

Proceeding of the Workshop entitled,

"Mainstreaming of Agro-Ecological Approaches and Practices in Ethiopian Agricultural Production System"



Organized by:
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MELCA-Ethiopia

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Addis Ababa, Ethiopia

MELCA-Ethiopia

Vision
To see healthy and prosperous people that conserves their bio-cultural diversity.

Mission
To work for healthy ecosystems, resilient communities and critical young generation through developing and institutionalizing innovative approaches and experiences.

Goal
To increase the adaptive capacity to social and ecological shocks of communities and contribute to the creation of a healthy ecosystem and resilient community.

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TABLE OF CONTENTS

ACRONYMS i
1. BACKGROUND 1
2. WORKSHOP OBJECTIVES 1
2.1 General objective 1
2.2 Specific objectives 2
3. SESSION I: WORKSHOP INTRODUCTION AND OPENING 2
3.1 Welcoming and workshop introduction 2
3.2 Key remarks and opening 2
4. SESSION II: PRESENTATIONS 3
4.1 Presentation 1: Agro ecology fundamentals and transitions 3
4.2. Presentation 2: Ethiopian Policies, Laws, Strategies and Plans around Agro-ecology 8
4.3. Presentation 3: Mainstreaming Agro-ecology in Ethiopia's Agriculture 14
5. SESSION III: PLENARY SESSION 18
6. SESSION IV: GROUP DISCUSSIONs 24
6.1 Group I Report 24
6.2 Group II Report 25
7. SESSION V: PLENARY DISCUSSIONS ON PRESENTATIONS 27
8. CONCLUDING REMARKS 27
Annex I: List and Contact Address of Participants 29
Annex II: Programme for the workshop 30

ACRONYMS

AAU	Addis Ababa University
AE	Agro-ecology
AFSA	Alliance for Food Sovereignty in Africa
CBD	Convention on Biodiversity
CCD	Convention to Combat Desertification
CSO	Civil Society Organizations
ECA	Ethiopian Consumer Association
ECX	Ethiopian Commodity Exchange
EFCCC	Environment, Forest and Climate Change Commission
EOSA	Ethio-Organic Seed Action
FAO	Food and Agricultural Organization
GHG	Green House Gas
GIZ-ISFM	GIZ – Integrated Soil Fertility Management
GMO	Genetically Modified Organism
GMO	Genetically Modified Organism
HARC- EAIR	Holeta Agricultural Research Centre of Ethiopian Institute of Agricultural Research
IA	Industrial Agriculture
IBC	Institute of Biodiversity Conservation
ISD	Institute for Sustainable Development
NAP	National Adaptation Plan
MELCA	Movement for Ecological Learning and Community Action
PELUM Ethiopia	Participatory Ecological Land Use Management- Ethiopia
TEK	Traditional Ecological Knowledge
YSND	Youth Network for Sustainable Development

1. BACKGROUND

MELCA-Ethiopia is a legal non-profit making organization founded in 2004 with implementing projects focusing on biodiversity conservation and revival if community eco-cultural practices in selected its woredas of Bale Zone of Oromia Regional State. The organization's long term vision is to see healthy and prosperous people that conserve their bio-cultural diversity and preserve its eco-friendly natural resource practices. The Organization's mission is centered on working for healthy ecosystems, resilient communities and critical young generation through developing and institutionalizing innovative approaches and experiences. For realizing its vision and mission the MELCA works in four broad and complementary programs areas. These are: Environmental governance, Youth and children empowerment and Eco-friendly livelihood improvement and Agro-ecology. The latter programme intervention is designed toaddress challenges brought by the conventional production system which is influenced and dependent up on external heavy chemical inputs, pesticides and the so-called improved "varieties of seeds" exposing to massive vulnerability to the effects of climate change and environmental degradation. Agro-ecology is nowadays considered as a positive way to respond to the issues of food security and agriculture which is at the center of the global development. In this connection, a momentum is building up in Africa and a coalition of stakeholders is emerging that favor scaling up of agro-ecological principles and practices by strengthening environmentally sustainable and productive agro-ecosystems.

To realize the attainment of its mission,MELCA-Ethiopia has been pursuing the introduction/strengtheningof agro-ecology practices along with its other eco-friendly interventions being implemented on the ground at the grassroots level with the communities through adopting participatory process. To expand the outreach and bring impact to a wider community, MELCA-Ethiopia and its key development partners recognized that it is quite timely to advocate for the need for expanding agro ecological practice through reviewing and policy and current practice for mainstreaming into relevant policies.It is with this perspective that this workshop was convened by MELCA-Ethiopia with a financial support of David and Lucile Foundation. The workshop forms an integral part of Agro-ecology programmefocusing on the policy level.

2. WORKSHOP OBJECTIVES

2.1 General objective

While the concept of agro ecology has now gained widespread support by many development partners, there lacks clear policy direction and mechanism of how to move forward in coordinated and multispectral and integrated way. To this end, further direction and action is required from government to mainstreaming of agro-ecology into the current agricultural policy.The overall objective of the workshop is to promote the mainstreaming of agro-ecological practice in Ethiopian agricultural production system as alternative and viable approach.

2.2 Specific objectives

The specific objectives of the workshop are:

- To inform policy makers on the significance of agro-ecology for biodiversity conservation and climate resilience and through joint formulation of specific recommendations to overcome major barriers to mainstreaming of agro-ecological approaches in the Ethiopian food production system.
- To strengthen collaboration among key government and non-government actors in the agricultural sector.
- To exchange and share knowledge, experience, encountered problems, and available technologies and methods in order to learn from each other's experience and lessons on agro-ecological approaches and practices.

3. SESSION I: WORKSHOP INTRODUCTION AND OPENING

3.1 Welcoming and workshop introduction

The participants were welcomed by workshop facilitator, AtoMerhaYilma, MELCA-Ethiopia Programme Director who then called participants to self introduce their names and organizations they represent. Following the self- introduction the facilitator called up on Mr. Solomon, Kebede, Executive Director of MELCA-Ethiopia, to introduce guest of honor to give key opening remarks. After cordially welcoming the participants on his behalf and on behalf of MELCA-Ethiopia, Mr. Solomon and called up on Dr. MelessDamte, Board Chairperson of MELCA-Ethiopia, to give key remarks and officially open the workshop.

3.2 Key remarks and opening

A. prof.Melesse was pleased to be given the opportunity and commenced by thanking the participants for their presence in this important meeting. He noted that the one day workshop will focus on Agro ecology which is an extremely important and timely topic that brings us together.



A. Prof. Melesse - Opening Address

He then briefly shared with the participants his comprehension on the challenges facing agriculture. In this connection, he reported about the fact that agriculture is at critical stage. In this connection he referred to FAO's Assessment report entitled "Agriculture at Crossroads" which was published in 2009. He noted that assessment report draws on the work of thousands of experts from all regions of the world the findings of which armed that agriculture is at critical stage facing several emerging challenges and opportunities calling for the international community think and act accordingly. In the same tune, he said that we also need to ask questions, such as what are the

Ethiopian agricultural policies and practices? To which direction our policies are driving the agricultural system? Which model should we follow for sustained agricultural development?

