NATIONAL CLIMATE POLICY STUDIES *for*

A CAMPAIGN ON AGROECOLOGY FOR CLIMATE ACTION

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ACRONYMS

ATA	Agricultural Transformation Agency
NGOs	Non Governmental Organizations
CRGE	Climate Resilient Green Economy strategy
EFAP	Ethiopian Forestry Action Program
AFSA	Alliance for Food Sovereignty in Africa
AU-IBAR	African Union – InterAfrican Bureau of Animal for Animal Resources
BAU	Business-as-usual
CBD	Convention on Biological Diversity
CBPWD	Community Based Participatory Watershed Development
CCC-E	Consortium for Climate Change-Ethiopia
COP	Conference of Parties
CR	Climate Resilient
CSARS	Climate Smart Agricultural Research Strategy
CSOs	Civil Society Organizations
DRM	Disaster Risk Management
DSSAT	Decision Support System for Agrotechnology Transfer
EBI	Ethiopian Biodiversity Institute
EFCCC	Environment Forests Climate Change Commission
EIAR	Ethiopian Institute of Agricultural Research
EPCC	Ethiopian Panel on Climate Change
EPE	Environmental Policy of Ethiopia
FDRE	Federal Democratic Republic of Ethiopia
GDP	Gross Domestic Product
GE	Green Economy
GHG	Green House Gas
GTPII	Second Growth and Transformation Plan
IFPRI	International Food Policy Research Institute
IMSC	The Inter-Ministerial Steering Committee
INDC	Nationally Determined contributions
IPCC	Inter-governmental panel on climate change
KII	Key informant interview
MC	CRGE Management Committee
MDGs	Millennium Development Goals
MEFCC	Ministry of Environment Forest and Climate Change
MoF	Ministry of Finance
Mt CO2e	Million Metric Tonnes of Carbon Dioxide Equivalent
NAP-ETH	National Adaptation Plan – Ethiopia
NDCs	Nationally Determined Contributions
NFSDP	This National Forest Sector Development Program
NRM	Natural Resource Management
PES	Payment for Environmental Services
PPP	Public Private Partnerships
RCP	Representative Concentration Pathway
SDGs	Sustainable Development Goals
SRM	Sectoral Reduction Mechanism
UNFCCC	United Nations Frame Work Convention on Climate Change

ACRONYMS

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1. BACKGROUND

Consortium for climate change-Ethiopia (CCC-E) is the legally registered consortium of Ethiopian Resident and foreign charity Organizations working in Ethiopia on issues related to environment, climate change and natural resources management. CCC-E's mission is to promote climate change agenda in Ethiopia through advocacy, networking, research and capacity building towards designing and disseminating activities aimed at influencing public behavior and policies along with establishing platform which will synergize the efforts of Non Governmental Organizations/ Civil Society Organizations (NGOs/CSOs) and other stakeholders in combating climate change.

Alliance for Food Sovereignty in Africa (AFSA) is an alliance of networks and organisations working for food sovereignty in Africa. AFSA is currently running a continental campaign on Agroecology for Climate Action in 12 African countries (Cote d'Ivoire, Cameroon, Ghana, Ethiopia, Kenya, Senegal, South Africa, Nigeria, Togo, Uganda, Zambia and Zimbabwe). The overall goal of the campaign is "Agroecology recognized in national, regional and international policy spaces and frameworks as a strategy for climate change adaptation and mitigation in Africa." As part of the campaign strategy, CCC-E is partnering with AFSA to undertake a study of the national policy environment for purposes of identifying entry points for inclusion of Agroecology and influence national climate policy frameworks, plans and strategies to reflect agroecology as an adaptation and mitigation measure for climate change.

The Paris agreement was adopted in December 2015 during the 21st session of the conference of parties (CoP) of the United Nations Frame Work Convention on climate change (UNFCCC). It was geared towards enhancing the implementation of the UNFCCC and strengthening the global response to the threat of climate change, in the context of sustainable development and effort to eradicate poverty. It also reflects equity but differentiated responsibilities and respective capabilities, in the light of different national circumstances. As part of the agreement, all parties to the agreement were to submit ambitious Nationally Determined Contributions (NDCs) to the global response to climate change before/when ratifying the agreement.

"Agroecology recognized in national, regional and international policy spaces and frameworks as a strategy for climate change adaptation and mitigation in Africa."

These Nationally Determined contributions (NDCs) identified the post-2020 voluntary national climate targets, including mitigation and adaptation, which countries committed to and which became binding Nationally Determined Contribution (NDC) when a country ratified the Paris agreement. Thereafter, each country shall communicate their NDCs every five years which shall be recorded in a public registry at the secretariat. Each party is also allowed to adjust its existing NDC to enhance its level of ambition. The following are the major pillars through which the NDCs and the Paris Agreement are implemented Mitigation, adaptation, finance, technology transfer and capacity building.

The implementation of the Ethiopia's NDCs depend on the sustainable development plan stated in the Climate Resilient Green Economy (CRGE) strategy. The CRGE strategy is integrated into the national development plan GTP II (Second Growth and Transformation Plan) and the currently under preparation 10 years Perspective Plan.

The CRGE strategy is bold step towards resilient low carbon economic development pathway in Ethiopia. Mitigation efforts focused mainly on forestry and Agriculture sectors which were estimated to contribute to 130Mt CO2e and 90MtCO2e GHGs reductions respectively. Additional abatement potential from transport, power and Industry were projected to significantly to carbon neutral economy by 2030. Ethiopia's NDC require robust financial support, technology transfer and capacity building activities. The 64% cut in GHG emission and the path to resilient green economy would require robust financial support of up to $150 billion.

The NDCs are to be implemented under four pillars namely:

a) Enhancing crop and livestock production practices for improved food security and better income for local farmers.
b) Forest protection and re-establishment for economic and environmental services.
c) Increasing electric power generation from renewable energy sources.
d) Energy efficient technologies in the transport, industry and building sectors

It is to be noted that there exists six traditional, 18 major agro-ecological zones, 32 sub-agro-ecological zones and 14 adaptation planning zones in Ethiopia. About 16.5 million hectares of land is devoted to the cultivation of various crops in different agroecologies of the country . Eighty percent of Ethiopia's population live in rural areas and most of them are small-holder farmers currently undertaking farming in an ecologically sustainable manner within their own farms. Several studies have clearly indicated that there is a change in the temperature and precipitation in Ethiopia over time severely impacting the food production. With NDCs implementation being at a nascent stage, it is important to explore the possibilities of utilizing the ago-ecological zones and the 'agro-ecology' as a concept to effectively adapt to and mitigate the impacts of climate change.

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2. OBJECTIVES/ PURPOSE OF THE ASSIGNMENT

The following are the major objectives of the current study:

a) Create an understanding of existing climate change related policies, plans, strategies, regulations and frameworks at national level.
b) Identify critical entry points for mainstreaming agroecology within the identified policy frameworks.
c) Propose approaches to guide the integration of agroecology in the national legislation and frameworks identified.

The CRGE strategy is the pertinent measure that the Government of Ethiopia has taken to alleviate the impacts of climate change. As parts of the agreement Ethiopia has submitted its ambitious nationally determined contributions (NDCs) to the global response to climate change. These Nationally Determined Contributions (NDCs) identified the post-2020 voluntary national climate targets, including mitigation and adaptation, which countries committed to and which became binding Nationally Determined Contribution (NDC) when a country ratified the Paris Agreement. The following section identifies and highlights the approach, methodology and tools utilized to conduct the study of the national policy environment for purposes of identifying entry points for inclusion of Agroecology and influence national climate policy frameworks, plans and strategies to reflect agroecology as an adaptation and mitigation measure for climate change.

“The CRGE strategy is the pertinent measure that the Government of Ethiopia has taken to alleviate the impacts of climate change.”

Scope of the assignment

The results of the study were based on the following activities, but were not limited to;

a) Collecting relevant legislation and policies including, but not limited to strategic and program documents and action plans on climate change in relation to agro-ecology;
b) Conducting informant interviews with representatives from government structures having mandates pertaining to climate change and agriculture;
c) Providing relevant conclusions and recommendations with regards to the inclusion of agro-eciology and for influencing the national climate policy frameworks, plans and strategies to reflect agro-ecology as an adaptation and mitigation measures to address climate change.

