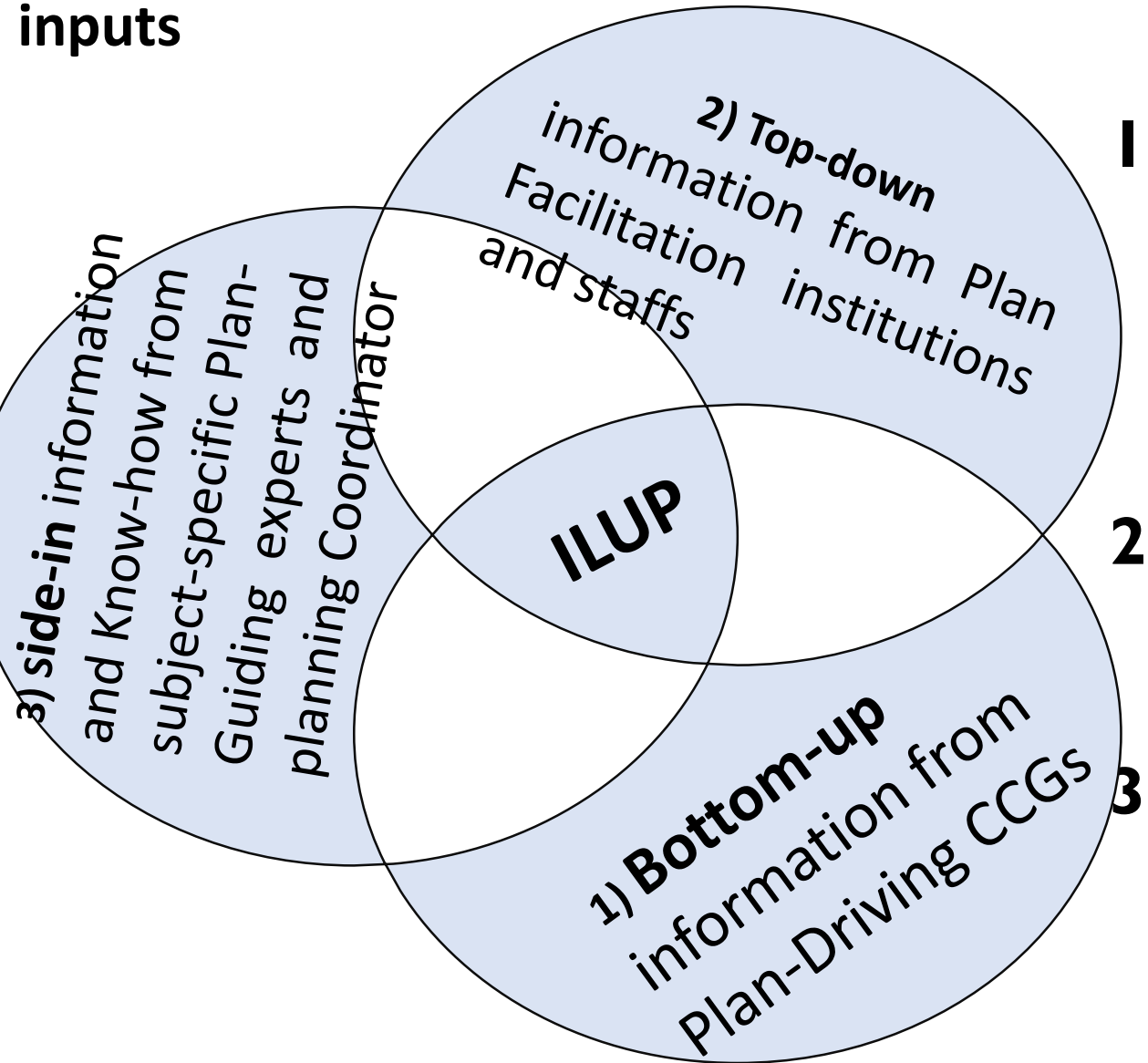
b) **Organizing and building the capacity of Drivers of the planning process (at least the CCG executives of all potential land use types),**

c) **Recruitment of the right Planning Guide experts at different phases to be lead by the Lead Planning Advisor**

d) **Building the capacity of all the planning actors** in a fused participatory planning approach by the genuine and integrated involvement of the above-mentioned 3 actors by a **Planning Guide Expert** who is masterminding the planning process.

3. Planning Participant actors **and their tools**

A) **The planning actors and their inputs**



B) **Assembling and using a number of Planning tools**

1. **Determining the planning units and planning scales for each of the rural and urban land use planning (both for Rural and Urban land uses)**
2. **Obtaining satellite imageries for current land use/land cover characterization**
3. **Reviewing the point and line data assembled during the catchment level plans for customized land use type prioritization**

Important Stakeholder Groups

Stakeholders are organized groups, individuals and /or institutions that have stake on the land use plan or livelihood sector projects to be implemented for the realization of ILUP and its objectives.

These are:

1. ILUP facilitation and plan regulatory **top-down actors ---** Training target staffs of the Land Use Bureau
2. ILUP driving and Plan Implementing **bottom-up actor CCGs**
3. Land use planning driving **side-in professionals ------**

- It is administrative boundary bounded and people-centered instead land allocation for which it is best fit and more resistant to climatic change impacts.

- Unless the land use planning is for annual crop land suitability assessment which uses agro-ecological zones, ILDP largely uses Agroclimatic zones

ILUP has three basic targets to be met in one go.

a) Supporting **economic transformation** by allocating land according to its potential and avoiding landuse conflicts

b) Enabling speeded-up and improved **social transformation**

c) Guarantying **sustainable environment and efficiency in adapting to climate change**

Additional basic statues of ILDP

a) ILDP is genuinely participatory, integrated, community-driven, expert-guided and institution- facilitated planning process

b) Establishing formal engagement of institutions through FSC, RSC, FTC and RTC is very important

c) Getting familiarized with the working environment (planning Unit) first through reconnaissance visit and establishment of counterparts and later through people participatory field-level planning, negotiation and reasoning is essential

Statues .....continued

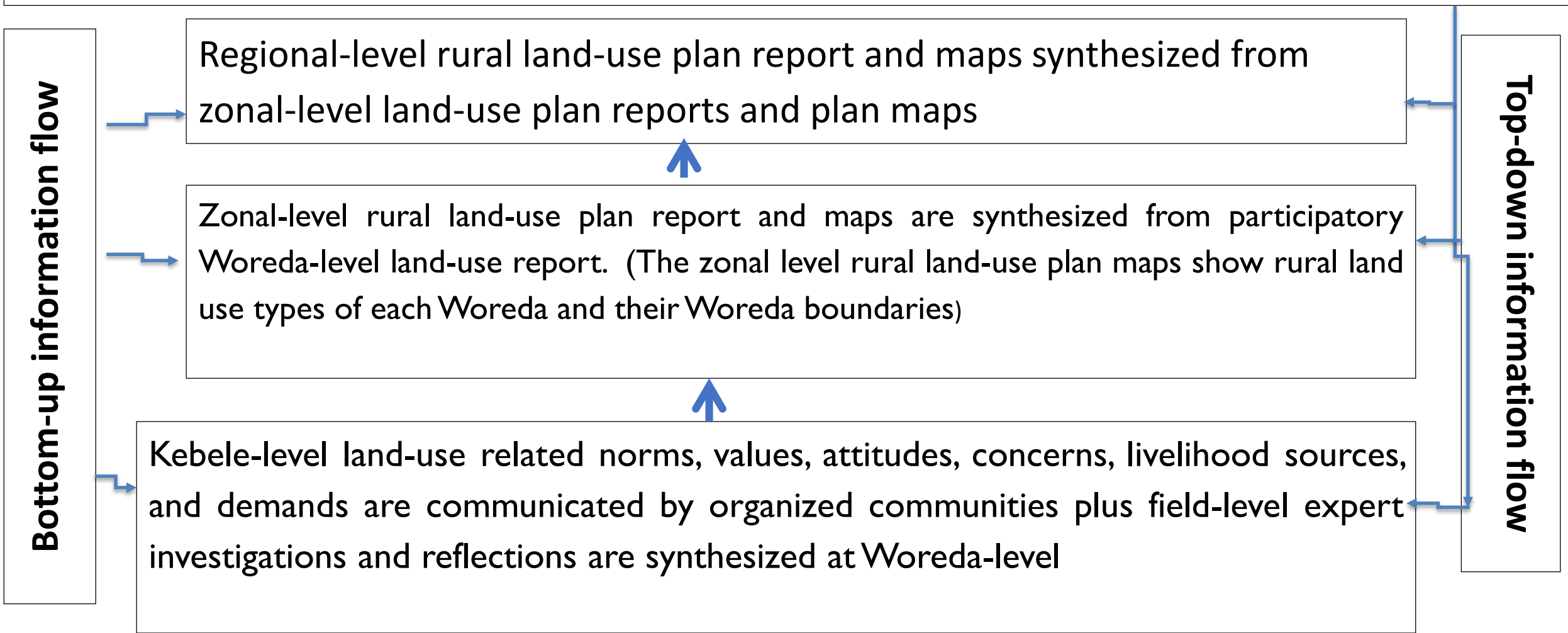
d) ILDP is built on bottom-up, top-down and side-in fused processes which is free from experts' intuitive reasoning. It builds up from Kebele-level truth to the highest planning level for:

- definite service time and
- Determined mapping scale of the plan outputs

e) ILDP is a guided planning move where every expert comes up with exhaustive list of study parameters as of the beginning **targeting at synergism**

Devicing the fused planning process

Higher level information/knowledge from experts' school thought and experiences elsewhere, plus information from country development directives, strategic objectives, proclamations, guidelines as well as from national and international commitments coming from top



Unit VII

Organizing, capacitating and empowering Production, processing and marketing commodity groups (CCGs) for
driving the integrated land use planning and plan-implementation

6.1 What are CCGs and how should they be organized?

1. These are Organized entrepreneurial bodies,
2. They are registered and officiated **C**ommon **C**ommodity production, value addition and marketing **G**roups (CCGs).
3. They are organized to produce, add value, grade and market commodities that are in line with implementation of planned land use types that are shown in the plan maps of each of the planning units of Oromia Region.
4. They are officiated by their CCG bylaws.
5. Their bylaws dwell on the governance, fare share of responsibilities, and benefits, as well as relationships with others

6.1 Organization and empowerment ---- continued

6) Projects that are to be established by the common commodity production, value adding and marketing community groups (CCGs) shall be sound in each of the following three factors simultaneously. They shall have proven

1. social benefits,
2. Economic benefits, and
3. sustainability benefits

7) Projects that depend on lands as diversified income resource base, must be sustainable when their production, value adding, and marketing entre are environmentally sound. Therefore, such projects shall always have SESA that shows positive as a proof.