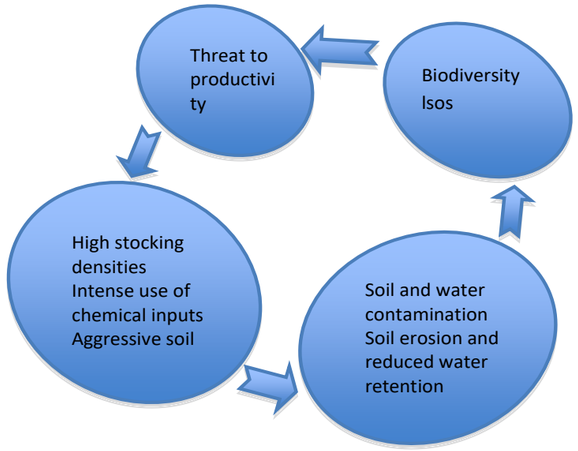
As to the existing agricultural policies and strategies he said that, by and large, they are tuned towards promoting industrial agriculture and further underscored that for the need for seeking alternatives in the face of the emerging challenges in terms of climate change, deforestation, agricultural productivity, land degradation which are partly attributed through practicing conventional agricultural practices. He also noted for the need to assess and review the present practices and trends in terms of promoting agro ecology practices in different countries and international initiatives and drawing lessons from the same to contextualize in the country for advancing sustainable agriculture, ensuring food security and protecting the health functioning of ecosystems.

Following, the above brief overview of the issues related to the workshop theme, he indicated that the workshop have four main objectives. The first to share evidence of the Agro-ecology Fundamentals and Transitions among participants, the second is to discuss on the concepts of agro ecology and mainstreaming of the same into Ethiopian Agriculture, the third objective is to provide highlight on existing Ethiopian policies, laws, strategies and plans around agro ecology, and finally to identify policy recommendations based on the ideas circulated during the three presentations and plenary discussions a well through breakaway group deliberations by participants. With this brief summary, Dr. Melese called on active participation by workshop participants and declared the workshop open.

4. SESSION II: PRESENTATIONS

4.1 Presentation 1: Agro ecology fundamentals and transitions

The first paper entitled "Agro-ecology fundamentals and transitions" is presented by Ato Solomon Kebede, MELCA's director. In this presentation, Ato Solomon stressed the vicious cycles of industrial agriculture system stated as:



In further explanation of the characteristic features of industrial agriculture, Ato Solomon stated that it is the underlying cause for persistence of malnutrition and poverty through the low macro and micronutrient content in the crops, high net calorie availability, supply shocks and global price instability and the resulting livelihood pressure for smallholder farmers.

In addition to the aforementioned, it has been reported that the International Panel of Experts

on Sustainable Food System (IPES) has identified the following as the key problems attributable to the current global food system:

- Micronutrient deficiency and hunger: while over 795 million people all over the globe are food insecure, 50% of these are smallholder farmers
- Obesity and over weights
- Anthropogenic greenhouse gas emission
- Shortage of potable water
- None communicable diseases



Ato Solomon - While presenting

In his presentation, Ato Solomon further discussed how and why the industrial agriculture survives despite its severe impact on human and environmental health, food and nutrition security and climate change. Some of the factors that are supporting survival of the industrial agriculture:

- Path dependency: IA is supported by high technology, investment, subsidy and labor costs
- Export orientation: Producing food for export and commoditization of food
- The expectation of cheap food: delivery of cheap and abundant food for those who can afford and have access
- Compartmentalized thinking: little attention to the complex interactions between the natural environment and human society that underpin food systems
- Short term thinking: pushing short-term solutions to business and political actors in spite of increasing problem
- Feed the world narrative: the narrative of ensuring food security by increasing total food production that do not address problem of poverty and access
- Biased measures of success
- Concentration of power in the hands of few corporate companies

After discussing the problems relating to industrial agriculture, the presentation then moved to the need for the shift to more sustainable agriculture and food production system. In this section, emphasis has been given to agriculture and food production systems that produce more, with less environmental and social costs in a just, locally and culturally appropriate manner. And the presenter stated that such agriculture and food production system is recognized to be agro-ecology.

Agro-ecology is described as a science, practice and social movement. As a science, it deals with the study of agronomic, ecological, economic and social dimensions in an integrated manner, as a practice it promotes the use of agricultural practices that work in harmony with nature and as a social movement it

deals with social justice, local identity and culture, indigenous rights for seeds and breeds, and food sovereignty.

Some examples of agro-ecological practices as listed in the presentation are:

- Conservation tillage
- Mixing crops in single crop such as intercropping and poly culture
- Crop rotation and fallowing
- Cover crops and mulching
- Crop livestock integration
- Integrated nutrient management
- Biological management
- Efficient water harvesting
- Manipulation of vegetation structure
- Agro-forestry
- Use of local resources and renewable energy sources, composting and waste cycling
- Holistic landscape management

Following these, the presenter discussed on how actors promoting agro-ecology can turn the lock-ins fixing industrial agriculture in to entry points for the transformation to agro-ecology.

The following table shows the suggested ways for turning the lock-ins in to the corresponding entry points:

Lock ins	**Suggested corresponding entry points**
Path dependency	Shift public support to diversified agro-ecological production system
Export orientation	Support short supply chains and alternative retail infrastructure
Expectation of cheap food	Use public procurement to support local agro-ecological produce
Feed the world narrative	Strengthen movements that unify diverse constituencies around AE
Compartmentalized thinking	Mainstream AE and holistic food systems approach in to education and research agendas
Short term thinking	Develop food planning processes and joined up food policies at all levels
Biased measures of success	Develop new indicators for sustainable food systems

The following are also mentioned in the presentation as basic requirements of a viable and durable agricultural system capable of confronting the challenges of the 21st century while carrying out its productive goals within certain threshold established locally or regionally.

- Agricultural production decoupled from the use of fossil fuel products (agro-chemicals)
- Agricultural production resilient to climate change
- Agriculture integrated with other/wild biodiversity conservation
- An agriculture system that has low environmental impact

- An agricultural production efficient in resource use
- An agricultural system that produces abundant and healthy food

As such, productivity, diversity, integration and efficiency are stated as features of green agro-ecosystems of the future.

In general, sustainable agricultural production system embedded in agro-ecological approaches and practices has been described as having multifunctional goals of attaining environmental and human health, access to food for all, reducing climate impacts and sustainable development.

Food sovereignty

The topic discussed in the next section is food sovereignty. The presenter described food sovereignty as a social movement that stands on six pillars, namely:

1. Food for people
2. Giving due vale for food producers
3. Localizing the food system and market
4. Control over food at local level
5. Promoting local knowledge/TEK and skills
6. Working with nature

Principles for building resilience in Socio-ecological systems

In the presentation the following were discussed as principles for building resilience in socio-ecological systems:

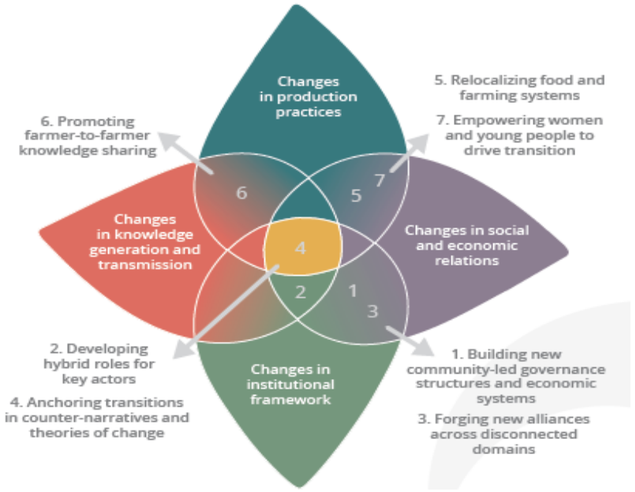
Principle I: Maintain diversity and redundancy
Principle 2: Manage connectivity
Principle 3: Manage slow variables and feedback
Principle 4: Foster complex adaptive systems thinking
Principle 5: Encourage learning
Principle 6: Broaden participation
Principle 7: Promote Polycentric Governance