This was done based on the Ethiopia’s visions, goals and targets identified in the CRGE strategy and Nationally Determined Contributions in line with the sectors` plans and targets.

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3. METHODOLOGY

The study applied qualitative methods, which deploys the following techniques and tools for gathering data and information from different sources. Documents for the desk review will be collected in two ways; one by accessing internet-based policy and strategy documents from various organization's websites, and by visiting selected government ministries, and agencies. The following techniques and tools will be deployed for collection of data and information

1. Desk review:

Both published and unpublished documents related to NDC, CRGE and GTP II and its implementation will be collected from Ministry of Agriculture and thoroughly reviewed. Other major environment and climate change related policies and strategies will also be reviewed. Any relevant peer reviewed publications related to the subject area will also be collected and reviewed.

2. Key Informant Interview

Key informant interview (KII) will be conducted with the selected officials/implementers related with agriculture sector NDC implementation. Interview will be conducted through structured interview questionnaire to gather firsthand information with regard to the existing legal and regulatory frameworks pertaining to agro-ecology and climate change, the challenges and limitations as well as recommendation for entry points for agro-ecology as a concept in the implementation of NDCs/Paris Agreement and modalities and structures put in place for effective implementation of Ethiopia's NDC's.

The list of organizations that are selected for the KII are as follows:

- Ministry of Agriculture
- Ethiopian Agricultural Research Institute
- Ethiopian Transformation Agency
- National Planning Commission
- Ethiopian Environment, Forest and Climate Change Commission

Attempts will also be made to seek information from other organizations who will be identified by the above major ministries/ agencies.

"Other major environment and climate change related policies and strategies will also be reviewed."

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4. CLIMATE CHANGE IN ETHIOPIA

Ethiopia is one of the most vulnerable countries to climate variability and frequently faced climate-related hazards such as drought and flood. The variability of rain fall, and the increasing temperature are a cause for frequent drought and famine and putting disastrous impact on the livelihood of the peoples in the country . Although Ethiopia is endowed with rich biodiversity resources; they have been highly degraded and lost from time to time as a result of climate change impacts.

The major environmental impacts of climate change in Ethiopia are changes in rainfall patterns and distribution, increased frequency and severity of extreme events including floods, droughts and storms, changes in growing seasons, changes in water quality and quantity, which all have direct and indirect impacts on other sectors in turn. Climate change also has significant economic and social impacts including significant loss of national GDP, infrastructure, lives and livelihoods.

Due to the fragile environment, dominance of climate – sensitive sectors in economic activities, and the existing low adaptive capacities, climate change and variability has adverse impacts on agricultural production and food security, water resource, human health and physical structure and ecosystems. The agriculture sector contributes about $27.5 billion or 34.1% of national GDP, 79% to labor force and 79% to foreign exchange (according to GTP II achievement assessment report) earnings is highly s earnings is highly susceptible to climate change.

> **“THE AGRICULTURE SECTOR CONTRIBUTES ABOUT $27.5B OR 34.1% OF NATIONAL GDP”**

More than 95% of crop production which is rainfall dependent has been produced by small holders and subsistence farmers who have low adaptive capacity to adverse impacts of climate change . in addition, the sector is dominated by rain fed smallholder mixed crop-livestock farming (Georgis et al. 2010). Smallholder agriculture with average farm size ranging from 0.5 to 2 ha contributes to 95% of the total agricultural production according to official statistics and supports the livelihood of millions of people (FAO 2016). It is expected that climate change may reduce Ethiopia’s GDP compared to a baseline scenario by 2-6% by 2015, and by up to 10% by 2045 . When crop diversity decreases, climate mitigation and adaptation potentials also decrease.

The Ethiopian agriculture is not safe due to changing climate. Various studies indicated that the trends in inter-annual and inter-seasonal rainfall variability like declining in amount, increasing in intensity, varying in the length of growing seasons with increasing temperature have

negative implication on crop and livestock productivity (Kassie et al. 2013; Getachew 2015) affecting negatively the income of rural households. All of the ecosystems and agrobiodiversity resources are vulnerable and affected by climate change. The increase in frequency of fire, increasing incidence of pests/diseases is associated with increase in temperature, which is a risk factor in most ecosystems .

The Ethiopian Panel on Climate Change (EPCC) developed model-based rainfall projections using Coupled Model Inter-comparison Project Phase 5 (CMIP5) over Ethiopia during the 21st century for RCP2.6, RCP4.5, and RCP8.5. The ensemble-mean annual precipitation for all RCPs show increase by 4% to 12% by 2100 compared to the 1975-2005 baseline. The response of different parts of the country to the different RCPs is slightly different. The percentage increase is higher over northern part of Ethiopia under RCP2.6 scenarios and over southern and southeastern Ethiopia under RCP4.5 and RCP8.5 scenarios.

The study further indicates that mean annual surface temperature will increase by 3.5% to 8.5% (from 0.50C to 6 0C) by 2100 relative to the 1975 to 2005 baseline period for all the RCPs. Although there is a slight spatial difference among the three RCPs in mean temperature projections of the 2020s, the difference increases with time. EPCC stated that under RCP2.6 the mean annual temperature increases by approximately 10C at the end of the century relative to the baseline period, and 50C in RCP8.5. For RCP 4.5, which represents the moderate scenario, the projected increase in temperature is around 20C .

Based on the projected mean annual rainfall and mean annual surface temperature, it is very likely that extreme weather events like drought and flood will be intensified in the future. It was also reported that larger share of total precipitation will fall during heavy precipitation events especially from July to December .

Other studies have also indicated that the extreme variability will also lead to increased incidence of extreme events with severe droughts in one year, and heavy flooding with soil erosion and landslides in the next year . Scientists have also predicted substantial increases in the frequency of hot days and nights, with up to 93% of days and 99% of nights likely to be 'hot' in the July-September season by the 2090s, compared to 10% of days and nights in the same season in the 1960s .

In a recent research conducted 32 major climate change models were used in analysis and the results indicated a high probability of significant increases in average world temperatures by 2055 as well as an increase in median temperatures in Ethiopia. The prognosis for rainfall in Ethiopia is much less certain, although on average the simulation models suggest a relatively small increase in rainfall for the country overall. Moreover, there is a growing consensus that climate variability will increase in all regions of the world .

Earlier studies of the likely effects of climate change in Ethiopia point to both positive and negative effects. Studies using hydrological models to assess the potential effects of climate change on water flow in various basins in Ethiopia generally suggest significant increases in water availability with potential benefits for irrigation as well as increases in variability and flooding .

Researchers used a crop model linked to a multimarket model of supply and demand of agricultural commodities to project climate effects on key crops in Ethiopia between 2000 and 2050. Based on output of four climate models, their analysis shows yield gains of over 25 percent in much of the eastern highlands and north- central highlands, but large yield reductions and loss of areas suitable for growing maize in the eastern and southwestern parts of central Ethiopia. Other researchers included general equilibrium effects in their analysis of potential effects on water flows, crops, infrastructure, and economic output, concluding that, in the absence of adaptation investments, Ethiopia's GDP in 2050 would be up to 10 percent below the counterfactual baseline of no climate change.

Results of other studies suggest that precipitation variability over land rises by 4 percent to 5 percent for every degree Celsius increase in temperature. Thus there could still be substantial effects on crop production and household welfare (as well as on livestock) due to extreme events droughts, floods, or extremely high temperatures. And because the effects of rainfall on yield is more U-shaped than linear, a rise in variability, even with-out a shift in the mean, almost always leads to a reduction in average yields and not just yields under extreme weather

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5. INTERNATIONAL FRAMEWORKS AND RESPONSES

The Paris Agreement

The Paris Agreement requires all countries developed and developing to make significant commitments to address climate change. At COP 21 in Paris, Parties to the UNFCCC reached a landmark agreement to combat climate change and to accelerate and intensify the actions and investments needed for a sustainable low-carbon future. It builds upon the Convention and for the first time brings all nations into a common cause to undertake ambitious efforts to combat climate change and adapt to its effects, with enhanced support to assist developing countries to do so.