6.1 Organization and empowerment ---- continued

8) All the community members to be organized into CCGs must have been:

   a) Owners of those land-use types identified as a specific land use in the land use plan for production of specific commodities, or

   b) those members that are involved in adding-value and marketing entrepreneurship that have connection to productions in a above or both.

9. CCG members will have to be made aware of what land use planning is, commodity and land type relationships, as well as production of the various commodities, and environmental sustainability implications

6.1 Organization of the CCGs ---- continued

10. After having the entrepreneurs identified, and training, the necessary sensitization is conducted to the level that is required,

    1. Members must be those who have established interest to get organized into CCGs, and to participate in the production, and /or adding value and marketing on a given commodity-type
    2. Members hold a general assembly and establish their executive body

6.1 Institutionalization of the CCGs …. Continued

11.. Members make sure that the following three distinguishing characteristics (representations) are met in forming the Executive body of the CCG.

a) Fairly represented women and men) =24

b) Relatively wealthy, average and low-income members

fairly represented =24

c) Fairly represented Knowledgeable in the core subject of the production, marketing and value adding =24

plus one legal advisor making total =25

CCG Institutionalization ……. Continued

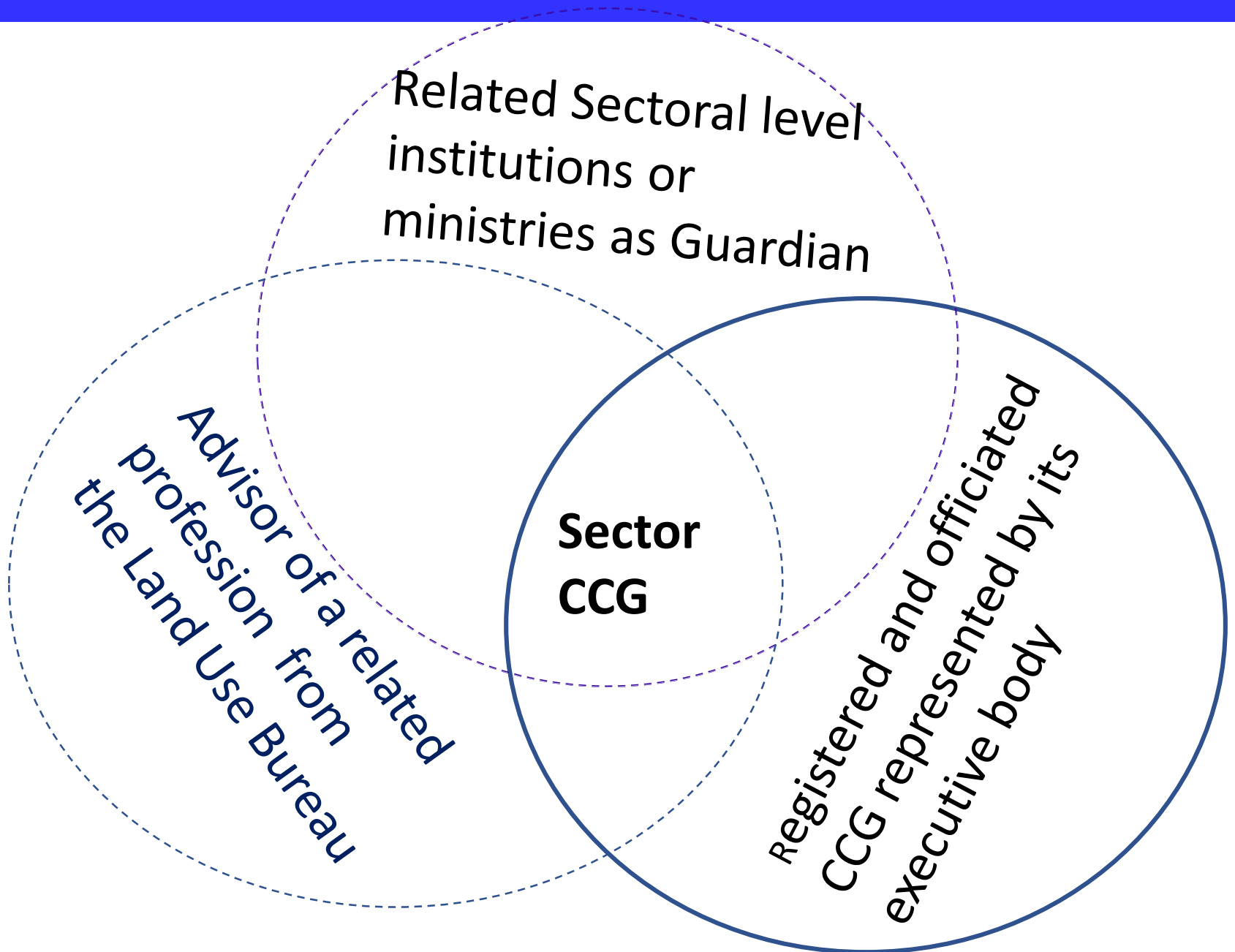
They employ an attorney who can prepare Articles of Association and Memorandum of Association that gets approved and signed by the general Assembly of members for their official registration in owning and running: either of

a) production and marketing of specific commodities,

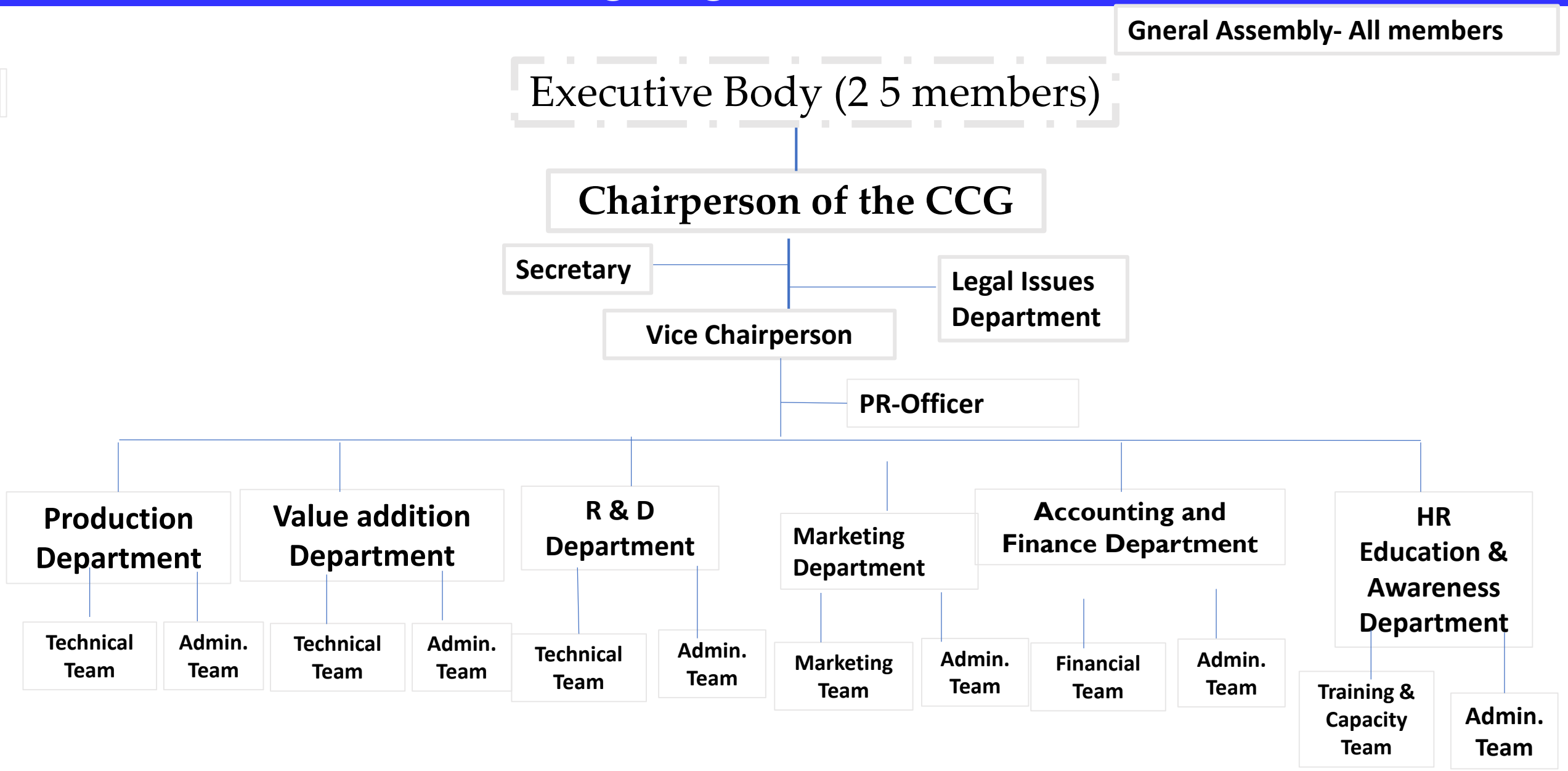
b) Value addition and marketing of specific commodities