The advantages of agro-ecology:

Thepresenter also discussed the following as the advantages of agro-ecology

- Production of sufficient and healthy food for local people (food sovereignty)
- Rural livelihoods and cultures preserved and strengthened
- Resilience to climate and other shocks
- Lower production costs, less indebtedness
- Greater autonomy and less external dependence
- Better stewardship of productive resources and biodiversity

Then the presenter discussed the need for driving the transition forward by combining/integrating different entry points as illustrated in the following picture:



Finally, the presenter stated the following as emerging opportunities for transforming the agricultural production system to agro-ecological approaches and practices:

- Policy incentives for diversification & AE
- Building joined up food policies
- Integrated landscape thinking
- Agro-ecology on the global governance agenda
- Integrated food system science and education
- Peer to peer action
- Sustainable and healthy sourcing
- Short supply chains

Recommendations for transition to Agro-ecological food production system

1. Develop new indicators for sustainable food systems.
2. Shift public support towards diversified agro-ecological production systems.
3. Support short circuits & alternative retail infrastructures.
4. Use public procurement to support local agro-ecological produce.
5. Strengthen movements that unify diverse constituencies around agro-ecology.
6. Mainstream agro-ecology and holistic food systems approaches into education and research agendas.
7. Develop food planning processes and ‘food policies’ at all levels.

4.2. Presentation 2: Ethiopian Policies, Laws, Strategies and Plans around Agro-ecology



Prof. Mellese - While presenting

A. Prof. MelleseDamte, MELCA's board chairperson and environmental law lecturer at Addis Ababa University, presented the second presentation, entitled "Ethiopian, policies, laws, strategies and plans around Agro-ecology". Prof. Mellese started his presentationby giving background informationon the prevalent food security/shortage in Ethiopia. He stated that Ethiopia is known to be a food importing country despite the fact that around 80% of its population is farmers and he questions whether any one or a combination of more than one of the following are the underlying causes:

Prof. Mellese - While presenting

- Lack of sufficient land?
- Insufficiency of water?
- Absence of appropriate technologies for food production?
- Absence of sufficient skills for food production?

And then asks how the Ethiopian people can solve this problemvery quickly. Then the prof. stressed that addressing the problem properly requires recognizing the fact that the food production system in Ethiopia is at crossroads and the following are among the underlying problems that need to be addressed;

- Population (human + animal) pressure;
- Reduction in soil productivity due to various reasons such as environmental degradation, exhaustion of soil fertility,
- Climate crisis;
- Policy problems

The presenter further inquires the need to explore viable food production ways and practices to produce healthy and sufficient food to feed the exponentially increasing population. To this effect, he underscores that the Ethiopian government and other non-government actors engaged in the agriculture and food production system should explore the kind of agriculture policy that can support healthy and sufficient food in the country and build resilience to climate induced shocks and where continuing business as usual will take us in the near and far future.

He then discussed thatexploring and understanding the problems will lead to finding context specific pathways toward sustainable food systems that improve resource efficiency, strengthen resilience and secure social equity. Then he poses whether agro-ecology is the agriculture and food production system that may lead tosuch desired end.

Agro-ecology as the viable agriculture and food production system

Then the presenter embarks on discussing the features of AE and whether it is the viable agriculture and food production system that enhances resource efficiency, resilience and social equity. Agro-ecology is defined by the professor as an approach that is able to contribute to transforming food systems by applying ecological principles to agricultur***e*** and ensuring a regenerative use of natural resources and ecosystem services while also addressing the need for socially equitable food systems within which people can exercise choice over what they eat and how and where it is produced. He also underlined that AE is a dynamic concept that has gained prominence in scientific, agricultural and political discourse in recent years. Further stressing that agro-ecology can be considered the best agricultural practice of the time because it perceives the agriculture in the context of the whole ecosystem through systems thinking and it gives due value to:

- Diversification;
- Mixed cultivation;
- Intercropping;
- Biological pest-control;
- Improvement of soil structure and health (considering soil as a living organism rather than a dead matter);
- Biological nitrogen fixation; and
- Recycling of nutrients, energy and waste.

The presenter further discussed that agro-ecology is gaining prominence in the international agriculture and sustainable development agendas. In this regard, the UN special rapporteur on the right to food has recognized it as:

- Mode of agricultural development which shows strong conceptual connections with the right to food;
- Agricultural practice complementary to conventional approaches such as breeding high yielding varieties;
- An agricultural system strongly contributing to the broader economic developmen**t**;

Further arguing that agro-ecology can contributes to the right to food through creating availability, accessibility and adequacy, it recommends that states should adopt appropriate policies on agro-ecology and devote maximum of their available resources to the progressive realization of the right to food.

The relevance of laws and policies for agro-ecology

The presenter started this section by claiming that laws and policies that deal with food production and consumption need to understand the ecological processes which play significant roles in food production. He then listed the following as some of the major reasons that laws and policies are concerned about AE:

i. Ecological reasons
   - The need for holistic approach and systems thinking
   - The need to make our agriculture environment/climate friendly
   - Protection of biodiversity

ii. Farmers' rights
   - The need to respect farmers' right of choice (freedom to save and share seeds, the right to participate and make informed decision, right to equity and social wellbeing)

iii. Consumers' rights
   - Protection of consumers from health risks emerging out of unsafe and poor quality or counterfeited food
   - The right to healthy and nutritious food
   - The principle of short food circuits to increase the incomes of food producers while maintaining a fair price for consumers

Legal and policy instruments for adoption of Agro-ecology in Ethiopia

The presenter started this section by claiming existence of a number of legal, policy and strategic instruments, in Ethiopia, both at international and national levels, which favor the adoption of agro-ecology. In addition to international legal instruments, there are a number of resolutions by the UN and its specialized agencies like FAO that suggest agro-ecology to tackle hunger and malnutrition for the growing world population.

I. International Instruments dealing with Agro-ecology

Stating that most of the international legal instruments deal with agro-ecology indirectly rather than directly, the presenter listed the following as among such international legal instruments:

A. The Convention on Biological Diversity (CBD)

- The convention states conservation of BD and the sustainable use of its components as its major objective
- The convention provides that "species and communities which are: threatened; wild relatives of domesticated or cultivated species; of medicinal, agricultural or other economic value; or social, scientific or cultural importance; or importance for research into the conservation and sustainable use of biological diversity, such as indicator species" and this can be linked as inclusive of the agricultural biodiversity as agricultural biodiversity is the major component of biodiversity in general.
- Hence, the plans, programs and decisions envisaged by the CBD can relate to agro-ecology

B. The United Nations Framework Convention on Climate Change (UNFCCC)

One of the objectives of the UNFCCC is stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.

It also has the purpose of allowing ecosystems to adapt naturally to climate change, to ensure that food production is not threatened.

C. The Convention to Combat Desertification (CCD)

This convention has a major objective of combating desertification and mitigating the effects of drought in countries experiencing serious drought and/or desertification, particularly in Africa, through effective action at all levels. According to the presenter, implementing agro-ecological practices in the agriculture system can significantly contribute to the realization of objectives of CCD. He further recommended that national legislators may draw upon the CBD and the CCD to justify provisions in national legislation on agro-ecology as a strategy for implementing these Conventions.

D. Agenda 21-Chapter 14, Promoting sustainable Agriculture and Rural Development

It is provided under article 14:27 of this convention that governments at appropriate level should develop and disseminate to farming households integrated farm management technologies, such as crop rotation, organic manuring and other techniques involving reduced use of agricultural chemicals, …, while enhancing techniques for waste and by-product utilization and prevention of pre- and post-harvest losses, taking particular note of the role of women.