The Paris Agreements central aim is to strengthen the global response to the threat of climate change by keeping a global temperature rise of this century well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius. In addition, the agreement aims to strengthen the ability of countries to deal with the impacts of climate change.

In order to meet these ambitious goals, appropriate financial flows, a new technology framework and an enhanced capacity building framework would be put in place, thus supporting action by developing countries and the most vulnerable countries, in line with their own national objectives. The Agreement also provides for enhanced transparency of action and support through a more robust transparency framework. Ethiopia is a party to the Paris Agreement and has been actively engaged in the negotiation processes.

The Paris Agreement, adopted through Decision 1/CP.211, addresses crucial areas necessary to combat climate change. The key aspects set in the agreement include; Long-term temperature goal (Art. 2), Global peaking (Art. 4), Mitigation (Art. 4), Sinks and reservoirs (Art.5), Market and non-markets (Art. 6), Adaptation (Art. 7), Loss and damage (Art. 8), Support (Art. 9, 10 and 11), Transparency (Art. 13), Global Stock take (Art. 14). Decision 1/CP.21 also sets out several measures to enhance action prior to 2020, including strengthening the technical examination process, enhancement of provision of urgent finance, technology and support and measures to strengthen high-level engagement.

“The Agreement also provides for enhanced transparency of action and support through a more robust transparency framework.”

It is understood that agriculture contribute to climate change and at the same time is among the sector which suffers the largest negative impacts of climate change, for which, consequently, huge adaptation efforts are needed. In general, the Paris Agreement as adopted in COP21 does not refer to agriculture as it should have been. However, the preamble of the PA refers to "Recognizing the fundamental priority of safeguarding food security and ending hunger , and the particular vulnerabilities of food production systems to the adverse impacts of climate change" which effuses the importance one should provide for agriculture and allied sectors.

Furthermore, Article 2 has the main objectives of the Agreement, one of which is: "Increasing the ability to adapt to the adverse impacts of climate change and foster climate resilience and low greenhouse gas emissions development, in a manner that does not threaten food production". Also Article 4 states that a balance needs to be achieved between anthropogenic emissions by sources and removals by sinks of greenhouse gasses in the second half of this century in order to hold the increase in the global average temperature well be-low 2 degrees Celsius above preindustrial levels . This automatically implies that drastic mitigation actions are needed to reduce emissions from agriculture and land use, as this sector is responsible for almost 25% of the global emissions . Many of the provisions on adaptation and finance aim at giving increased support to developing countries to meet their adaptation needs, both through greater emphasis on providing financial re-sources and through the transfer of technology and capacity building.

Given the impact of climate change on agriculture and the dependence of developing countries on this sector it is beyond doubt that implementation of several provisions of PA will largely focus on agriculture. Another important new instrument may become the National Adaptation Plan (NAP). Under the Agreement, parties are required to engage in adaptation planning processes and building the resilience of socioeconomic systems, which obviously also include agricultural policies .

Sustainable Development Goals (SDGs)

The Sustainable Development Goals (SDGs) are known as the Global Goals and are a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity. The 2030 development Agenda is deliberately ambitious and transformational, with a set of 17 integrated and indivisible Sustainable Development Goals and targets to guide the world. The 17 interconnected goals2 were built on the successes and lessons learnt from the implementation of the Millennium Development Goals (MDGs), which including new areas such as climate change, sustainable consumption amongst other priorities. Ethiopia, participated in the preparation of the SDGs, based on its appreciable performance of MDGs.

Ethiopia was one of the 50 countries selected by the UN to provide data for the preparation of the 2030 Sustainable Development Agenda and one of the ten African countries selected to form the High-Level Committee for the preparation of the Common African Position (CAP) on Post 2015 Development Agenda. Thus, Ethiopia provided substantial contribution and succeeded in proposing Structural Transformation for Inclusive and People Centered Development which was endorsed by the organizing committee.

The proposal was made one of the strategic pillars of the post-2015 African Development Agenda and is believed to have meaningfully contributed to the 2030 Sustainable Development agenda, which is currently under implementation. The FDRE accepted and approved the 2030 Sustainable Development Agenda during the UN-member states meeting held in New York from September 25 to 27/20153. Subsequently, the SDGs have been integrated into GTPII together with CRGE Strategy. Agriculture sector is very crucial for achieving the goals and targets of SDGs. Several of the targets are directly related with agriculture and the rest interlinked with agriculture sector though not directly. Hence sufficient attention has to be provided the

Nationally Determined Contributions (NDCs)

Ethiopia was one of the first countries to submit its iNDC in June 2015. Subsequently, when the PA was ratified in 2017, the iNDCs were transformed into NDCs. Ethiopia intends to limit its net greenhouse gas (GHG) emissions in 2030 to 145MtCO2e or lower, which is a 64% decrease in emissions by 2030 from Business as Usual scenario.

The Ethiopian NDC is aligned with the national development plan and anchored on the Climate Resilient Green Economy (CRGE) Strategy This covers the key sectors; agriculture, forestry, transport, electric power, industry and construction. The emissions reduction targets in the Ethiopian NDCs constitutes a reduction of 90MtCO2e from agriculture;130MtCO2e from forestry; 20MtCO2e from industry;10MtCO2e from transport; and 5MtCO2e from buildings. It has been outlined in the NDCs that it requires US$ 150 billion finance to implement the proposed activities during the time frame of 2030.

The NDC has a section providing details about the mitigation contribution. The plan to mitigate GHG emissions is built on four pillars and two of them are related with agriculture. The first pillar intends to improve crop and livestock production practices for greater food security and higher farmer incomes while reducing emission.

Agriculture sector includes both soil and livestock. The second pillar aims to protect and re-establish forests for their economic and ecosystem services, while sequestering significant amounts of carbon dioxide and increasing the carbon stocks in landscapes. Ethiopia's NDC clearly enumerates that livestock sector emitted 65 Mt CO2e (45 % of total), crop cultivation 12 Mt CO2e (9% total) and deforestation and forest degradation due to the cutting and

burning fuel wood and due to logging 55 Mt CO2e (37 % of total) as of 2010 indicating the enormous potential that agriculture and allied sectors have for addressing climate change. The document also envisages emission reductions which constitutes a reduction of 255 MtCO2e or 64% compared to 'business-as-usual' (BAU) emissions in 2030, includes 90 Mt CO2e from agriculture and 130 Mt CO2e from forestry amongst others from various sectors.

Similarly, Ethiopia's long term goal is to ensure that adaptation to climate change is fully mainstreamed into development activities with the aim of reducing vulnerability and contributing to economic growth path that is resilient to climate change and extreme weather events. The document also clearly mentions that since climate change is affecting all geographic areas of the country, the solution requires the participation of the entire population, especially farmers and pastoralists.

It is also clearly mentioned that already several large-scale sustainable land and natural resources management programmes are ongoing, for example the sustainable land management programme and the productive safety net programme, which will continue to build resilience to climate change. The main efforts in the near-term are to build the capacity needed to mainstream adaptation to climate change into all public and private development initiatives.

The document also clearly stipulates that the long-term adaptation goal would be to increase resilience and reduce vulnerability of livelihoods and landscapes in three pillars including drought, floods and other cross-cutting interventions, the areas which are directly linked with agriculture.

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6. NATIONAL FRAMEWORK AND RESPONSES

Constitution of Ethiopia

The 1995 FDRE Constitution recognizes the right of all persons to live in a clean and healthy environment. This means, everyone has the right to an environment that is not harmful to their health and wellbeing. Environmental right is a right that allows humans to live in an environment that fulfills the enjoyment of life. Living in a clean and healthy environment is essential to lead a healthy life.

To attain this, the environment must be protected and maintained in a good order. A degraded environment has a major adverse impact on human dignity, since people are unable to enjoy life as they are forced to live in an environment that does not provide the necessary services.