- ✓ They register as an official institution which shall have legal personality
- ✓ They shall have official office and office organogram (next page)
- ✓ They may have other office tools, materials and equipment that make their institution functioning

6.1 CCG formation and support network



6.1 Model Organogram of the CCG institution



6.2 Organizing and building the capacity of CCGs

- Preparing CCG establishment modalities
- Forming CCGs
- Building the capacity of the CCGs
  - On group management
  - Community bylaws
  - Articulation and presentation of group opinions
  - Using LLPPA-based land use characterization for input to ILUP

Examples of social, economic and environmental transformation business plans to be implemented by the CCGs

1. CCGs organized on rural feeder road development
2. A number of CCGs organized Large-scale farming investment as many as available in each of the planning units
3. Major public services developments for earning cash profit on livelihood improvemetn projects such as mud-block and steel-kiln processed Charcoal projects by the many CCGs
4. Fishery resources development improvement by owners organized into CCG
5. Rainfed and smallholder agriculture improvement CCG who produce for own consumption and marketing
6. CCGs centered on Irrigated and mechanized agriculture improvement

7. CCGs that are focused on Improved horticulture development

8. CCGs focused on the many kinds of non-timber forest product development (Hewn Squares, roof shingles, railway sleepers, fence poles

9. CCGs organized in Industrial forest development

10. CCGs organized and working on forest-based industries

11. CCGs working on adoption of comprehensive land-husbandry for multiplying yields in organic farming

12. CCGs organized on renewable and non-renewable energy expansion

13. Biodiversity improvement and ecological restoration

14. Wildlife and tourism development

Project ideas that CCGs may consider in planning and implementation

1. **Aquaculture site development, fish processing, packaging,** and marketing
2. Aromatic/essential oil production and marketing
3. Biodiversity-related forest protection, tourism, and marketing
4. Bio-energy production and marketing
5. Biosphere reserve protection and use
6. Briquettes making and marketing
7. Charcoal production and marketing
8. Cemetery development and marketing

Project ideas that CCGs may consider in planning and implementation ---- continued

9. **Coffee production and marketing**
10. **Commercial cereal farming and marketing**
11. **Commercial forest development, utilization, and log marketing**
12. **Construction wood production and marketing**
13. **Controlled hunting and game meat marketing**
14. **Controlled hunting, organic meat processing, and marketing**
15. **Education infrastructure construction**
16. **Environmental ameliorations and environmental tourism**
17. **Ethno-botany and herbal medicine production and marketing,**
18. **Fiber crop production and marketing**
19. **Fishery development and marketing**

Project ideas that CCGs may consider in planning and implementation ---continued

20. **Large-scale irrigation command area protection and marketing**
21. **Livestock feed processing and marketing**
22. **Livestock keeping and live livestock marketing,**
23. **Medicinal/pharmaceutical plant production, harvesting, processing, and marketing**
24. **Surface mineral mining and marketing**
25. **Mud block/brick production and marketing**
26. **Natural heritage protection and development**
27. **Nectar and other floral part processing and marketing**
28. **Nuts production and marketing**
29. **Oil prospective and exploitation areas**
30. **Oilseed crop production and marketing**
31. **Oilseed processing and marketing**

Project ideas that CCGs may consider in planning and implementation ---continued

32. Organic fertilizer (compost) production and These may be stratified into several types of minerals available
33. Fruit and vegetable production and marketing
34. Gum and resin production and marketing
35. Health infrastructure construction
36. Herbal medicine production and marketing/use
37. Heritage site development and protection and tourism
38. Hiking and eco-tourism
39. Honeybee flora expansion, beekeeping, honey production, and marketing
40. Incense production and marketing
41. Insect-replant production and marketing
42. Irrigation-water-catchment protection and production lands
43. Juice /fruit pulp production and marketing
44. Lands fit for small business enterprising

Project ideas that CCGs may consider in planning and implementation ---continued

45. **Organic fruit production, grading, and marketing**
46. **Organic poultry (chicken and egg) production and marketing**
47. **Petty trading**
48. **Rangeland development, feed belling, and marketing**
49. **Rural settlement areas and their corollary development options**
50. **Riverside/river protection and boat-**
51. **Road and transport construction**
52. **Roof shingles production and marketing**
53. **Root and tuber crop production and marketing**
54. **Salt mining, grading, and marketing**
55. **Sawmilling and timber production and marketing,**
56. **Slaughterhouse construction, meat production, milk processing, and**

Project ideas that CCGs may consider in planning and implementation ---continued

57. **Smallholder agriculture production,**
58. **Small-scale irrigation command area**
59. **Spice and condiment production and marketing**
60. **Sugarcane production, processing, and sugar marketing**
61. **Syrup production and marketing**
62. **Transmission and fence pole production and marketing**
63. **Urban residence expansion and development lands**
64. **Value-added fruit and vegetable production and marketing urban lands**
65. **Value-added Vegetable production and marketing rural lands**
66. **Value-added Wild/domestic fruit production and marketing**
67. **Water catchment protection, hiking, and scouting**

Project ideas that CCGs may consider in planning and implementation ---continued

68. **Water-catchment protection, water bottling, and marketing**
69. **Weaving and dying chemical production and marketing**
70. **Wetland protection and associated crocodile farming and marketing**
71. **Wetlands and associated butterfly farming**
72. **Wildlife parks, reserves, and associated tourism**
73. **Wildlife-attracted tourism and marketing,**
74. **Wood crafting and marketing**

Unit VIII

Planning facilitation top-down professionals and authorities

4. Getting the land use planning Guide-professionals Assembled from at least 18 different disciplines

1. Sociologist
2. Gender specialist
3. Agronomist
4. Horticulture professional
5. Forestry development /Silviculture specialist
6. Forest industries /forest utilization expert
7. GIS and remote sensing professional
8. Ecology and biodiversity
10. Soil sciences specialist
11. Wildlife and tourism professional
12. Urban land use Planing specialist
13. Aqua-culture and Fisheries
14. Geology and Surface Mining
15. Rangeland/ livestock specialist
16. Herbal medicines /ethnobotanist
17. Environmental protection expert
18. Hydrology and water Catchment specialist

Capacitating the ILUP Plan Facilitation staffs

Training the staffs of the Land Use Bureau for:

1) coordinated and informed guidance of the ILUP making experts,

2) Organizing, training and institutionalizing the ILUP driving CCGs for driving the ILUP and implementation ofILUP

3) Deploying , guiding and monitoring subject-matter experts who are to guide the entire planning and

Capacitating the ILUP Plan Facilitation staffsg the ILUP Plan Facilitation staffs---- continued

1) Facilitating the production of project ideas and 2-page project profiles that can exhibit possibilities of implementation for economic, social/and or environmental benefits on each of identified land use by each of the Side-in Planning Guide-experts

2) Making planning input available such as information/input on:

    a) Areas of protection on whch government is signatory

    b) Necessary input such as satellite imageries and maps as well as geo-reference data from available sources

Unit VIX
List of non-resident Planning Actors (Guide professionals)

Professions of non-resident Planning Guide Experts who needs only re-orietnation for their subject to fit into ILUP making

1. EXPERTS IN PREREQUISITE SUBJECTS
   1) GIS/cartography
   2) Building capacity, forming CCGs (through regional office)
   3) Forming FTC FSC, RTC, RSC
   4) Socioeconomic studies
   5) Topography and architecture
   6) Land use/land cover
   7) Weather and climatology
   8) Soils and geology
      - ➢ Agroclimatic zones
      - ➢ Land resilience /sustainability grading
      - ➢ Enumerating study parameters /subjects
      - ➢ Grading livelihood sources

2ND-PHASE LAND-CLAIMANT SUBJECTS

1) Agriculture (commercial and smallholder)
2) Forestry
3) Rangeland and livestock
4) Ecosystem and biodiversity
5) Beekeeping and honey production,
6) Fishery and aquaculture areas
7) Wildlife habitats
   - ✓ Wetlands /other sensitive areas
   - ✓ Suitability by class
8) Mining
9) Hydrology

More professions of Planning-guide Experts

3. Third Phase INFRASTRUCTURE SUBJECTS

1) Rural settlement
2) Urban settlement
3) Roads and transport
4) Education institutions
5) Health institutions
6) Markets
7) Energy and energy resource
8) Urban land use planning
9) water supply
10) Waste management

4. PLANNING FACILITATION and PLAN ENFORCEMENT SUBJECTS

1) Institution
2) M&E
3) Geo-dating /data management systems design
4) Policy and law
5) **Recruiting and deploying an overall planning process lead-expert who guides the entire process and masterminds ILUP**