It is further provided under art. 14:76(b) that governments should consolidate document and disseminate information on biological control agents and organic pesticides, as well as on traditional and other relevant knowledge and skills regarding alternative non-chemical ways of controlling pests.So one can deduce from these provisions in Agenda 21 that agro-ecology is recommended as the best agricultural practice to mitigate the effects of climate change and environmental harm.

II. National Instruments

A. The FDRE Constitution

Article 41-which provides for the economic, Social and Cultural Rights of the People state that Ethiopian farmers and pastoralists have the right to receive fair price for their products, that would lead to improvement in their conditions of life and to enable them to obtain an equitable share of the national wealth commensurate with their contribution.

In addition, it is provided under art. 43 (3) of the constitution that the People of Ethiopia as a whole, and each Nation, Nationality and People in Ethiopia in particular have the right to improved living standards and to sustainable development.

Hence, although they do not directly address the issue of agro-ecology, as agro-ecology is one of the pathways to sustainable development, these constitutional provisions can be interpreted to incorporate agro-ecology as the best way to ensure better prices in a sustainable manner for farmers and pastoralists.

B. Proclamation No. 488/2006 - Organic Agriculture System Proclamation

This proclamation deals with organic agricultural products defined in the proclamation as 'a product which is produced, processed or handled and distributed without the use of synthetic chemicals and genetically modified organism. It has the primary objective of introducing a proper labeling of organic agricultural products, which benefit both producers and consumers.

C. Seed Proclamation 782/2013

Provisions of this proclamation supporting the idea of agro-ecology are:

- None applicability of the proclamation to the use of farm-saved seed by any person and the exchange or sale of farm-saved seed among smallholder farmers or agro-pastoralists
- Restriction on the importation of GMO seeds

The presenter further stated the following as the core principles of seed laws that align with the principles of agro-ecology:

- Diversity
- Freedom of seed and
- Diversity of farming systems

D. Plant Breeders' Right Proclamation No. 1068/2017

This proclamation provides that smallholder farmers or pastoral community shall have the right to save, use, exchange and sell farm-saved seed of any variety on the non-commercial marketing.

It further states that plant breeders may only be granted patent right on improved varieties only if the breeder has, in accordance with prevailing national laws on access and benefit-sharing of biodiversity of the country.

Hence we can see that these provisions of the proclamation are well aligned with the principles of AE.

E. GTP II

In this plan, no agro-ecological practices are encouraged or promoted except that organic agriculture is considered as an economic opportunityas it is expected the "world middle class" will increase in number. The plan rather provides for increased utilization of chemical fertilizer from 1,223,309 tons to 2,062,106 tons by the end of GTP II with annual average growth rate of 15%.

F. Ethiopia's Climate-Resilient Green Economy (CRGE) Strategy

This policy document envisages different mechanisms to materialize the ambition of building green economy. One of these mechanisms is adopting an agricultural system that reduces emissions through use of organic fertilizers and pest management.

G. Environmental Policy of Ethiopia

Article 3 (1) of the policy is devoted to soil husbandry and sustainable agriculture. It promotes the use of appropriate organic matterand nutrient management for improving soil structure, nutrient status and microbiology in improving soil conservation and land husbandry. So we can see that this provision of the policy can be interpreted as promoting agro-ecological practices.

H. Agricultural Sector Policy and Investment Framework (PIF) 2010-2020

Paragraph 77 of this policy and investment framework provides for the need to increase carbon capture through reforestation and agronomic innovations that increase soil organic carbon levels, and which also have beneficial impacts on soil fertility. Through these works, the policy envisages 3% increase in soil organic carbon level for the expected outcome of improved soil health in key agricultural landscapes and 3% change in agro-biodiversity index to maintain agricultural biodiversity, which read in line with the principles of AE.

I. National Adaptation Plan (NAP)

In this document, enhancing food security by improving agricultural productivity in a climate-smart manneris stated as one of the 18 proposed options to ensure food security. As discussed by the presenter, the NAP recognizes the agriculture sector as the most significant sources of green house gas emission and has given at most priority to abate green house gas emissions.

J. Intended Nationally Determined Contribution (INDC)

While INDC is derived and based on the CRGE Strategy to cover issues of mitigation, adaptation and means of implementationagriculture is given a paramount importance for reduction of GHG emissions.

K. The Food Security Strategy of Ethiopia, 1997

Finally, A. Prof. Mellese concluded his presentation with the following concluding remarks:

- The existing agricultural practices in Ethiopia are easy to modify so that they can converted to agro-ecology.
- Agro-ecology can be taken as a viable option to solve most of our food related problems.
- The existing legal and policy frameworks in Ethiopia are permissible to conduct agro-ecology even if it is not possible to argue that they are fully supportive to agro-ecology.

4.3. Presentation 3: Mainstreaming Agro-ecology in Ethiopia's Agriculture

DrRegasaFeyisa, Director of Ethio Organic Seed Action (EOSA) presented the last presentation entitled ''Mainstreaming AE in Ethiopia's Agriculture". DrRegasa started his presentation by describing agro-ecology as a natural environmental system under which agriculture is practiced. He has also described AE as a field of science that combines sets of principles deriving from different scientific disciplines and shapes ecological principles and concepts for the management and design of sustainable agricultural environments.

Evolution of the concept of AE

In this section, the presenter gave a highlight of the emergence and development of the concept of agro-ecology as a science, practice and social movement. According to the points discussed in the presentation, the term AE emerged for the first time in 1930's as a scientific study that focuses on agronomic research.

Then in the 1960's and 70's it widened its scope and started to focus on the impacts of green revolution. In the 1980's and 90's it gradually shifted from ecological and agronomic analysis to an interdisciplinary approach in the agriculture sector. Finally in 1990's and onwards it widened its view from farm level to a discipline that focuses on agro-ecological and food production systems.

According to the presenter, there are still no commonly agreed definitions and understanding of agro-ecology though. While some perceive it as an alternative agricultural practice and others as the different agro-ecological zones in the landscape whereas, still others consider it as a political and socio-environmental movement. The presented finally stressed the fact that the diversity of perception has resulted in varying views that hampered mainstreaming ecological agriculture.



Dr. Regassa – While presenting

The presented further discussed that there are counterproductive approaches that hampered mainstreaming of AE. These include misconceptions such as:

- Perceiving Agro-ecology as sole alternative and in direct opposition to the conventional farming;
- Considering ecological and conventional agriculture as mutually-exclusive
- Soft' inputs -i.e. knowledge, techniques and practices as common deterrent to the adoption of agro-ecological approaches.
- Setting fixed and inflexible formulas resulting in rejection to adopt the practice.

- Practicesdo not match marginal farmers' local needs and objectives and the labor and the time the practicing consumes.

Global concern over Industrial Agriculture

The presenter then stepped to discuss on global concerns relating to the impact of IA. According to him, these days, there are research findings confirming the fact that IA is causing multidimensional harms to humans and the environment as well as sustainable food production that transcends to the future generation. Some of the crucial concerns, as discussed in the presentation, include:

- Massive degradation and alteration of terrestrial and aquatic ecosystems.
- Dependence on genetically narrow based crop varieties
- Agro-ecosystems modification and standardization resulted in unintended ecological, socio-economic and health crisis worldwide
- Loss of biodiversity resources, degraded and altered terrestrial and aquatic ecosystems;
- Destruction of natural enemies and pollinators;
- Depletion of food and feed sources and violation of global agricultural and food systems
- Social and economic inequity, poverty, hunger;
- De-carbonization of soil;
- Exacerbation of anthropogenic climate change effects;

Mainstreaming AE in Ethiopia

In this section the presenter started the discussion on mainstreaming AE in Ethiopia by describing features of the existing agriculture and food production systems in Ethiopia. According to him, the agriculture in Ethiopia can still be described as a pool of accumulated biological, ecological and social capital embedded in bio-cultural diversity. The diversity of farming, production and food systems, of culture and knowledge generated the wide base of crop genetic diversity Ethiopia is known for.