Article 44 (1) of the FDRE Constitution fits well into the spectrum of internationally accepted principles for protecting the quality of life of present and future generations.

This constitutional rule echoes the principle of the Stockholm Declaration of Human Environment, Principle 1, which provides for humans fundamental right to live in an environment that allows them to have a life of dignity and well being. Moreover, Principle 1 of the Stockholm Declaration states that the human species bears a solemn responsibility to protect and improve the environment for present and future generations. This idea has been addressed in Article 92 (4) of the FDRE Constitution as: Government and citizens shall have the duty to protect the environment.

With Agroecology applying both ecological and social concepts and principles to the design and management of food and agricultural systems and supporting the adaptation of agriculture to specific environment, it strengthens the principles of rights and obligations enshrined in the Constitution of FDRE. Further, Agroecology places a strong emphasis on human and social values, such as dignity, equity, inclusion and justice all contributing to the improved livelihoods.

It puts the aspirations and needs of those who produce, distribute and consume food at the heart of food systems. By building autonomy and adaptive capacities to manage their agro-ecosystems, agroecological

“It strengthens the principles of rights and obligations enshrined in the Constitution of FDRE. Further, Agroecology places a strong emphasis on human and social values”

approaches empower people and communities to overcome poverty, hunger and malnutrition, while promoting human rights, such as the right to food, and stewardship of the environment so that future generations can also live in prosperity, all of which are the essence of the key principles mentioned within the Constitution of FDRE.

Environmental Policy of Ethiopia (EPE)

The overall policy goal of the EPE is ensuring sustainable development by improving and enhancing the health and quality of life of all Ethiopians through a sound management and use of natural, human-made and cultural resources and the environment as a whole. The above policy statements which have been prescribed by the EPE need to be implemented in a way that is fulfilling this general objective of the EPE. Further to Agroecology emphasizing the environmental rights and obligations enshrined within the constitution of FDRE, it also emphasis the sound management of environmental resources anchoring itself in the policy goals mentioned in EPE. Agro-ecology supports increased biodiversity and in turn contributes to a range of production, socio-economic, nutrition and environmental benefits. Increased resource-use efficiency as part of the Agroecology concept contributes towards environmental sustainability. By enhancing biological processes and recycling biomass, nutrients and water, producers are able to use fewer external resources, reducing costs and the negative environmental impacts of their use, which basically effuses the essence of the EPE.

National Growth and Transformation Plan II

The Second Growth and Transformation Plan (GTPII) is built on Sectoral policies, strategies and programs, lessons drawn from the implementation of GTPI and the post-2015 Sustainable Development Goals (SDGs). The GTP II has also considered the global and regional economic situations with direct or indirect bearings on the Ethiopian economy. The major objective of GTP II is to serve as a springboard towards realizing the national vision of becoming a low middle-income country by 2025, through sustaining the rapid, broad based and inclusive economic growth, which accelerates economic transformation and the journey towards the country's renaissance.

To circumvent the challenge of greening the economy as well as building resilience to the changing climate, Ethiopia designed the climate resilient green economy (CRGE) strategy and has been implementing it with strong commitment. Encouraging results have been gained thus far in generating energy from renewable sources, as well as in participatory and community-based natural resource conservation and basin development.

As indicated in GTP II, Climate and development are strongly interlinked. In this regard, well-designed policies in these areas can make economic growth and climate objectives compatible and mutually reinforcing in both the short and medium term. GTP II envisions

to carry-on the execution of these effective elements of the CRGE strategy. Reducing greenhouse gas emissions through enhanced crop and livestock production that improve food security and income of farmers and pastoralists; natural resource development, forest protection and reforestation programs that enhance economic and ecological advantages of forests; expanding electricity power generation from renewable sources of energy for domestic and regional markets; leapfrogging to modern and energy efficient technologies in transport, industry and constructions are the basic strategies of GTP II to build climate resilient green economy. GTP II also envisages that to achieve the goals of the plan, the green economy agendas need to be rigorously mainstreamed into sector plans, programs and projects. In addition, there is a need to regularly monitor, evaluate and report on progress to ensure accountability and transparency at all levels.

Agricultural Sector - GTP II

This overarching development plan of the Ethiopian government, among other things, addresses policy and strategic issues applicable to the agricultural sector, which has been given the required emphasize so as to implement the full breadth of Ethiopia's NDC's. In doing so the plan addresses all aspects of agriculture and rural transformation. The major strategic directions that guide implementation of specific initiatives of this sector encompass; development of small holder crop and pastoral agriculture, capacity development of the youth so as to enable them organize and engage in agriculture investment,

- scaling up strategy suitable to the various agro -ecological development zones, pursuing holistic measures aimed at addressing constraints and challenges related to supply of agricultural inputs and utilization of agricultural technologies among others.

That being the case in view of the crucial importance of natural resources for bringing about the desired outcomes in the area of agricultural transformation it also gives due attention to natural resources management and development and include a specific strategy in this regard. More specifically the plan indicates ensuring sustainable agriculture through improvement of soli healthy and fertility, management and development of natural resources, aligning the agriculture development plan with the green economy development strategy coupled with expansion of small scale irrigation developments are the strategic directions to be pursued with regard to natural resource conservation and management. As has been indicated in the NDC's improving the income of farmers through ensuring transition from production of subsistence crops to high value crops and improving their access to markets is also emphasized under the plan.

Implementation of complimentary medium and long term plans geared towards creating alternative livelihood opportunities to arid and semi -arid areas of the country is another planned activity to be pursued during the GTPII period.

A number of targets in relation to different aspects of the agriculture sector are also indicated. Targets in relation to crop farming and pastoral development and within that crop productivity and production, coffee productivity and production, horticulture productivity and p roduction, livestock productivity and production, rural resource conservation and utilization, improved production and productivity through strengthening demand driven agricultural research works, improved sustainable national biodiversity conservation and equitable benefit to the community food security, disaster prevention and preparedness are identified. Moreover, irrigated watershed management, rural land administration and irrigation development are the other specific sectors with regard to which specific targets have been set for realization at the end of the implementation period. There are also related specific targets mentioned within the plan. The other issue worth noting is the implementation strategies that are believed to be highly instrumental in bringing about national goals set with respect to the agricultural sector. Improving crop production and productivity that includes strengthening demand driven agriculture, e, enhancing natural resources conservation and utilization, improving sustainable national biodiversity conservation and equitable benefit to the community are few of them. It is clearly visible that that all the specific sectors and the strategic directions and implementation strategies are highly relevant to the efforts to build a climate resilient green economy as well as implementation of Ethiopia's NDC's that gives special emphasis to the agricultural sector and within that reduction of emission from livestock and soil.

Climate Resilient Green Economy (CRGE)

In 2011, the government of Ethiopia proclaimed a unique economic growth vision. The ambition is to enable the nation to become middle-income country by the year 2025 through a climate resilient and carbon neutral development pathway. To realize the vision of becoming a carbon neutral middle-income country by 2025, Ethiopia has designed a Climate Resilient Green Economy (CRGE) Strategy that clearly defines the path towards meeting green economic targets. The strategy has three mutually reinforcing objectives: fostering economic development & growth; abatement & avoidance of future greenhouse gas emissions; and building resilience to climate change impacts. The CRGE initiative follows a sectoral approach and has identified and prioritized more than 60 initiatives, which could help the country achieve its development goals while limiting GHG emissions to 150 Mt CO2e by 2030, which is less by 250 Mt CO2e than estimated under a conventional development path. Building a green economy, which is in the focus of this strategy offers an opportunity to achieve its economic development targets sustainably. It represents the ambition to achieve economic development targets in a resource-efficient way that overcomes the possible conflict between economic growth and fighting climate change.