Sub-groups of the Planning Expert Team

1. Data acquisition and data management team
2. climatology, biodiversity and ecology team
3. natural resources study team
4. livelihood study team
5. physical infrastructure team
6. Strategic environmental assessment and planning team
7. Socioeconomic study and benefit domain identification and planning team
8. Law and policy team
9. Economic and finance analysis team

Unit X
Assembling and using a number of Planning tools

Assembling Planning tools

1. Studying the inherent characteristics of each land use for suitability (ranked at priority levels)
2. Weighing and assigning priority land use type in consideration of its cumulative weighted value in terms of a) guaranteed environmental sustainability, b) economic viability and c)contribution to socioeconomic development
3. Based on scientific, social benefits, environmental sustainability and economic contribution significance, assigning infrastructure plans in line with the finally decided land use

3) Scope and coverage of the planning attributes ----- continued

4. Weighing and assigning priority land use type in consideration of its **cumulative** weighted value in terms of a) guaranteed environmental sustainability, b) economic viability and c)contribution to socioeconomic development
5. Based on scientific, social up-lifting potential, environmental sustainability and economic contribution significance, assign best option land uses
6. Based on inherent characteristics of each land use type, and in consideration of the growth and transformation agenda expected to be functional at the specific land use type of the planning units, enumerate development agenda of each land use type

3) Scope and coverage of Planning attributes --- continued

7. In consideration of possible land development project ideas (examples next page)and inherent characteristics of the lands, plan infrastructure plans to be operational at the finally decided planning unit

8. Conducting SESA review and prepare project profiles to be pigeonholed at the most relevant and appropriate implementing institution

9. Conducting comprehensive knowledge and skill development of the planning facilitators and planning drivers (as per the identified land use categories pertaining to the planning unit).

3) Scope and coverage of the planning attributes --- continued.

10. Orienting and deploying subject-specific land use planning experts for assembling the existing data, enriching with additional -data when necessary, and finally producing the basis for suitability-classification and justifications for the proposed land use types

11. Mapping the proposed geo-referenced potential land use plans types at least in three prioritized levels (highly--suitable, moderately suitable, and marginally suitable for negotiation

3. Scope and coverage of the planning attributes ---continued.

12. Conducting analysis of subject-specific plan outcomes in a planning studio and deciding on best competing land use alternatives in consideration of comparatively best-fit land use options
13. Producing integrated land use plans that are most suited in terms of economic, social and environmental benefits for the planning unit in written form which is substantiated by illustrative maps and drawings of intended scales
14. Letting each of the experts of each final land use plan attribute produce implementation project ideas at a project profile level to make the planned land uses most effectively contribute to the social, and economic agenda of th eplanning unit on a sustainable basis

Unit XI
Land use planning experiences other countries and in Ethiopia

1) Land Use Planning experiences in Ethiopia

1. Land use planning was assumed to be synonymous with Integrated land use planning. To this effect, department of land use has been a department under the Ministry of Agriculture for decades
2. Actually, ILUP office is responsible for producing timely and updated land Use Plan whenever land-related development directions, utilization technologies and alternative use-types and benefits become realized anew
3. It is guided by independent and neutral (non-land user) institution which arbiters land uses conflicts that may arise between land-claimant ministries, agencies and regional governments, authorities at federal, regional, zonal, Woreda and kebele levels . In few countries, such institutions have their own arbitration courts

Ethiopian experience on land use planning --continued

4. Ethiopia has lots of experience on land development planning on watershed basis. None may be considered as integrated land use plan addressing multiple agenda.

   a) All have been prepared on river-basin level.

   b) The land users (the most decisive actors) were not made to drive the process

   c) Plans were targeting erosive forces and neglecting land users who have decisive power on how land should be managed

   d) Plan do not have administrative boundaries . Enforcement on land use plans could not be enforced legally.

   e) Plans have been based on inherent characteristoc of the land neglecting the social character that manupulates them and the administrative organs which are the key for enforcement of planss.

Land use planning experiences in Ethiopia --continued

f) **They have been river basin studies usually facilitated by development institutions such as EVDSA which has specific objective of developing one of the land use types among the many identified and planned.**

Such river-basin plans are excellent plans for for institutions that are mandated to work in a watershed continuum that are apportioned into:

- ✓ **water-catchment,**
- ✓ **reservoir,**
- ✓ **command-area catchment, and**
- ✓ **Command area**

2) . International experiences of ILUP

1. **In Myanmar, the land-use plan is prepared under the auspices of a land use commission established under the presidential office. For enforcement of the plan, a special court is made responsible**

2. **In Vietnam, the General Department of Land Administration (GDLA), which is a government agency solely responsible for land administration and land classification at national level.**

3. **In Kenya, an independent institution is established under the presidential office for facilitating the land-use master plan preparations**

International experience --- continued

4. In Rwanda, land-use planning was coordinated by the Ministry of Lands and Natural Resource which was proved to be a failure. Upon evaluation, suggestions have been made to establish a Land Use Planning Commission under the president's Office. The new revised integrated land use plan is prepared under the guidance of the Land Use Planning Commission

5. For ease of enforcement and control, all land use plans have been planned, guided, facilitated and administered at administration levels

3. Responsibilities of the ILUP Institution

1. It is an institution which continues to safe-keep and furnish land use related information to land use Implementation sector ministries, agencies and authorities
2. These necessities the Bureau to operate at a superior portfolio, most conveniently connected to the Ministry of Planning at federal level, and effectively networked down to zone, Woreda, and Kebele levels.
3. In Gambella, the integrated Land Use Plan has been guided by the regional and Federal Steering committees and technically supervised by the federal and regional Technical Committees while it has been professionally administered by HoAREC&N of Addis Ababa University where the trainer works as a Lead Expert

XII

Tools for Identifying and optimally planning Integrated Landc Use

I .
Using Satellite Imageries and identifying the whereabouts of change-prohibited land use types and other lands

A) Change-prohibited land use types

1. **National Parks managed at National Level**
   1) Abijata Shala
   2) Awash
   3) Bale Mountains

2. **National parks and sanctuaries managed at the regional level**
   4) Arsi Mountain
   5) Yabello
   6) Dati Wolel

3. **Biosphere reserves managed at the regional level**
   7) Yayu as of 2011
   8) Yabello (1978)

Change-prohibited land use types ….continued

9. Wildlife sanctuaries managed at the federal level by EWCA
   i) Babilie Elephant sanctuary as of 1962
   j) Senkile Swayne Hert Beest Sanctuary as of 1964
10. Wildlife reserve managed by the region
   a. Babile
11. Open Controlled Hunting areas managed by the region
   a) Debere Libanos
   b) Gara Gunbi
   c) Gara Meti
   d) Jibat
   e) Sinana

Land use -change-prohibited land use types ….continued

12. Controlled hunting areas such as:

1. Abasheba Demero As Of 2004
2. Adaba-dodola As Of 2010
3. Aluto Arba-gugu As Of 2005
4. Beshenena Oddo-gulu As of 2003
5. Shedem Berbere As Of 1988
6. Dindin Arba-gugu
7. Hanto 2001
8. Hurufa Suma 2000
9. Haro Aba Dika 2010
10. Munessa As Of 2003
11. Shedem Debere 1988
12. Sororo Torgum 2000
13. Wergan Nula As Of 2010

Land-use change prohibited land use types ….continued

13) Rock outcrops
14) Natural Forests,
15) Woodlands,
16) Plantation forests
17) Bush and shrub lands,
18) Worshiping places, (mosques and Churches)
19) Biosphere reserves
20) Ecosystem conservation sites
21) Natural heritage trust sites
22) Lands greater than 60% slope

Note:

This is not to say that these lands will not be studied and reclassified for improved and sustainable projects that respond to economic, social and environmental benefits

B)

Tools to be used for classification and planning comparatively best-fit land use types to be planned anew