While agro-ecological thinking is still embedded in the Ethiopian agricultural practice, local sources of food are still plenty, some of them still unknown to science.

Claiming that agro-ecological production approaches are still prevalent in the Ethiopian agriculture, the presenter, however, stated the following as the key challenges facing it:

- A significant decline in the diversity and richness of the agro-ecology resources, the very basis on which Ethiopia's agriculture is founded.
- Little or no investment on scaling up ecological farming and production systems, and on improving farm environments
- Disruption of ecological farming and production systems
- Extreme dependency on externalities
- Mix up of politics with policies

The new Vision for Ethiopia Agriculture

In this section, the presenter discussed measures that need to be taken by all actors to combat the challenges and total shift to agro-ecological practices in Ethiopia. In this regard, he stressed on reversal of any disruptive approaches through agricultural policies and strategies rooted in agro-ecology as the key approach to bring a paradigm shift in the agricultural sector.

Apart from this, he also listed the following as strategic approaches to the desired shift:

- Basing the practice on the principles of ecological science and local knowledge for balanced management and better functions of an agro-ecosystem.
- Mimicking natural processes, and diversification
- Creating beneficial biological interactions and synergies between the components of the agro-ecosystem
- Modeling the practice based on specific local agro-ecological conditions and on farm scale level.
- Accounting for farming and production systems, the soil types, the local flora and fauna as well as farmers' needs and objectives.
- Multi-functional approaches to farming for meeting environmental, economic and social needs

He further discussed that the shift also requires government and non-government actors to comply with the following principles:

- Agro-ecosystems are dynamic multifaceted setups with ecological elements that function rhythmically and require systemic approaches.
- Protect and maintain soil as a living organ
- Promote a high degree of complexity of diversity in space and time, and horizontal and vertical
- Farm and landscape planning, integration of trees, multiple cropping, crop rotation, selective weeding, etc.
- EA is knowledge-intensive -a wider space for the know-how of local farmers and for agro-ecological science and its experimentations.
- Recognition, promotion and socio-economic incentives for diverse, ecologically sound and healthy farmers' produce.

Some features of Ethiopia's Agro-ecosystem

In this section, the presenter discussed the following as features of the Ethiopian agro-ecosystem:

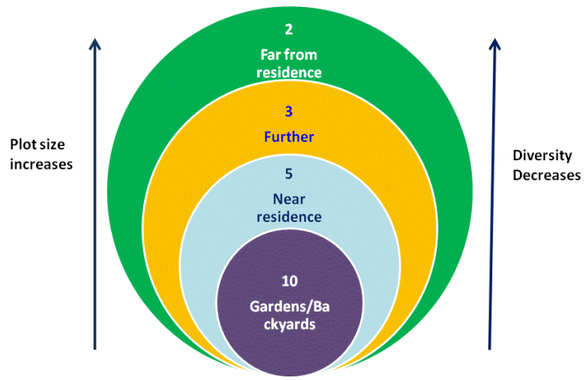
- Farming systems are dynamic socio-environmental systems with evolving social, economic and environmental processes.
- Agro-ecological compositions of the farming landscapes evolve and farmers' knowledge and practices that modify the farming landscape co-evolve with the farming systems.
- Farmers' practices follow the pattern of the evolving changes of the compositions of local environment.

- There are varying sub-farming systems interspersed across the main farming and production systems

He further discussed the traditional classification of agro-ecological zones in Ethiopia as described in the following table:

Traditional zone	Climate	Altitude (m)	Average Annual Temperature (^{0}C)	Average Annual Rainfall (mm)
Bereha	Hot arid	< 500	> 27	<200
Kola	Warm Semi-arid	500-1500/1800	27-20	200-800
Weyna-dega	Cool Semi-humid	1500/1800-2400	20-16	800-1200
Dega	Cool & Humid	2400-3200	16-11	1200-2200
Wurch	Cold & Moist	Above 3200	<11	above 2200

The following diagram also illustrates crop management practice by Ethiopian farmers as discussed in the presentation:



Following this, DrRegasa discussed the impact of alteration of gene function (disjunction) under different ecological zones in Ethiopia. In connection with this, he explained how same crop varieties come up with different characteristics in different agro-ecological zones and stressed that the natural

agro-ecological zones and landscape in Ethiopia call for diversification of crop genetic pool in the agricultural sector.

Finally, DrRegasa stated the following as the key approaches to pave the way for mainstreaming AE in the Ethiopian agriculture:

- Technologies and practices that are alternative to environment unfriendly approaches and can bring both environmental and economic benefits for farmers, communities and nations.
- Resource conserving and enhancing technologies and practices that enable sustainable environmental and economic benefits
- Management approaches that enable maintaining the dynamics of intrinsic changes
- Action that provide livelihood/survival options

He further stated the following as the challenges expected on the way to the new approach:
Adjusting our needs to the new changes
OR
Adjusting the new changes to our needs
Whether or not one is an alternative to the other:

i. We have to build resilience (develop hardiness)
ii. We have to build persistence (keep carrying on, develop endurance)

5. SESSION III: PLENARY SESSION

Following the three presentations, participants were given the opportunity to reflect and share and also share their perceptions in the context of the thematic areas. Accordingly, the participants tabled the following reflections. Clarification, questions.

Dr. Hailu was given the first chance to reflect. He then started by clarified about carbon equivalent- how carbon stock is calculated. Coming back to the presentations he thanked the presenters for their insightful presentations and commented on the issue of measuring productivity. On this point he took example of BT cotton which is said to be high yielding by many proponents. But he said, we should be careful in interpreting the productivity issue. For instance, he said, available evidences from two experiments indicate that farmers in Arba Minch have been harvesting organic cotton in a range 24-34 quintals per hectare. Comparing this result with BT cotton's reported yield of 30 quintals per hectare there is no convincing reason to promote BT Cotton in the farming system on top of lack of knowledge on the social and environmental consequences of the same. He added, the bias towards conventional industrial agriculture taking simply productivity measure, without considering the existing local potentials should be revisited as we have so many powerful but silent farmers who need to be supported. In this connection, he pointed out the important role played of Ethiopian Biodiversity Institute in terms of preserving the local seed varieties in gene banks that can be distributed to farmers

as a critical input for expanding agro-ecological practices. He also stressed the need to work on creating market linkages to end buyers within the country so that farmers will gain better income from their produce by avoiding a long chain of middlemen who ear larger profit margin from the farmer's produce.

Dr. Feleke, IBC Deputy Director started by thanking MELCA-Ethiopia for the organization of the forum reflected by indicating the salient elements raised by the presenters. He said that such forum have big contribution for understanding on of biodiversity resources, sustainable utilization and benefit sharing through exchange information,updating on the new developments and reaching on common understanding and narrow the observed differences have on the subject matter. He then appreciated the approach of first presentation on "Agro-ecology Fundamentals". He mentioned that the presentation started by giving highlights on the currentstatus of industrial agriculture which is a giant and dominant sector dominated by big companies which has large impact in influencing states and shaping the economies at national and international levels. He then reiterated the need to have clear understanding of the concept of agro ecology, the pillars, the competing interests and how we should move forward in advancing agro-ecology approaches and practices.