CRGE has two major components; the Green Economy (GE) and Climate Resilient (CR) that focus on low carbon and sustainable economic development and protecting green economic growth from the adverse effects of extreme climatic events (resilience to climate change) respectively. The emissions from agriculture and forestry sectors as indicated in the CRGE document is same as that of indicated in the NDC document which was basically inspired from the CRGE document. The document clearly indicates that there is a great domestic potential to contribute towards global efforts by abating around 250 Mt CO2e in 2030 as compared to the Business as Usual scenario.The document also clearly mentions that the strategy must make choices about the levers not only to capture a large share of the abatement potential but also to boost economic and social development at the same time. The strategy document also indicates economic benefits deriving out of the abatement potential including obtaining carbon credits. Two sectors – agriculture and forestry – should receive particular attention: they contribute around 45% and 25% respectively to projected GHG emission levels under business-as-usual assumptions and together account for around 80% of the total abatement potential. Agroecology could be a very good tool to achieve the objectives of the CRGE strategy and also generate the necessary revenues for the farmers.

National Adaptation Plan – Ethiopia (NAP –ETH)

With a vision to create climate change impact resilient development for Ethiopia and its people the NAP-ETH embraces development and service sectors with particular reference to agriculture, forestry and water amongst others, which are considered to be most vulnerable. NAP-ETH aims to strengthen holistic integration of climate change adaptation in Ethiopia s long-term development pathway, supported by effective institutions and governance structures, finance for implementation and capacity development and strengthened systems for disaster risk management and integration among different sectors. The plan and its implementation are guided by the principles of participation, coherent interventions, stakeholder empowerment, gender sensitivity, equitable implementation and partnership, many of which are key agroecology principles. Within the selected sectors, 18 adaptation options have been identified for implementation at all levels and across different development sectors, recognizing the considerable diversity in context and vulnerability across Ethiopia's regions and social groups. Almost all of the options are directly related with agriculture sector except for three which are also linked indirectly. The document also lists five strategic priorities which are essential for integration of climate change adaptation in development policies and strategies at all levels, including issues related to mainstreaming, institutions, funding, research and development and knowledge management systems. NAP-ETH is set to address the adaptation actions through a programmatic, multi-sectoral and long term planning approach. In addition, NAP-ETH aligns climate change centered adaptation initiatives with ongoing development endeavors, to obtain synergies and achieve the outcomes of enhancing adaptive capacity of government, local institutions and individual women and men who are directly affected by climate change impacts on their livelihoods and the landscapes in which they live.

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7. AGRICULTURAL SECTOR - POLICIES AND STRATEGIES

Rural land administration and land use proclamation

While the proclamation primarily deals with the administration, access, ownership and use of rural land it categorically states in its preamble that the proclamation takes into consideration the need to sustainably conserve and develop natural resources and pass over to the coming generation through the development and implementation of a sustainable rural land use planning based on the different agroecological zones of the country. It also clearly stipulates certain use restrictions with regards to sloppy gully and wetlands.

The proclamation envisages that a guiding land use master plan which takes into account soil type, land form, weather condition, plant cover and socio-economic conditions and which is based on a watershed approach, shall be developed by the competent authority and implemented. It also requests for an equitable water use system to be established between upper and lower watershed communities.

If further provides details of the land use based on the slope percentages indicating that land with more than 60% slope shall not be used for farming and free grazing and will be used for forestry and growing perennial plants and forage production. The proclamation also provides details regarding land reclamation, restoration and rehabilitation.

“The major themes covered in the strategy are climate and geospatial crops, livestock, soil and water, biotechnology and socio-economic and policy categorized into, science, technology and extension.”

Ethiopian organic agricultural system proclamation

The Ethiopian organic agricultural system proclamation was adopted with the principle to adopt and internationally accepted production, processing and distribution system in Ethiopia and that all operators using labels referring to organic production should be subjected to regular. follow-ups, carried out by accredited inspection and certification bodies, to ensure that they meet the prescribed minimum requirements.

As can be understood the scope of the application is wide, including, production, processing, packaging, labeling, storing, transportation, marketing, exportation and importation of agricultural products which carry or are intended to carry labels referring to organic production methods. The objectives are also clearly stipulated to ensure international recognition and acceptance of the Ethiopian organic agriculture system, to introduce the Ethiopian organic agriculture products in the relevant international markets as well as to protect the consumers. The objective

also clearly mentions the need for standards and the products to comply with the directives. The proclamation also provides details towards establishment of an organic agriculture production system council and the establishment of a national brand for organic products.

Seed System Development Strategy:

This strategy addresses the issues of seed production, handling and marketing/distribution vis-à-vis the seed proclamation and regulation. The strategy has identified bottlenecks at different levels of production and has suggested interventions to remove the bottlenecks. The strategy also identifies major stakeholders of the seed system in Ethiopia. It also provide information on the seed laws and regulatory system in place in the county. It identified the various bottlenecks in the formal, intermediary and informal seed sectors and also provides suggestions for intervention, Its major focus is to improve production and productivity in a comprehensive manner as related to the seed sector.

Climate Smart Agricultural Research Strategy (CSARS)

The major objective of CSARS are to identify entry points for attaining higher productivity under the changing and variable climate; Increase adaptive capacity through improved crop and livestock species, soil and water management, and access to weather forecast and advisory services; and ensure the development and application of advanced weather/climate forecasting/prediction methods for agriculture.

The strategy is an indicative framework document for guiding climate-smart research prepared by Ethiopian Institute of Agricultural Research (EIAR) to enable different research teams, while developing research projects that address climate change and variability for mainstreaming into the various sectoral strategies. The major themes covered in the strategy are climate and geospatial crops, livestock, soil and water, biotechnology and socio-economic and policy categorized into, science, technology and extension. Some of the major strategies addressed by CSARS include agro-weather advisory system, crop varieties for maximum resource use and ability to adapt to changing climate, enhancing ecosystem resilience, soil fertility management, agroforestry and livestock management amongst others. The general focus of CSARS is on addressing adaptation and mitigation issues in agriculture sector.

Forest Development, Conservation and Utilization Proclamation No. 1065/2018

Cognizant of the fact that the forest sector plays an important role in addressing the adverse effects of climate change and sustainable forest development, conservation and utilization plays a crucial role to halt environmental, social and economic problems caused by high levels of forest degradation in the country a new proclamation that replaced the existing legislation applicable to forest development have been promulgated by the

federal government in 2018. This legislative framework gives particular emphasis to the fact that forest development, conservation and utilization has a decisive role in preventing soil erosion, desertification and loss of biodiversity. It also underscores this sector plays a crucial role in balancing the demand and supply of forest products, sustain agricultural productivity and thereby ensure food security.

Those being the case, in addition to public and private, community ownership and public participation have been duly recognized. Particularly in terms of encouraging community and association forest development and enhancing sustainable forest development, conservation and utilization towards full implementation of policies and strategies of the sector. Furthermore, the proclamation classified forests into productive, protected and exclusively protected based on their environmental, social and economic significance. It is also designed in such a way to further enhance the environmental, social and economical benefits that may arise from multilateral and bilateral agreements. Strengthening forest sector research, education, investment, trade and information system is the other objective of this legislative framework.

On the other hand it intends to address management and administration of forests and ensure its contribution to the sustainable development of the country. It primarily defines forest and its classifications. In addition, it addresses the rights and obligations of developers as well as issues of management and administration of forests. In the context of climate governance key issues such as prevention of damage to forest resources as a result of wild fires is one of the principal issues addressed by this law .

Deforestation and forest degradation and their adverse impact upon the environment and livelihoods of communities as well as their undesirable consequences in disrupting socio-economic situations of different parts of the country is the other aspect emphasized by this legal framework.

This law also gives particular emphasis to the fact that sustainable utilization of the country's forest resources is possible through ensuring the participation of, and benefit sharing by the concerned communities. Harmonizing forest policies and programs with other economic sectors, particularly agriculture and rural development policy which are directly related with livelihood of rural communities is also duly recognized as one of the factors that has to be emphasized so a s to bring about the desired outcomes .

National forest sector development programme

This National Forest Sector Development Program (NFSDP) acts as the main guiding document and as a road map for coordinating strategic policy interventions and sector-wide investments involving all relevant stakeholders. It also provides a framework for funds mobilization and coordinating support to achieve the forest sector's ambitious development

and green growth goals. NFSDP also aims to establish Payment for Environmental Services (PES) schemes to better valorize the forest's contribution to watershed management and carbon sequestration.