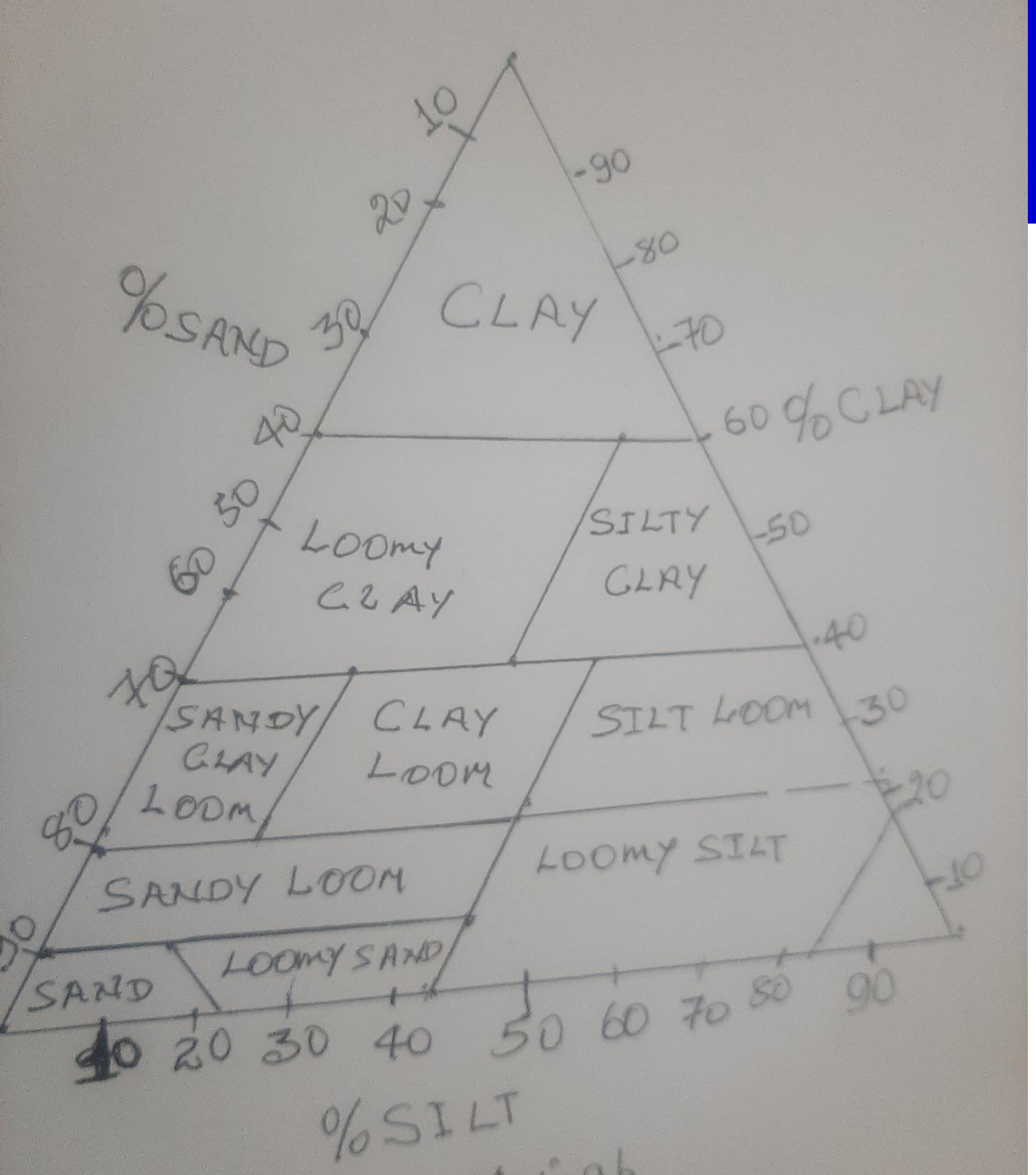
eAltitude above SESA level in millimeters	Above 3700 meters above SESA level (m asl)	Dry Alpine Wurch	Moist Alpine -Wurch	Wet Alpine Wurch
	3200 – 3700m asl	**Dry Wurch**	**Moist Wurch (Kur)**	Wet Wurch
	2300-3200 m	Dry Dega	Moist Dega	Wet Dega
	1,500 - 2300 m asl	Dry Weyna-Dega	Moist Weyna-Dega	Wet Weyna-Dega
	500 – 1500 m	Dry Kolla	Moist Kolla	Wet Kolla
	<500m asl	Dry Bereha	Moist Bereha	Wet Bereha
		<900 mm	900 – 1400mm	➢ 1400mm
		Mean annual rainfall in mm per year		

I) Agroclimatic zones that distingushing land use types

2) Classifying lands by sustainability and production potential grade for most optimally optional land use option

		Slope categories				
		0 -5%	**>5 - 16%**	**>16 - 40%**	**>40 - 60%**	**>60 %**
Soil Depth	Rock or <20 cm	SPG (16)	SPG (17)	SPG (18)	SPG (19)	SPG 20
	20 – 50 cm	SPG (9)	SPG (10)	SPG (11)	SPG 12)	SPG 15
	50 – 100 cm	SPG (3)	SPG (4)	SPG (6)	SPG (8)	SPG 14
	>100 cm	SPG (1)	SPG (2)	SPG (5)	SPG (7)	SPG 13

SPG = Sustainability and production-potential grade



3) SOIL TEXTURE GROUPS FOR PRIORITIZING LAND SUITABILITY FOR AGRICULTURE

Eg.. **Suitability rank for agriculture**

1) Clay loom ---------- Excellent
2) Silty clay Very good
3) Silt loom ---------- Good
4) Loomy clay ------- Farely good
5) All other texture groups --- low

XIII

Identifying land use types of comparatively highest economic and social significance by using fitness variables

I What do land use planners investigate and use for planning ?

1. Possibilities for introducing modernization and commercialization of agriculture,
2. Possibilities for environmentally safe industrialization and service-sector expansion
3. Possibilities for advancing various sectors of social, economic and environmental improvement and growth
4. Possibilities for improved/value added fishery, horticulture, forestry, wildlife, construction, energy, livestock, mining, and eco-tourism.
5. Possibilities for "domestic knowledge to action" processes
6. Possibilities for cost-effective and community conscious development of social facilities such as roads, health and education facilities

2) Enumerating type, size, and whereabouts of past and current land use/land cover from satellite imageries verified by sampled ground trothing

a) Aquaculture spread, quality and management style

b) Wildlife/parks, reserves for conservation , trophy marketing, and tourism development

c) Unique Ecosystems for ecosystem rehabilitation and tourism development

d) Cultural heritage, values and norms for preservation

e) Protection forests existing and need for re-stocking

f) Industrial forests existing and possibilities

g) Ethno-botany sites

h) Wetland ecosystems year-round and seasonal coverage

3

Examples of land use types to be studied singly for deciding

on the land use type to be allocated

because of its composite significance in its contribution to the economic, social and environmental sustainability benefits

4) Type of studies in each of the Planning units: Zone, Woreda

A. Methods

1. Wet season land use/land cover assessment and charracterizing the the land use production inputs in terms of economic and social contributions
2. Conducting dry season land use e / land cover assessment and determining the contribution of the land to economic and social benefits on a sustaibable basis
3. Conducting resource mapping with the land users that are categorized into the many different land use options
4. Conducting analysis of land use / land cover of the planning unit and comparing the land use shift (if any) by using 3-decade long Aerial-photographs plus understanding the driving force for the changes

4) Type of studies in each of the Planning units: Zone, Woreda --- continued

5. Conducting hydrography studies and :

   a) Identifying and quantifying coverage of Major rivers (width and length showing you catchment area

   b) Quantifying area covered by Lakes, Reservoirs and Natural ponds

6. Based on the three decadal land use /land cover analysis determining which expertise may be need for detailed studies and deploying them for th eintegrated study subject-by-subject.

5) Exemplary land use planning attributes and deciding on best area coverages of the different land use types in the Integrated Land Use Planning

A.

AQUACULTURE AND FISHERY STUDIS AND DECIDING ON BEST AREAS FOR LAND USE PLANNING AND DEVELOPMEWNT

1) Important fishery development site allocation issues to be analyzed for deciding on the best sites of each planning unit

8. Study size (market volume) and diversity of the fishery resource with reference to

   a) Current and potential economic contribution (in commercial market and in subsistence level),

   a) Significance in environmental protection and ecologically significance

   b) Threats and potentials of the fish resources

   c) Available technologies and markets for economic and social impact

1) Important fishery development site allocation issues to be analyzed for deciding on the best sites of each planning unit… continued

a) Current abundance of such resources with reference to potential adding-value and marketing facilities

b) Major source areas in the land use planning unit

   i. From major rivers in metric tons per anum

   ii. From Lakes, in metric tons per anum

   iii. From Reservoirs in metric tons per anum and

   iv. From Natural fish ponds in metric tons per anum

c) Contribution of the aquaculture and fishery resources to the household level and market economy in each of the planning units

1) Level of value-adding and marketing effort and the need for improvement of the fish resources --- comntinued

a) Preservation technologies at household level and commercial level

b) Available fish markets and issues for improvement

c) Fishing gears and common fishing methods

d) Fish processing and improved storage and transportation methods if available and the need for improvement

e) Socioeconomic importance (cash-valued contribution to the dietary system and household income per year)

2) Land-based Fisheries- Aquaculture

GIS-assisted quantification of land-based aquaculture development areas with Criteria for selection

1) Topography of land (% Slope)

a. Highly suitable: 1-4
b. Moderately suitable: 5-8
c. Marginally suitable: 8-15

2) Soil texture

a. Highly suitable: Clay 1
b. Moderately suitable: Sandy clay, Clay loam, Silty-clay--2
c. Marginally suitable: Sandy clay loam, Silty clay loam 3

2) Identification and mapping of aquaculture sites

3. **Annual Rainfall (in mm):**
   - i. **Highly suitable:** >2000
   - ii. **Moderately suitable:** 1000-1999
   - iii. **Marginally suitable:** 700-999
   - iv. **Unsuitable:** <700
4. **Site distance from perennial river or lake or reservoir (in km)**
   - a) **Highly suitable:** <1
   - b) **Moderately suitable:** 1-2.5
   - c) **Marginally suitable:** 2.6-3.5
   - d) **Unsuitable:** >3.5

2) Site suitability prioritizing criteria …….. continued

5). Temperature (in ^{o}C)

i. **Highly suitable: 24-35 ^{o}C through out the year**

ii. **Moderately suitable: 15-23 ^{o}C for 6 months to a year**

iii. **Marginally suitable: 15-23 ^{o}C for 4-6 months**

iv. **Unsuitable: Other than the above**

6) **Economic suitability (Distance from available market)**

1. Highly suitable: <5 km
2. Moderately suitable: 6-10 km
3. Marginally suitable: 11-15 km
4. Unsuitable: >15 km

2. Non-negotiated but, prioritized suitable area-map and respective area which is proposed for negotiated fishery resource land use decision