In relation to the presentation on the policy and laws he stated that the review made by the presenter has enabled the participants to have wider perspectives on the subject. He however noted that the existing legal frameworks should not be considered as enablers of agro-ecology. He further pointed out that the traditional farming units are based on agro ecological units but have been neglected or broken by conventional agriculture. Although we have challenges from, expansion of industrial agriculture we need to have clear understanding of the challenges and try to fill the gaps to come back to nature. Since agro-ecology is a nature based system our solutions are in nature. Natural system is not against technology but we need to study how technologies will complement the traditional systems.

We need to continuously drill the idea and share our understanding and on how we can consider different perspectives and the challenges we were encountered with. We have failed to properly see and value our resources. As an example of the challenges, he raised the case of *Enset* farming as an example which has multidimensional values but being replaced by other crop typesas observed in some places without undertaking rigorous cost benefit (economic, environmental and social) analysis. We should not wait for provisions to engage with or apply the available solutions to promote agro ecology activities. It is there but we need to integrate and try to face the challenges coming from within our institutions and different national and international entities by having clear awareness of the issue for concerted action ny all concerned.

ShambelGebremedhin Biregaexpressed his views by saying that the issues we have been raising are not as such new as we have been repeatedly hearing in many workshops and platform. He then said thatto bring changes we desire we have to start by inward looking and ask ourselves what we are contributing towards the same. We have to combat our feelings and reservations to say what is right and think out of

the business as usual approach. We need to work for creating demanding consumer that can say no to unhealthy food through empowering the same to have voice. We need also to recognize and promote our existing best practices to advance agro-ecology and try to influence policy makers to give more focus for integrating agro-ecology in relevant sectors including in the education system. He also stressed on the need to work on designing mechanisms to engage the young educated generation to be engaged in agricultural activities so as they will play key role in promoting agroecology approaches and practices to change the prevailing conventional agricultural production system.

Kalkidan Fikre- expressed her opinion by asking 'Do we know the farmer and understand what they need?". She said instead of imposing our prescriptions on them we need to approach them and now their real desires and felt needs. She also said that we have to allow and encourage the farmers' betted performing local seed varieties rather than approaching and pushing them to focus on specific selected hybrid crop varieties. Further, she raised her concern on the observed natural resources degradation and loss of soil due to erosion from the degraded and cleared forest landscapes and suggested for the need to give focus to combat the situation to improve production and productivity through promoting agro ecology approach and practices and ensure sustainability.

Eskadmas Alemu – participant from Youth Network for Sustainable Development (YNSD) asked what the Ministry of Agriculture and Agricultural Research Institutes are doing or have done in promoting agroecology approaches and practices and in sharing/disseminating the knowledge gained. He indicated his observation and experience of lack of information in his effort to produce publications especially on the best practices related to agriculture.

Gebremedhin Belay- extended his appreciation to the three presenters by highlighting the salient points addressed by each and noted that in addition to having policy frameworks the need to frame and widely communicate powerful slogans and mottos as other means of promoting agro-ecology. He also commented on the existing perceptions of population as liability and asset. Here he said that so long as we have a working society who feeds the nation, Ethiopian population is not a liability rather is an asset/capital and needs to be supported through capacity building for enhanced performanceto driving agricultural productivity and production in general.

Sebsibe Zuber – Asked questions relevant to the workshop theme which needs to be thought about and worked up on by all concerned. The key questions he raised include: As agricultural researcher what were our focus areas in the past? Where were we a heading? Did we work to build on the farmers' knowledge and practice or did we dismantle the existing knowledge in the name of increasing production and productivity? As an entry point we know that, due to various factors, the present generation has little interest to be engaged in agriculture. Most of us here are from farmers' families and preferred to stay away from rural life. But still we have elder farmers and resource persons from whom we can learn traditional ecological knowledge (TEK). We have to work on how we can tap the

knowledge and practices and restore what has been ignored. We cannot bring back the trees we have cleared, the fertile soil (minerals and microorganisms) we have lose in the past decades. We need to work on keeping the traditional knowledge complement with scientific knowledge as appropriate based on our local context. The need for eco-friendly agriculture technology adoption is quite evident. However, we need to think globally and act locally in the effort to inculcating new technology in our complex agro ecological setting.

Bersabeth from MELCA-Ethiopia thanked the presented for the presentations from which she has learned a lot andraised question saying"Why the agriculture sector was focusing only on cereals as was presented?".She suggested for the need to work on introducing cultural food crops like Anchote and Enset which is known in limited geographies to other parts of the country She further stressed for the need to work on creating demand by other communities/consumers so long as they are researched and found to have better nutritional value, contribute to ensuring food security, healthy and environmental friendly as well.

The participant also revealed his observation and practical challenges which need to be researched in relation to promoting agro-ecology practices taking Bale as a case in point. He indicated that mono cropping culture has becometo dominate the traditional farming system in Bale and Arsi. Sharing his lesson from Bale farmers with a relatively larger farm land holders, he said that they reported to prefer fallowing instead of crop rotation since the later will not yield better as compared to the former. The dominating agronomic practice of these farmers is that they fallow their farm land and use chemical fertilized to get better production. This practice brings achallenge for researching competitive crop for rotation so as to introduce and encourage farmers to adopt agro ecology practice. He also asked whether there are evidence-based comparative analysis between conventional and agro-ecology in terms of economy as well as the shadow part of agro-ecology which he said couldn't find except literatures narrating about the principles of agro-ecology.

Response:

The presenters thanked the participants for raising important questions and sharing their perceptions on some of the issues highlighted during the presentations. In response to the questions the presenters gave brief responses as summarized below.

Dr.Melesse: With respect to the question on the policy gaps, he said that in general we do not have strategy on agro-ecology. This could be due to the fact that concept of agro-ecology has not yet well understood and advocated. He indicated from his experience that it is very hard to influence the government to issue policies and laws that may not fall under their prevailing priorities within a given timeframe.In anotherperspective, he said, existing legal instruments are not prohibiting us to move forward. Starting from the Ethiopian constitution, policies, laws, policies, strategies, plans and

programmers – all do not restrict us from promoting agro-ecology although some have conflicting provisions. In general, he said, since the existing laws and policies are not hindrance to promote agro-ecology we better use the available loop holes within the policies and laws to start practicing it on the ground. As far as we view agro-ecology as practice we have to translate it into action and show the positive contribution it has in various angles - economic, environmental and social. By then, we will have many followers to take it and sustainably integrate it into their farming systems. Otherwise, if we are to wait aspiring that policies will be drawn in a way we desire, we have to wait for undefined time until this happen-loosing time and resources.

Dr. Regassa: As a general comment, Dr. Regassareflected on the question of 'what the Government is doing'. In this connection, he said, it is a difficult question but we need to have conceptual clarity on how we perceive state and its role. He noteda state is public office given responsibility to serve the interest of the nation.The assignment is given by the citizen. The issue is that be it intentionally or unintentionally the role of the government and that of the citizen is not well exercised.To bring about change both theperception and practice need to be gradually transformed through concerted effort of all concerned.

On the issue of knowledge sharing, he said, we need to create youth platforms. There are open rooms since our societies have long developed integrity in many aspects. We can listen to each other which is a fundamental value for sharing knowledge through engaging the youth and other segments of the population.