The NFSDP provides a timely update to the 1994 Ethiopian Forestry Action Program (EFAP) as the current NFSDP directly contributes to the transformational change agenda set by the Government of Ethiopia. The NFSDP is fully aligned with the Climate-Resilient Green Economy (CRGE) strategy because protecting and re-establishing forests for their economic and ecosystem services, including as carbon stocks, is one of the four main CRGE pillars. Building on the CRGE forestry targets, the NFSDP also provides an implementation framework for the second Growth and Transformation Plan (GTP 2) by advancing the sector towards one that is more productive and better contributes to Ethiopia's environmental sustainability and equitable socio-economic development.

The overall vision of the NFSDP is to build on the country's considerable forest resources, attract foreign investment (both donor and Public Private Partnerships - PPP) and leverage existing momentum to transform Ethiopia's forestry sector in a way that catalyzes GDP growth, generates employment, contributes towards self-sufficiency in forest products and enhances environmental services.

Ethiopia's Agricultural sector policy and investment framework (PIF) 2010 - 2020

While providing a strategic framework for the prioritization and planning of investments towards driving Ethiopia's agricultural growth and development, the PIF is designed to operationalise the CAADP Compact signed by the Government and its development partners. The PIF is anchored to, and aligned with, the national vision of becoming a middle income country by 2020 together with a number of key policy and strategic statements. The CAADP Compact and the PIF are critical in policy alignment and securing access to the finance needed for sectoral development from both domestic budgetary and international sources.

While the agriculture sector has performed strongly over several years, the PIF directly speaks to the scope towards sustainably improving \productivity, production and market linkages. While the objective of PIF embodies the concepts of producing more, selling more, nurturing the environment, eliminating hunger and protecting the vulnerable against shocks; all of which are embodied in various national policy instruments, can be streamlined towards being CS and also incorporating the principles of Agroecology. PIF also provides highlights of areas where policy reviews, adjustments and refinements may be beneficial.

PIF also have identified priority investments to be financed jointly by the Government and its development partners. There is a need to guide these investments by integrating Agroecology concepts. This could happen during the updates of the PIF framework of which initial discussions have been held.

Climate Smart Agriculture (CSA) Field Manual

The Climate Smart Agriculture (CSA) field manual provides guidance to donor projects and national extension staff who seek to promote climate-relevant agricultural interventions at field level within targeted Sustainable Land Management micro-watersheds. The manual is to supplement the existing Community Based Participatory Watershed Development Guidelines (CPWDG) of MoARD (2005) by providing guidelines to implement CSA related activities. .

The manual describes the operational approach to integrate CSA into SLM and provides tools for managing the CSA activities at the field level among others. CSA and Agroecological concepts complement each other . The manual also discusses about Sustainable Natural Resource Management in public and communal lands as well as private lands where most of the CSA approaches will be implemented. Furthermore CSA also requires capacity building activities as well as continuous monitoring and effective knowledge transfer, the guidelines provides options to do so.

Ethiopian Climate Smart Agriculture Strategy

The Ethiopian Climate Smart Agriculture Strategy document provides an overview of the various policies and also projects funded both by national and international partners that are currently being used for addressing Climate Smart Agriculture related issues. The document emphasizes the vulnerability of the Ethiopian agriculture for the vagaries of climate change. IT also provides an overview of the conceptual understanding of the CSA approach. Both CSA and Agroecology as a concept are complementary to each other.

The document also provides an illustration of how CSA can generate synergies and trade-offs across the CSA pillars. A key feature of the document is that it lists all common agricultural practices and their CSA attributes clearly indicating that this also supports the concept of Agroecology. The CSA strategy document also provides number of inputs towards having an enabling institutional and policy environment related to CSA which are also vital for agroecology to be considered as a strategy for agricultural production. The proposed strategies are also very vital for the success of CSA as a concept. These strategies are provided at individual farm level as well as at the level of landscape. Several of the strategiex including the improving of the resilience of smallholder agriculture, area specific interventions, reduction of green house gas emissions, institutional linkages etc all speak to the concept of agroecology.

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8. INSTITUTIONAL ASPECTS – NDC IMPLEMENTATION

It is imperative to understand the institutional aspects of NDC implementation in Ethiopia. Institutions are mandated to come up with policy and strategy documents and many times they also act as implementing agencies. Policy influence with regards to agroecology be done by engaging with key institutions involved in the implementation of the NDCs. The following section provides detailed description with regards to the institutional structures currently in place to implement the NDCs/CRGE within the country.

At national level the CRGE strategy/NDC implementation is coordinated by Inter-Ministerial Steering Committee answerable to the Prime Minister's office. All ministers of sectoral institutions are members of the steering committee. There is also a CRGE management committee under the Inter-Ministerial Steering Committee, co-chaired by Ethiopian Forest and Climate Change Commission (EFCCC)and Ministry of Finance (MoF), where the sectoral office are represented by their state ministers or assigned representatives. At the national level, the EFCCC is assigned to play major technical roles such as providing capacity building and support the mainstreaming of the CRGE such as via developing support tools, setting agenda for the inter-ministerial steering meeting, identifying technologies for climate change adaptation and mitigation and mobilizing resources.

EFCCC is coordinating the CRGE strategy through Climate Change Response Coordination General Directorate and the four different directorates under it. The four directorates are established to coordinate climate change mainstreaming such as through developing policies, strategies and guidelines; identifying adaptation and mitigation technologies; coordinating and leading Multilateral Environmental and climate change agreements and negotiations and establishing Monitoring Reporting and Verification (MRV) system at a national level. Existing institutional /departmental arrangement has provided the Commission to higher experts dealing with the CRGE strategy in different ways, while also mobilizing resources.

The Commission via its established structural arrangement is able to regularly follow up the planning and implementation of the CRGE by the implementing entities. When it comes to the financial part of the coordination it is led by the CRGE Facility which is hosted within the Ministry of Finance.

There is also a CRGE management committee under the Inter-Ministerial Steering Committee, co-chaired by Ethiopian Forest and Climate Change Commission (EFCCC)and Ministry of Finance (MoF),