One regional Suitability Map of Oromia Region for Fishery Development that shows the coverage of the three levels of suitability to be negotiated for fishery/ aquaculture development area coverage with annual yield estimate in tons per suitability rank

Zonal level Planning Unit	Highly suitable	Moderately suitable	Marginally suitable s
Zone 1			
2			
3			
4			
5			
6			
7			
9			
10			
.			
.			
21			

2. Non-negotiated prioritized suitable area map proposed for negotiated area decision

Zonal-level Suitability Map of Oromia Region for Fishery Development that shows the coverage of the three levels of suitability to be negotiated for fishery/ aquaculture development area coverage with annual yield estimate in tons per suitability rank

Woreda level Planning Unit	Highly suitable	Moderately suitable	Marginally suitable s
Woreda 1			
2			
3			
4			
5			
6			
7			
9			
10			
.			
.			
156			

2. Non-negotiated but, prioritized suitable area-map and respective area which is proposed for negotiated fishery resource land use decision

One Woreda level Suitability Map of Oromia Region for Fishery Development that shows the coverage of the three levels of suitability to be negotiated for fishery/ aquaculture development area coverage with annual yield estimate in tons per suitability rank

Zonal level Planning Unit	Highly suitable	Moderately suitable	Marginally suitable s
Zone 1			
2			
3			
4			
5			
6			
7			
9			
10			
.			
.			
21			

2. Project Ideas for implementation of aquaculture lands

1. Strengthening Fishery Cooperatives in Capture Fisheries (CCGs)
   - Training in fishery production, value adding and marketing
   - Preparation of landing sites
   - Buildings storage and processing facilities
   - Sorting, packaging and transporting facilities and costs
   - Marketing facilities (Sheds, storages)
   - Market accessibility
2. Developing Model Aquaculture Farms that includes
   - Growing out,
   - Hatchery, and
   - Feed Production Schemes

Project Idea ---- continued

3. Establishing and strengthening Fisheries and Aquaculture Institution in the region
   a) Training on fisheries and aquaculture
   b) Capacity building of zonal and woreda level experts
   c) Developing and improvising appropriate technologies
   d) Providing technical assistance to CCGs who invest in fish production, adding value and marketing

Example 3
Wildlife and tourism sector land use planning

3.1) Identification and characterization of the wildlife resources for va;ueadded planning … cont.

1. Endangered wildlife sp. Such as Nile Lechwe, African Hunting dog & Lelwel hartebeest & Vulnerable sp. Such as Elephant, Lion, Shoe billed Stork and Black crowned Crane) are also found in a significant number

2. Large area coverage of wetlands at low altitude & high temp. incredible population. WEK & biological diversity made GR one of the most significant ecological regions to be maintained

3. Most wildlife areas can be considered as pristine habitat.

3.1) Identification and characterization—cntinued

4. Most local residents are pastoral communities or in remote areas wheree people are always confronted with what nature gives themr.
5. hunting of wild animals, un integrated agriculture investment brought severe impact to wildlife and their natural habitat
6. current human encroachment to wildlife habitat, extensive traditional It is also known for its unique landscapes
7. Land cover Consisting extensive wooded grassland, huge wetland, flat plain and scattered or chain of mountains

3.1) Identification and characterization for comparison on suitability --- ---- Continued

8. major rivers in the wet season drain to the swamps and create the biggest flood plains in the Region.
9. The huge wetland harbors threatened species such as the Nile Lechwe and the Shoe billed stork.
10. Endangered wildlife sp. (Nile Lechwe, African Hunting dog & Lelwel hartebeest & Vulnerable sp. (Elephant, Lion, Shoe billed Stork and Black crowned Crane) are also found in a significant number
11. Large area coverage of wetland at low altitude & high temp.
12. high-population significant ecological regions to be maintained

3.1) Wildlife habitat as a land use ---- continued

13. Most local residents are pastoral communities who utilize the resources in a rotational manner.

14. current human encroachment to wildlife habitat, extensive traditional hunting of wild animals, un integrated agriculture investment brought severe impact to wildlife and their natural habitat

15. Integrated land use and development plan corridors are smoothened by Map-Calc (GIS-method) to come up with main focus on each of the planning units substantiated by scientific data .

3.1) Target in Wildlife protection and management --- ontinued

16) Quantified and comparatively ranked Economic, social, and environmental purpose/benefit of the wildlife area as compared to other competing land use candidates such as:

1. Leisure /tourism
2. Research
3. Ecosystem management (environmental maintenance role)
4. Cash income

3.1) Study items –continued for deciding on target wildlife areas

17)Biological diversity and wildlife potential:

a. Species diversity, population, endemism, rarity
b. The region in terms of unique ecosystem
c. Wildlife distribution and habitat use
d. Critical resources for survival of the species
e. Movement (Migration route)
f. Human habitation (Habitat use, Life style, settlements) from Areal Survey result conducted since 30 years ago for indicating most potential wildlife areas)
g. Economic, social and ecological benefits

3.1) Study items –continued for decifding on target wildlife areas Study items .....continued

18. Contribution of wildlife in economic and social contributions

a) economic, social and ecological benefits

b) Role of wildlife tourism in poverty alleviation

c) Today tourism industry accounts 9% global GDP

d) GPNRS rich in natural and historical attractions

e) has high tourism potential

- **Only in dry season (2003-2007), 21million Birr from tourism)**
  (data from Gambella Regional office alone)

3.1 Study items –continued for deciding on target wildlife areas ----- continued

19. Communities engagement

a) community members are dependent on nature &most are

b) Bee keeping, wild coffee collection

c) subsistence hunting and Fishing,

d) traditional medicine users

3.2) Land suitability for wildlife and tourism development

1. National Park (NP)
2. Wildlife Reserve (WR)
3. Community Conserved area (CCA)
4. Biosphere Reserve (**most suitable type of conservation category where both the wildlife and humans coexistence in good harmony).**
5. Wildlife potential areas identified could be used as CHA (based on detailed studies).

3.3 Area extent of wildlife habitat Plan

1. Regional coverage …… km2
1. Federal NP…… km2
2. Private NP…….. km2
3. Regional NP…… km2
4. Wildlife Reserve…….. km2
5. Wildlife Priority area…… km2
6. Community Conservation Area.. km2

4). Social criteria for rating land use sustainability

1. **Local communities have great understanding of (natural environment)**
2. Issues that exhibit communities' **live is directly connected to Nature and wildlife resources**
3. **Benefits of wild animals are well recognized**
4. **Status of natural environ. & trend of wildlife is well understood (rated decrease/increase)**
5. **Extensive traditional hunting, fishing, forest fire, human encroachment, un integrated agriculture investment are major problems.**
6. **Infrastructure and tourist facilities are none existent**

Example 4

Agriculture sector land use planning

For

Agriculture /Crop Production(Cereals, Legumes, Oil crops, Horticulture, Coffee, Sugarcane, Fiber crops, Spices production

Methodology for prioritizing agricultural lands

- Identifying best and potential lands for Agriculture/ crop production based on including and excluding criteria of land cover types and natural resources
- Screening land use competition based on balancing environmental land management and land demands with multidisciplinary team of experts/negotiation.
- Undertaking matching exercises with crops environmental requirements and land characteristics and qualities using GIS software;

Methodology for prioritizing agricultural lands --- continued

- Exhibiting factors that show such a unit of land could surpass other land use options in terms of quantified economic and social benefits while asuring longeveity of the production
- Making professional decisions on appropriate uses of a land unit that sustains optimum production and Climate Resilience and
- Undertaking and providing verification of plans with respective partners, land users and experts in a composite planning studio.

Criteria for singling out lands best fit for agriculture land use

1. **Areas not covered with closed forest**
2. **Areas covered with grass but not wetlands and soil depth .>50cm**
3. **None wet lands/ swamps**
4. **Areas with less than 30% slope for cereals and upto 45% for perennial horticulture crops**
5. **Areas not reserved for Park**
6. **None lands of riverine forests**
7. **50m far from the river bank**
8. Mean Annual Rainfall > 900mm for rainfed agriculture or existence of water source for irrigation

Prioritization criteria for agriculture land use continued

1. Mean Annual Temperature < 27 degree centigrade
2. Investment areas/cultivated land of investors
3. Crop Lands of indigenous farmers
4. Effective soil depth >50 cm
5. Soil fertility level medium and high
6. Soil PH between 4.5 and 7.5
7. Irrigation potential areas with very good access to water source
8. Land Resilience classes 1, 2, 3 & 4

Enumerating project ideas that can help to implement the agricultural land use for economic and social benefits on a sustainable basis

Examples

1. Quantified area of xpansion and Improvement of rain-fed coffee production possibility

2. Quantified areas of expansion for Improved production of rainfed oil crops for the production and marketing of vegetable oils

-

Agriculture project ideas ---continued

3. Areas of production of fruit Crops
   a) Total area quantified
   b) objective production of high quality fruits; Implementing
   c) facilitating Agency=MoANR, BoANR, Donors,
   d) Implementing body CCGs,
   e) Budget / Cost=/ USD 10,000,000;
   f) Budget Source:=Investors 100%; FGOV: 20%; RGOVS: 20%; Donors: 30%; CCGs: 20 %;

Project ideas continued for the agriculture land use sector

4. Production of rice;
   a) Area available in the planning unit in ha ----------;
   b) Objective=expand and increase production;
   c) Location=easing, westing, nothing and southing
   d) Implementing CCGs (composed of Local and /or Foreign Investors;
   e) Cost= Birr ----------
   f) Implementation Period= ----------years
   g) Budget contribition: govet, CCG, Bamk loan, donors

Project ideas continued for the agriculture sector

1. Rained Production of Spices and Condiments:
    1. HAS=6,602 ha ;
    2. Objective= High value and High quality;
    3. Location
    4. Implementing agency =, CCGs,
    5. Total estimated Budget USD ----------;
    6. Budgt source =GOV: 20%; GPRS: 20%; Donors: 30%; CCGs: 20 %;
    7. Project period 10 years

Project profile continued

1. Rained Production of Tea;
    1. **Area /location and extent ----ha (attach map)**
    2. **Objective= high quality and High value tea;**
    3. **implementing agency = CCGs, Investors;**
    4. **Budget cost = USD 5,000,000;**
    5. **Income Source=GOV: 20%; Bank loan: 40%; Donors: 20%; CCGs: 20 %;**
    6. **Beneficiaries= FGOV, Region, CCGs,**
    7. **project Period= ------ years**

5
Land use planning for Beekeeping

5.1 Land Prioritization criteria

1. Social impact/social welfare
2. Potential for achieving substantial gains in production and/or income/economic growth
3. Probability to exploit potential and existing opportunities
4. Suitability of the land under the given land use type (attach land use Plan map).