In relation to soil degradation issue, he said we should have clear picture on who is controlling the land. Land should not be perceived as simple commodity owned by specific body. Rather land is a country. As a citizen every one can use it and each one of us has a duty to protect the land. However, it is observed that in few rainy seasons gullies are formed due to lack of proper conservation measures in many places since it is considered asnobody's business and property. The farmers are reluctant to exert their labor and resources on land as they are not sure to own the resource. This situation is hurting the country and therefore needs to be worked on to bring system change to reverse the situation.

With regard to the existing gap in promoting the traditional food culture(Anchote, Enset…) developed among specific communities, Dr.Regassa appreciated the question and suggested for the need to enhance the culinary values to show how good it is to adopt and part of diet based on its level of vitamins, minerals, or calories. He recalled that Teff was once considered as food with no/little nutritious food but this has been by scientific evidences and now is among the food beyond the country. Similarly he said, now demand for Kocho is growing andthere is a need to work on promoting food values of different crops through home economics and introducing into hotelsalong with the existing knowledge and culture to create demand for the products and thereby expand the production and consumption of the same.

Solomon: As to the participation of CSO's in the ten years policy drafting Ato. Solomon indicated his view by indicating that discussions were not widely organized among civil society forum. But he said, in the forum I am currently participating we are working to look into agroecology issue. He said that the concept of agro-ecology is a new thinking which needs an eye opening and exert efforts of all concerned through advocating the same in different platforms and communication channels. In this connection, he pointed out that there is an ongoing effort specifically in collaboration with concerned bodiesmainly with one interest group called "Land for Life" in which he is participating as a member through frequently raising the issues indifferent platforms with the view toinculcate the values of agro-ecology to decision makers so as to give space in the ten years policyframework.He added by saying that ten yearsis a long term planning period that covers three strategic plan durations or two election/political periods for the government and the ideas about mainstreaming agro-ecology requires a continuous process of undertaking open dialogue and deliberations for informed decision making as well as for translating the same into action through effective planning and implementation by all concerned.

With regard to the question whether we have comprehensive research, Ato Solomon indicated that the Ethiopian agriculture research system has been largelyfocusing in measuring production and productivity. To undertake rigorous comparative analysis between conventional agriculture and agro-ecology, we need to measure different parameters. For instance, he said, we need to see nutrition parameter, resource use parameter, livelihoods enhancement parameter, greenhouse gas issue, etc... Therefore, we need to revisit our parameters to be multi-dimensional for robust analysis of success factors and associated challenges. In this connection, our education system, research approach need to be reoriented towards this end.Otherwise, he said, by simply applying conventional production system parameters we cannot do fair comparative analysis between industrial agriculture and agro-ecology as they cannot give us holistic picture to reach on fair conclusions.

Despite the shortcomings in our research system, he said, there are efforts by different organizations to build knowledge and gain lessons from best practices. In this connection he mentioned that MELCA-Ethiopia is trying to compile successful practices in its areas of interventions within the country. He also mentioned efforts of other organizations including ISD, EOSA and PELUM Ethiopia who are working on the same althoughmany of them had limited in scope but with valid contributions in building knowledge and document lessons forfurther action in the area.He also revealed that MELCA-Ethiopia is currently developing guidelines on agro-ecology which will be guiding framework for its engagement in the area and also serve as a reference for all interested.In related matter, he indicated the present workshop which organized by MELCA-Ethiopia is part of the effort to come up with the draft policyrecommendations for mainstreaming agro-ecology in the agricultural production system and revealedthe ongoing policy study/review (to be deliberated on by CSOs and Government organizations) which will be used as a basis to come up with draft policy document for consideration by government. As part of an ongoing effort, he alsomentioned the role of AgriProFocus which is an international multi-

stakeholder platform focused on development in the agriculture sector and playing important role in agro-ecological movement through agro ecology network and the Alliance for Food Sovereignty in Africa (AFSA) which is a broad alliance of different civil society actors that are part of the struggle for food sovereignty and agroecology in Africa.

6. SESSION IV: GROUP DISCUSSIONs

Two groups were formed to discuss on the following key Questions.

- What are major bottlenecks of Ethiopian agricultural production system?
- What should be done to transit to more sustainable agricultural production system such as agro-ecology?

Group I discussed on the first question by examining the major bottlenecks of agricultural Production and outlined possible solutions to address them.
Group II discussed on both the first and the second topics.
The groups made thorough discussion on the topics given to them and identified key bottlenecks and possible solutions in the agricultural production system especially in relation to promoting agroecology approach and practices and possible areas requiring action to address the problems.A summarized report of the groups is presented as follows.

6.1 Group I Report

❖ Major Bottlenecks of Agricultural Production

- Ignoring indigenous knowledge and practice
- Unable to appreciate diversity
- Absence of systems thinking /holistic approach in agriculture
- Lack of investment on small holder farmers -
- Narrow context of training- farmers' education, extension...
- Lack of consultative /inclusive policy
- Lack of promoting traditional food sources-
- Market linkage and value addition problems

❖ Suggested Solutions

- Recognizing of indigenous knowledge and practice
- Increase diversity on farms by using the existing potential
- Promote holistic approach and systems thinking
- Recognizing and assisting the tradition of eco-friendly farming systems
- Undertaking context of training/education research and extension

- Prepare inclusive/consultative policy
- Promote traditional food sources
- Creating market linkage and value addition

6.2 Group II Report

❖ Major bottlenecks of the Ethiopian agricultural system.

- Structural challenges and problems with agricultural governance system, inputs, mechanization.
- Value chain problems, marketing problems and market linkage challenges.
- We focus on highland agriculture, which has several natural bottlenecks – the "water tower" resource is also a problem in terms of erosion and soil loss, and depletion of soil organic carbon (unlike temperate climates that can have meters of accumulated soil organic carbon)
- High dependence on imported ideas: starting from policy design. Our own knowledge and skills are ignored.
- We are moving towards emphasis on markets (especially export markets), cash crops and therefore mono-cropping. (This is also a foreign mindset, to be market centered)
- Attention to local markets is not given – focus is on export market development. The best products, nutritious products, sustainable products are exported.
- Top-down approach, lack of participatory approach, including relevant people, experienced farmers, civil society, relevant professionals etc.
- Education investment, research agenda is not aligned to multifunctional systems success of agriculture sector.
- Policy is not comprehensive, market incentives are not comprehensive, and safety nets are not in place.
- One size fits all approach, irrespective of local ecological and cultural differences, and the results are low.
- Soil Erosion and land degradation is a major bottleneck.
- Landuse policy, the land tenure system has problems.
- Integrated watershed management is a challenge because there is not good policy to incentivize investment in the land, and guarantee benefit in the future from what you put in.
- Knowledge and information dissemination systems have limits, as do the training and extension systems (where specialists have to be generalists, or people might have their position more for political allegiance than for the agricultural expertise
- Hadiya and other parts of South Ethiopia, central and Northern highlands, the land holding sizes are really small. 0.25 ha per family is common.
    - This can be related to a mismatch between family planning and land holdings. The men are usually the ones who get the land, and the size of the parcel is divided amongst the male kids. The land holding is diminishing.
    - Furthermore, land is often owned/controlled by elders who don't have the strength power to manage it well, and there is a labor shortage for good management.