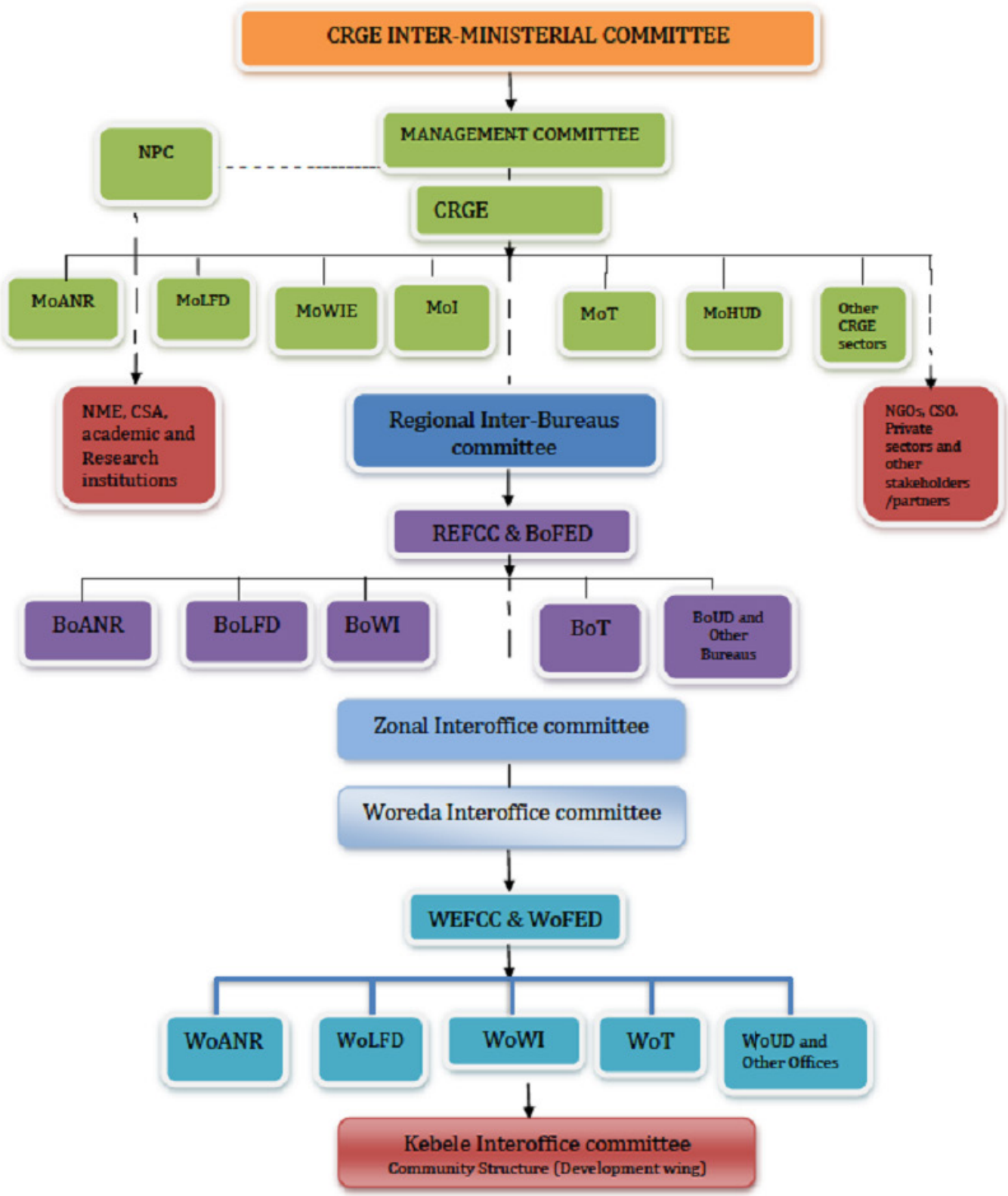
There are also other specific committees responsible for the management of the CRGE within the sectoral institutions. The CRGE institutional architecture has been developed to enable a programmatic and transformative approach for mainstreaming CRGE activities that minimizes the transaction costs, fragmentation and duplication associated with a project-based approach. As far as possible, the institutional architecture also embeds CRGE systems within existing mechanisms for economic and environmental planning and implementation. The system created to help convert the CRGE vision into practical action on the ground, and thus bring about a climate resilient green economy is the Sectoral Reduction Mechanism (SRM). A comprehensive flow diagram provides a detailed overview of the institutional mechanisms that could be used for mainstreaming agroecology concept as well as to understand the entry points for Influencing policy. The institutional architecture is used for both annual and mid-term planning process as well as envisaged for the implementation purposes during which time CSOs could participate in the meetings. The following are brief descriptions of the functions of units within the CRGE institutional architecture, which are core units facilitating and mainstreaming the implementation of the CRGE strategy.

The Inter-Ministerial Steering Committee (IMSC): chaired by the Prime Minister's Office, the Committee sets the criteria and scope for approving action plans, and determines the overarching priorities for the planning, mainstreaming and implementation of CRGE in Ethiopia and for that of CRGE Facility. The National Planning Commission is a member of the IMSC;

The CRGE Management Committee (MC): a standing committee comprising senior representatives of Government line ministries and the National Planning Commission, responsible for providing general oversight for the CRGE initiative as well as determining the optimum allocation of available funds to approved actions and alignment with the GTP. The Management Committee is co-chaired by MEFCC and MoF;

The CRGE Facility: The Government of Ethiopia's national vehicle established to help mobilize, blend, combine and sequence domestic and international, public and private finance to support the institutional building and implementation of Ethiopia's CRGE Strategy.

The CRGE Secretariat: undertakes day-to-day management of functions of the SRM. The Technical Unit of the Secretariat is housed by the MEFCC and is responsible for the mainstreaming of CRGE and the development of standardized guidance, sector specific support and technical back stopping for the SRM, and quality assurance for Sector Reduction Actions in line with agreed guidance and criteria. The facility is responsible for the financial activities and is housed in MoF. The flow diagram (Fig 1) provides an overview of the institution architecture for mainstreaming of CRGE into NDPs which in principle could be used for the concept of Agroecology to be mainstreamed.


CRGE INTER-MINISTERIAL COMMITTEE
MANAGEMENT COMMITTEE
NPC
CRGE
MoANR
MoLFD
MoWIE
MoI
MoT
MoHUD
Other CRGE sectors
NME, CSA, academic and Research institutions
Regional Inter-Bureaus committee
NGOs, CSO, Private sectors and other stakeholders /partners
REFCC & BoFED
BoANR
BoLFD
BoWI
BoT
BoUD and Other Bureaus
Zonal Interoffice committee
Woreda Interoffice committee
WEFCC & WoFED
WoANR
WoLFD
WoWI
WoT
WoUD and Other Offices
Kebele Interoffice committee
Community Structure (Development wing)

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9. QUESTIONNAIRE SURVEY REPORT

The authors of the study conducted a rapid assessment through a questionnaire survey (Annex I) amongst key institutions involved (Annex II) in the implementation of CRGE/NDCs in the country. The following section provides an overview of the responses received

Agroecology as a policy response

Several of the respondents indicated that the agroecology as a concept has been included within the CRGE, NDC, GTPII, and NAP, documents which was listed in the questionnaire , , . One of the respondent indicated that specifically CRGE, NAP-E and GTP II included the concept of Agroecology, though it has not being mentioned explicitly . While CRGE document clearly indicates the plan to implement the conservation agriculture, however since it is a strategy document, it lacks the clear approach how these could be operationalized or implemented on the ground . The implementation plan is usually done through the sector specific strategy documents and ensuing implementation guidelines However, it was also clearly mentioned that the new 10 year development plan that is currently being developed includes the concept of Agroecology . The government of Ethiopia has unveiled for discussions a 10-year economic development plan under the theme 'Ethiopia: An African Beacon of Prosperity'. The ten-year plan targets "to bring quality based economic growth" and to increase production and competitiveness; build a green and climate-resilient economy as well as bringing about institutional transformation. The plan is also centered around "women and youth" and guarantees private sector-led growth.

Stakeholder engagement platform

It is critical for any organization to know and engage in the existing stakeholder platforms within those institutions which are crucial for mainstreaming and implementing agroecology concepts. These platforms also brings together many other relevant stakeholders and hence can act as a very good advocacy and networking platforms. It was indicated by the respondent that Ethiopian Biodiversity Institute hosts a public wing which engages with different sectors of the society including various governmental organizations, non governmental organizations, faith based and belief society/organizations, youth and professional societies among others. . Similar platforms exists in many governmental organizations and it is crucial to be engaged in

"Similar platforms exists in many governmental organizations and it is crucial to be engaged in such platforms."

such platforms. When it comes to Climate Smart Mainstreaming in the Productive Safety Net Programme (CSM-PSNP) of Ministry of Agriculture the respondent clearly mentioned that one of the key platforms to engage and deliberate on issues pertaining to Agroecology is the National watershed and Agroforestry multi-stakeholders platform. The organization hosting national platform has been tasked to set up similar platforms in various regions of the country and at the district/woreda levels . When it comes to the Ministry of Agriculture-the respondent indicated that the existing FM-Cooperatives, Organic agriculture associations are some of the key platforms that the various stakeholders could engage and discuss on issues of agroecology's importance . When it comes to Ethiopian Agricultural Transformation Agency of Ministry of Agriculture, it was indicated by the respondent that one of the key platforms to be engaged is the task force for climate smart agriculture .

International organizations/ meetings processes

One of the key platforms where the awareness about agroecology could be raised, as well as the policy processes could be influenced are the international/regional level meetings that are being conducted. It was evident from the response that the Ethiopian Biodiversity Institute engages in different international meetings including Convention on Biological Diversity (CBD), African Union – InterAfrican Bureau for Animal Resources (AU-IBAR) among others .