5.2 Opportunities

1. Description of adapted honeybee races
1. Huge number of bee colony population (86,300)
2. Sizeable annual production (honey --- tons and beeswax, ---- tons per year)
3. Dense, widely distributed adapted honeybee forage
1. Existence and distribution of Water bodies such as reservoirs, Lakes, ponds and springs
4. Existence of traditional beekeepers to improve

5.3 Land suitability prioritization criteria for forestry land

Excluded

a) Main wild life delineated areas/buffer national park, proposed wildlife reserved areas, national parks

b) Wet lands and lakes areas

c) Big or commercial farm and irrigated land

d) Settlement/industrial areas

e) Tobacco farm

f) Tea farm

g) Cereal (such as rice, sorghum, etc) farm

5.5 Included

a) Closed forest areas and
b) open woodlands, dense bush and shrub lands, plantation forest areas
c) Rain fed agriculture areas out of slope range
d) Peripheral areas of wild life /national park, proposed wildlife reserved areas,

5.6 Identified beekeeping areas

Beekeeping may be planned to be developed:

1. in whole
2. Integrated with Closed and Open Forest
3. within Peripheries of even sensitive areas such as parkes

5.7 Project Profiles

Applicant:	Specify institution and its address
Brief project Description:	**Modernizing beekeeping production systems** The predominance of rudimentary methods of production where low productivity prevails due to lack of knowledge and skills as well as market will be addressed
Project Development Objectives:	To enhance the contributions of bees and beekeeping to food security and improved livelihoods in Gambella regional state through improved knowledge/skill and bee product marketing
Performance Indicators:	- Enhanced knowledge and skill of beekeepers and experts - Established improved beekeeping technologies demonstration sites - Increased honey and beeswax quantity and quality - increased income of beekeepers and input suppliers - improved beekeeping extension services
Total Project Cost:	Total: $ -----Million partitioned into US$: ----- million GoE, CCG, US$ ----- million beneficiaries (in form of labour) US$ ------- million donor grant and US$ I million loan
Facilitating Institution	MoARD, representatives of funding agency, ILDP and other stakeholders

Brief project Description:	**Project-II: Support to beekeeping value chain** Local demand for unprocessed honey and for *tej* mean that poor roads, fragmented markets and inadequate processing and packing facilities. The project which will have 10 components, linked to different stages in honey value chain will be supported
Project Development Objectives:	To enhance the roles and contributions of actors in honey value chain through improved support
Performance Indicators:	- strengthened and created rural microfinance - improved access to credit and input supply - improved processing, market development and market information network - established bee forage development and conservation schemes - Created awareness on wise use of agricultural chemicals - established and maintained bee products quality assurance programs - improved involvement of private investor and established Api- producer organization
Total Project Cost:	Total: $ ----- Million partitioned into US$: **-----** million GoE,, US$ **-----** million beneficiaries (in form of labour) US$ **-------** million donor grant and US$ ------million loan
Facilitating Agency	representatives of funding agency, ILDP and other stakeholders

Brief project Description:	**Project-III: Technology Development** **The slow uptake of modern beekeeping methods indicates less contributions of to real innovation in beekeeping; innovation in the sense of turning knowledge into improved productivity and incomes. Therefore, future research that focussed on developing technical packages which can be rapidly taken up by the beekeepers is highly required to ensure the plan of ILDP on beekeeping**
Project Development Objectives:	**To enhance the role of research and innovation in generating improved technologies in the sense of turning knowledge into improved productivity and incomes**
Performance Indicators:	**- availed improved and adaptable beekeeping and bee products handling technologies** **- available information on productions systems, product character, market information** **- improved knowledge on bee plants** **- improved knowledge on local bee types with their behavior**
Total Project Cost:	**Total: $ ----5_Million partitioned into US------million GoE, --------million beneficiaries (i------million donor grant and US$------- million loan**
Facilitating Agency	**MoLFRD, representatives of funding agency, research institutes and other stakeholders**
Implementing Agency (owner)	**CCG ----------**

6
Livestock and Range Sector Land Use Planning

6.1 General Methodology

1. Organizing exhaustively compiled data to be used for justifiably planning a given land for livestock and range development,
2. key informant interviews and site mapping of the whereabouts of best range lands with CCG-members
3. Stratifying, analyzing and interpreting the data, and producing tentative plan for livestock and range development,
4. Coming up with non-negotiated and negotiated livestock and range development lands
5. Coming up with project ideas that can put the pland land into economic, social and environmental benefits

6.1 Suitability analysis -continued

6. The critical issues considered for the suitability map for Range/Livestock Development include soil depth, slope, rainfall and temperature. The areas identified to be suitable were those with a soil depth of (20 – 50 cm), slope of < 60%, annual rainfall of > 400mm/annum; and temperatures of > 140C.

7. In the end of the process, a negotiated suitability map may be produced which indicated that ------ - of the land mass iof the planning unit economically and environmentally suitable.

6.2 Non-negotiated suitability map for Livestock / Rangeland development

1. Included areas of land use categories as suitable for Range/Livestock in each of the planning units:

a) Woodland
b) Wooded grassland
c) Grassland
d) Shrub land

2. Excluded:

a) Closed forest areas
b) National parks, wildlife reserves, and wildlife sanctuaries
c) Wetlands in wildlife habitats
d) Biosphere reserves
e) Ecosystem restoration sites

6.3 Project ideas/ profiles to be prepared on each of the following commudities to be generated on resolute land livestock and range land

1. Milk production, processing and marketing
2. Meat production, processing and marketing
3. Feed production, processing and marketing

7.
Infrastructire Land use Plan

7.1. Studies on type, size and whereabouts of infrastructure facilities

1. Settlement and housing including extent and size of towns and city
2. Rural feeder-roads to see what can be done for linking social facilities, market centers, potential processing facilities, and settlements
3. Education infrastructure to see linkages with settlements and roads , less prime lands, less sound pollution areas
4. Health infrastructure to see linkages with settlements and roads , less prime lands, less sound pollution areas
5. Markets to match production, consumer and transportation linkages
6. Agro-industries to match with production sites, and storage facilities and roads
7. Large storage facilities linkage with agro-industries, road routs

8.
Strategic Environmental Studies and whereabouts of environmentally sensitive areas

1. Biodiversity to establish conservation requirements, identify unique flora and fauna of various economic potentials
2. land degradation to quantify the extent of technologies and efforts that can improve resilience and sustenance
3. Industrial, water and air pollution to establish baseline and surveillance mechanism
4. Natural hazards to properly situate infrastructure
5. Waste management facilities to see possibilities by which household wastes and industrial affluent can be effectively catered without drastic

9
Other Planning attributes

- The preparation of the Plan stresses on facilitation and interaction and the genuine involvement of stakeholders
- Involving Regional-level government bureaus, agencies, directorates, authorities to be organized into FSC and FTC to fill the policy vacuum – secretary will be Land Use Bureau of Oromia
- The communities and the private sector to be represented by organized groups stratified into various livelihood sector groups (CCGs) at each Kebele for their involvement in ILUP making

➢ **The planning will be planning by the stakeholders – not by experts singly planning for the land use planners**

9.1 Application Of GIS as a land potential and limitation identification and Land-use Planning Tools

1. GPS: As Sources of Spatial Data
2. Adding an Existing data File (Data Acquired From Online Data Portals, Offices, Individuals.)
3. Satellite Imageries
4. land use land cover from Google Earth
5. Contour Maps And Slope category maps
6. Land Use/land Cover Mapping

Unit XIX

The Planning process and planning modalities

1. Making the regional public aware and sensitized

1. **Renting newspaper columns and briefing about RLUP benefits at least weekly for three months**
2. **Renting radio and TV hours and briefing the public about the benefits of RILUP weekly for theree months**
3. **Preparing fliers and having readers circles at community level for the first three months**
4. **Conducting workshop discussions on the purpose, scope and modalities of RILUP making for the region**

2) Organizing and building the capacity of grassroots beneficiaries

- ✓Conducting Woreda-level seminar on purpose, benefits as well as modalities of RILUP preparations and peoples' involvement
- ✓Identifying the number of economic growth areas in the Woreda
- ✓Organizing the communities in livelihood growth areas
- ✓conducting community resource mapping through a community participatory planning approach