  - Rural to urban migration also contributes to the labor shortage in rural areas.
  - Land administration and leasing policy does not encourage effective use of land.
- Mismatch between population growth and productivity.
  - Youth unemployment is vast, yet there is rural labor shortage. The government can help to manage the labor gap.
  - Market development, valorization and market linkages and value chains are a bottle neck: Ethiopian Commodity Exchange (ECX)for aggregation and securing market for just some foreign crops, but not the indigenous ones like inset etc. (local) Value chain development for the local crops is required.
    - Functional market help for the quality of the product supply.
    - Perishable crops are lost in PHL before reaching the market
    - However, note that ECX is all about export, and not about local market development
  - Gender: ½ of the population is still excluded from lots of agriculture development support.
  - Our excellent high quality, nutritious oil seeds are exported. And the oil processing factory in development is using imported oil sources.
  - Farmers are not organized. A movement is needed to strengthen farmer agendas.

❖ **What can be done to transition to more sustainable agricultural production system such as agroecology?**

- Land policy advocacy and revision is required. The ability to sell land after a couple of years and for the market to reward investment in the land, and for the policy to protect those that invest in the land so they are incentivized to care for it.
- Align policy, education, research agendas and government plans to agroecology.
- Ensure public accountability in discharging its responsibility
- We need movement creation – to build awareness and a critical mass who are calling for these things. We need multi-stakeholder platforms for fostering cooperation. We also need to ensure that pastoralist communities are involved.
- Ensure that urbanization does not take place on our most productive land. See where urbanization might assist with fragile ecosystem conservation. Urban agriculture strategy also needs to be integrated with coordinated city-region foods system development, supported by clear direction and guideline and zoning etc.
- Policy to support and acknowledge good cultural conserving agro-ecological practices (E.g. in some parts of the south people who don't plant inset on terraces are ostracized!)
- The (largely organic) waste at the end of the value chain needs to go back to the agriculture system! Farm-post fork sustainable resource use in circular value chains is necessary.

- Different agro-ecological approaches for conserving the soil and water are important (E.g. fruits) to address the crop production bottlenecks in highland agriculture.
- Document and share success in post harvest and post fork sustainable management success from our country.
- Untapped potential in lowland areas, especially Somali region
- Governments should help to bridge the gap between mass youth unemployment and rural labor shortages.
- Land investment incentivization integration with enabling policy might be a possibility. Can farmers work together with investment partners? And a supportive local and international market is required. We need government structures to link farmers to investment partners and local and international markets.
- Strengthen value chains, particularly for indigenous biodiversity.
- Farmer associations need to be stronger and autonomous so that farmers can have a voice for their interests.

7. SESSION V: PLENARY DISCUSSIONS ON PRESENTATIONS

Following the presentations of group reports plenary discussion and interactions made are summarized as follows.

- The need to organize agro-ecology practitioners at country level so as toinstitutionalize and empowered them to exercisetheir full rightsby creating an enabling environment.It was also noted that the process can be initiated byconnecting together the existing associations organized in different regions such as, farmers seed bank (gene banks) associations.
- It was also suggested for the need to make extra effort to have East African Regional Level Agro-ecology farmers of association.
- The need to facilitate a continuous forum among the CSOs and policy makers as well as farmers to instill agro-ecology and to facilitate evidence based policy decision making, planning and implementation.
- The need to encourage model farmers through capacity building – training, facilitation transfer of knowledge through exchange visits, and recognition of their contributions in the area, etc...
- The need to give opportunity for farmers to set agenda and present their experiences in different forums to share their experiences and identifying research agenda for participatory research.

8. CONCLUDING REMARKS

As concluding remarks brief statements were made by Dr.Regassa and Ato Solomon. In his remark Dr. Regassa expressed his happiness on the two days deliberations in which important issues were raised in relationto the workshop theme. He thanked MELCA-Ethiopians' commitment for bringing together

concerned partners to share ideas and experiences which is critical input to meet the objective of the workshop. As to the engagement of youth in agriculture, DrRegassa revealed that there are ample opportunities for youth to play their role sustainable agriculture and benefit themselves. In this connection, he mentioning the experience of youth in Itayaworeda who started with small investment and know reached at promising growth stage. He also underlined the importance continues exchange platform and information sharing among farmers, concerned entities including policy makers for informed decision making. Last but not least, he underscored that, if we start in an organized, systematic and institutionalized approach we would be able to register success and ensure sustainability in our endeavors.

Ato Solomon in his closing remark pointed out that referring to the theme of the workshop, we are in a stage where we need critical thinking for policy reorientation that would bring paradigm shift. He noted that we need to use the opportunity CSOs have, given the improved legislation, and explore the means to create critical mass movement at all levels.

We should widen our perspectives and be open for new knowledge and strength our unity to influence policy in agricultural system. We should go for poi-centric approach rather than being used to disseminate corporate disoriented prescriptions to our farmers. This requires decolonization of the mind and work on farmers be heard and given a chance for generation policy recommendations as they have important political influence. Further to the identifying policy gaps, CSOs need also to work on bringing forward alternative policy recommendations for consideration by the government. We need to show to the government the means and the end to address policy gaps identified. This is what MELCA-Ethiopia is striving through this and other platforms to promote agroecology approach and practices by drafting policy options.

He pointed that one of the outputs of this workshop is its ability to bring together relevant partnersto share experience and enhanced networking. He also underscored about the issue of GMO which needs further deliberations. In this connection he noted that agricultural policy discussion without addressingGMO issue cannot be effective- indicating that improved GMO is an extension of GMO. He also raised about strengthening farmers associations and noted that we need to work on how we can be relevant to farmers, consumers, researchers, policy makers, development partners… In otherwords, he said, we need to have cross sectoral relevance and work on cross feeding and knowledge harmonization to break knowledge barriers in our endeavor towards attaining desiredgoals.

Ato Solomon finally wind his remark by thanking MELCA-Ethiopia Board Chairperson, the paper presenters, workshop organizers and all the participants for their active deliberations and important inputs to enrich the policy framework document to be submitted to the concerned government organization for further refinement and action.

Annex I: List and Contact Address of Participants

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Annex II: Programme for the workshop

National Consultative workshop on mainstreaming of agro-ecological approaches and practices in Ethiopian agricultural production system.

Organized by MELCA- Ethiopia with the financial support of David and Lucile Packard Foundation

15th September 2020, Azzeman Hotel, Addis Ababa, Ethiopia

Time	Activities	Responsible
8:30 -9:00 am	Registration	MELCA-Ethiopia
	Opening Session	
9:00-9:15 am	Self introduction by participants	Facilitator
9:15-9:30 am	Introduction of the programme	Mr. Mersha Yilema. MELCA-Ethiopia Program Director
9:30-9:40am	Welcoming address	Mr. AlemayehuAyalew, MELCA-Ethiopia, General assembly V/Chairperson
9:40-10:00 am	Official Opening speech	H.E State Minister of Agriculture or Designee
10:00-10:30 am	Coffee Break	Organizer
Plenary Session I: Chair Person : TBD		
10:30- 11:00	Agroecology Fundamentals and Transitions	Mr.Solomon Kebede, MELCA-Ethiopia
11:00-11:30 am	Ethiopian Policies, Laws, Strategies and Plans around Agroecology	Dr. MelleseDamtie, Environmental Lawyer, Consultant and Lecturer
11:30-12:00 PM	Mainstreaming Agroecology into Ethiopian Agriculture	Dr. RegassaFeyssa, Senior Researcher/Practitioner Individual Consultant
Plenary Session II: Chair Person: TBD		
12:00-12:30	General reflection on the presentations	Participants
12:30-1:30	Lunch break	MELCA-Ethiopia/Hotel
1:30-2:30	Group Discussion	Group Members
Plenary Session III: Chair Person: TBD		
2:30-3:00	Groups Presentations	Group representatives
3:00-3:45	Plenary discussions on presentations	Participants
3:45-4:00	Closing Remarks	TBD

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