3) Preparing comprehensive terms of reference and engagement schedule for each of the experts and scheduling their engagement periods

- **Engaging land use land cover analyst GIS expert for purchase of satellite imageries of the required scene , contour maps pf required scale**
- **Tasking soils and geology expert for organizing soils and geological data required as guided by the lead RLUP expert**
- **Involving the socioeconomic and gender experts who can organize the necessary population, gender and stratified peoples requirements from the land**

4. Conducting recruitment and employment of investigative and study experts –for the side-in input

- Advertising and receiving CVs of the experts for each phase
- Reviewing the CVs and screening at least 3 best experts for interview
- Conducting interviews, negotiating on terms of employment
- Having RILUP-acquaintance meeting phase by phase

5. Purchasing, computing and compiling physical and remote sensing information.

a) Purchase of satellite imageries of the regions that of December 1990, 2010 and 2020 for comparative analysis

b) Conducting and availing decadal land use land cover information (maps and data).

c) Acquiring 1:50,000 scale contour map, and availing slope category maps and aspect maps for the RLUP guide experts to use.

d) Conducting discussions with adjacent regional governments and delineating commonly agreed boundaries of each planning unit

5. Purchasing, computing and compiling physical and remote sensing information ---continued

6) **Having discussion and determining on common boundaries of Woreda and the regions within** and adjacent planning Unit

7) Reviewing the exhaustive list of study issues prepared by each and every expert if it addresses each and every study and output item of the expert to be engaged by conducting discussions on the way foreword and synergism

6. Preparing inception report with exhaustive list of undisputable study and output items to be handled by each and every LUP- expert

a. Getting the Exhaustive list of study items approved

b. Having undisputable physical, social and environmental criteria for deciding the suitability of the land use on a given parcel of land at Woreda, zone and regional levels

Note: all experts use comparative criteria to help them compete in prioritization of the land use type for any given unit of land

7. Delineating and excluding environmentally sensitive issues to be considered in smart growth planning approach not to be assigned for production use

a. Important wildlife habitats such as national parks, habitats of endemic species and sites of endangered or threatened species,
b. Closed natural forests and open forest lands that have more than 20% canopy cover
c. Fragile ecosystems and biodiversity conseravation areas
d. All fragile lands which require insitue protection because of having sensitive slopes that are exceeding 60% or fragile geological formation such as mass-westing.

7. Delineating and excluding environmentally sensitive issues to be considered in smart growth planning approach not to be assigned for production use ..... continued

e. Socially and culturally important areas being used for cultural rituals, ethnobotanical uses, and sites of significant endemism of palnts and animals

f. Any conservation area for which Ethiopia is signatory for protecting and safe-keeping such as wetlands, important bird other wildlife

g. Role in keeping the ecosystem in balance

8) Producing subject-specific literature review report and preliminary level plans based on literature reviews, site reconnaissance and boundary determining discussions with the planning actors

- Reviewing literature that are focused to international framework agreements, conventions and safeguard policies, river basin studies of Oromia, Amhara, Afar and Somalia;
- Reviewing land use planning attempts of regional governments, and master land planning efforts of the different ministries, agencies and organizations
- Reviewing national legal frameworks: including sectoral policies, transformation strategies and plans such as water and environment strategies, CRGEs and GTPs that are relevant to:
  - ✓land use policy formulation, and
  - ✓land use planning development

8. Subject-specific literature review ---- continued

- Producing the preliminary level plan and the literature review report by each and every expert.
- Reviewing the preliminary-level plans and the report submitted by each expert and conducting expert-discussion on the problems and weakness of the plan and the report, congruence of the report with the TOR of the report
- Conducting discussion with the experts on the preliminary plan, literature review report, TOR and Exhaustive list and deciding the issues to be addressed in the field level investigative study

9. Conducting field-level investigative assessment

- **Experts enumerating the issues to be investigated at field level having made due reference of their respective ToR and exhaustive list**
- **The Lead Planning coordinator discussing with each and every expert and screening issues to be investigated at field-investigative studies**
- **Determining the experts that need to be deployed for field-level investigation and those who do not need to be deployed**
- **Conducting office-level discussion in a planning studio and observing the land use overlaps witnessed by the preliminary-level subject-specific plans**

and

- **deciding which of the line of expertise will require it**

10. Dealing with plan-specific issues

1. **Using suitability-level comparative factors for each of the competing land use type and deciding on whereabouts of the different land uses**
2. **Producing Subject specific pre-final and non-negotiated plan-reports substantiated by geo-referenced illustrative maps and drawings**
3. **Producing Subject specific final and negotiated and conflict-free plan reports produced for each land-claimant land use type with Album of Maps and economic-growth area project ideas**
4. **Producing at least three economic-growth area project ideas for each of the land use types identified and planned for implementation of the plan**

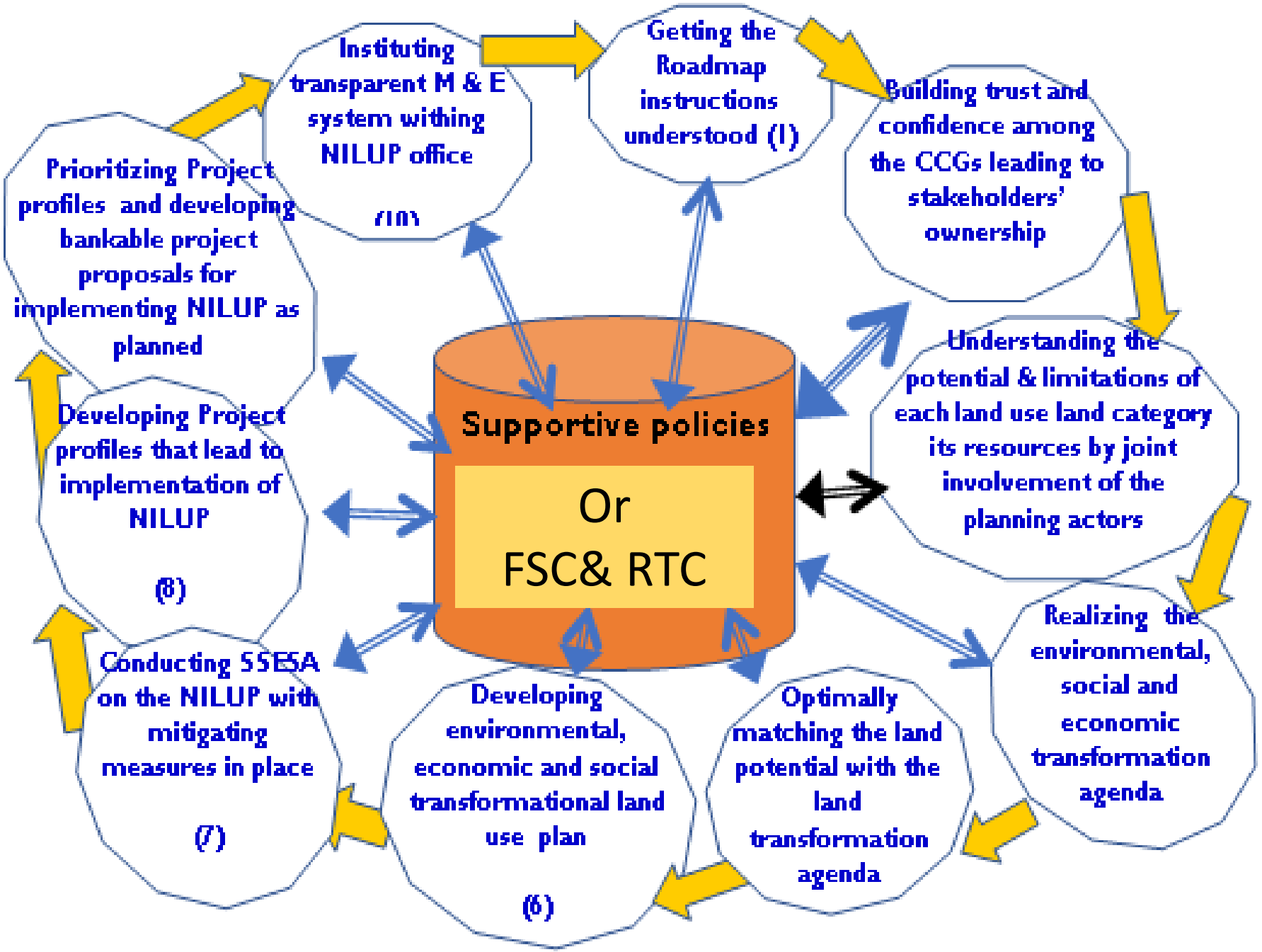
11. Technical validation /officiation of ILUP

1. Having detailed common framework of engagement (CFE) between possible facilitation institutions of the each and every identified and planned land use for responsibly facilitating implementation of the project ideas identified
2. Getting all the members of the FSC/RSC and RTC sign their respective CFEs.
3. Having a technical review committee (TRC) all planning Unit levels in place
4. Conducting workshop critiques on final nartrative report and its substantive, g negotiated, and integrated plans and album of maps
5. Officiation of the final plan report approved by the regional and federal parliaments

Unit XX

Continued role of the facilitation and regulatory Land use Office

The Integrated Land Use Planning (ILUP), monitoring, and revising Concept



End of the Operational Manual

Good Luck in Implementing the Zonal level Training for professional facilitation of Integrated Land Use Planning in Oromia Region

By

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