The EFCCC being the focal point for several environmental negotiations has robust engagement at international level. The Commission apart from engaging in UNFCCC negotiations also engages in regional dialogues related to NDCs, SDGs meetings among others . The Ministry of Agriculture – Agriculture Transformation Agency links up with international processes by involving in the national dialogue process on Nationally Determined Contributions, NAP-ETH process and other similar forums organized by EFCCC . Similarly, the Ministry of Agriculture Crop Development Directorate, though not involving itself in the international processes directly, involves in the national and regional platforms, GHCOF, NCOF, annual planning and evaluation meetings .

Areas of involvement for Civil Society Organizations

When specifically asked about the platforms and opportunities for Civil Society Organizations to be involved as a key stakeholders in their respective areas of implementation, many respondents indicated the CSOs could involve themselves in the existing stakeholder engagement platforms. EBI respondent indicated that the CSOs could be involved in all relevant meetings especially those of the annual stakeholders meeting organized by the public wing of the institute as well as get involved in the various regional meetings . The respondent from CSM-PSNP indicated that all stakeholders including CSOs could be involved in the watershed and agro-forestry platforms that have been set up for stakeholder engagement, usually through annual workshops . When it comes to the Sustainable Land

Management Program/Resilient Landscapes and Livelihoods Project(RLLP) the respondent indicated that the CSOs could involve themselves in the frequent workshops organized on Conservation Agriculture (CA) for farmers by the unit, the meetings that are organized by the Watershed Users Association . EFCCC respondent indicated that the CSOs could be involved in any meetings being organized related to NAP, CRGE, NDC implementation, DRR framework, Technology Needs Assessments meetings with UNFCCC format by focusing on adaptations and mitigation technology for attaining sustainable development. (Invited by Regional and City administration), workshops organized to prepare guidelines for CRGE strategy for Regions, City administration and line ministries as well as the annual planning workshops with line ministries . The respondent from Ministry of Agriculture – Crop Development Directorate indicated that the CSOs could attend any consultative workshops, strategy development meetings as well as meetings organized to discuss regulations/laws etc apart from attending the meetings organized in the existing stakeholder platforms .

Role of CSOs

Several of the respondents indicated that the civil society has a big role to play when it comes to the concept of agroecology including creating awareness , , capacity building activities , advocacy, developmental activities resource mobilization , , experience sharing , , innovations piloting/demonstration . The respondents also clearly mentioned the need for coordination among various stakeholders including civil society as one a key aspect towards playing an important role in implementing agroecology as a climate change adaptation and mitigation action. Participation in the various stakeholder engagement platforms are key for sustained engagement .

As indicated by one of the respondent, the role of CSOs are also seen mainly in establishing communal bylaws (controlling free grazing, protecting closure areas for afforestation/ reforestation etc) and support in the implementation of the bylaws.These communal bylaws ensures conservation as well as positive interactions in the environment . CSOs also play a key role in developing and implementing agroecological innovations that enhance sustainable agriculture and food system, knowledge sharing to the stakeholders at all levels from program/project experience, promote environment friendly approaches, enhance ecosystem functioning efforts, empower local community on ecosystem based agriculture and resource use efficiency opportunities .

Agroecology as a concept for mainstreaming

Ethiopia is a country of great geographical, climatic and cultural diversity. The country's diverse topography, high mountains to low-lying depressions, has the effect of causing a wide variation to the country's climate, livelihood and ease of accessibility. The country is among the countries in the world endowed with very diverse natural resource (soil, water and forest), wide range of plant and animal genetic resources, coupled with active working force.

Hence, any development intervention should consider climate agroecology, environment, socio-economic and biophysical condition of area of interest without which the rate of success in the implementation of developmental activities might diminish . Similar views were also expressed by other respondents indicating that Ethiopia could benefit from increasing food production with minimum effects on environment and biodiversity at the same time adapting to changing climate as well as mitigating the ill effects .

Others emphasized the fact that many approaches and concepts in the area of agriculture and food system ignore the social aspect and rather consider only the technical issues. On the contrary, Agroecology as a concept highly considers addressing the social aspect to optimize the interactions between plants, animals, humans and environment . Furthermore, respondents also indicated that agroecology will play a significant role in reducing vulnerability of communities, ecosystem and the economy .

The respondent indicated that Agroecology improves productivity and reduces risk as well as saving ecosystem. It creates a holistic approach so as to address the interest of all the members of the community by developing agroecological based development interventions . It was clearly indicated that, a key aspect in using agroecology as a concept is that the local community is capacitated in dealing with climate change impacts as it promotes bottom up planning. Furthermore, it promotes and consider indigenous knowledge and practices in addressing the climate change impacts. These activities and others will also enhance the participation of small holders as well as enhance the resilience of community and agriculture system to shocks. It will also enhance the ecosystem functioning thereby increasing productivity .

Existing experiences in using agroecology as concept

Agroecology as a concept is already being used among various institutions in Ethiopia. The Ethiopian Biodiversity Institution is founded on key concepts including biodiversity conservation and sustainable utilization which are among the basic principles of agroecology. These together with access and sharing of benefits accrued from the use of genetic resources are the three basic pillars of biodiversity . One of the respondent indicated that the right from the early start, one of the key guidance provided to the development agents is that agroecology is the main entry point for any sort of developmental interventions.

The draft watershed strategy also provides priority for area-based intervention rather than blanket recommendation for all areas. The respondent also mentioned that Agriculture and Rural Development policy also mentions priority interventions based on different situations like moisture surplus, deficit, pastoralists area etc and these are the experiences related with agroecology and they are also very good entry point for further mainstreaming . One experience that could be used for mainstreaming the concept is the activities that are implemented based on the Community based participatory watershed development (CBPWD) in the Ministry of Agriculture, to apply resilient landscape management and any Natural Resource Management

(NRM) activities at local level. The guideline consider and show how community/people (society) is motivated to function and contribute as a group to perform various tasks they all contributed to identify, select and design. this approach will give high priority to consider social aspect in all aspects from the planning via implementation and utilization in a sustainable manner.

This method is one of the entry point in order to perform the task at community level. . Considering that EFCCC is coordinating the national adaptation plan processes and its implementation, the commission has experiences in supporting the various sectors in developing adaptation options amongst which agroecology as a concept has been included towards enhancing adaptive capacity and increasing resilience . Some of the respondents have indicated that they have experiences in understanding the benefits of agroecology as a concept by being involved in the monitoring and evaluation of similar projects .

In some cases there are specific experiences of the diversification and intensification of crops program was based on agro-ecological zones as well as the livelihood mapping done for Disaster Risk Management (DRM) that had helped to plan and implement different interventions . Similar experiences have also been observed on the ground in areas of the country where agroforestry is more practiced and developed, the community become food secure. Cereal-pulse crop rotation and intercropping is also best resource use practice, crop and livestock integrated farming is also synergistic approaches that contribute to resilient community development. Although, the practice of agroecology concept is existent, more intentional approach and interventions are needed to ensure sustainable agriculture and food system in the country .

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10. CONCLUSIONS

The following are the major conclusions from the review work and the questionnaire survey undertaken

- Ethiopia is in the forefront of climate change action through the initiation and implementation of CRGE, NAP-Ethiopia and NDC at international level. Agriculture being one of the key sectors in Ethiopia whichthe countries NDC provides emphasis on adaptation and mitigation actions related to agriculture. The NDCs are currently being updated.
- All plans related to climate change and Sustainable Development that Ethiopia has committed at international level has been mainstreamed into its relevant sector's national, regional and sub-regional development plans and being implemented.
- Institutional structures have been put in place for coordinatingand implementing climate adaptation and mitigation actions at national, regional and sub-regional level and is currently being strengthened.
- Starting with the Constitution of the country as well as the Environmental Policy the nation has embarked on a green path with rights and obligations for citizens towards ensuring sustainable natural resource management at all levels.
- Several policy and strategy documents that have been initiated for the purpose of sustainable development of agriculture sector emphasis agroecology as a concept, though not explicitly, through conservation agriculture, natural resource management, climate smart agriculture, organic agriculture and biodiversity conservation etc. These sectoral policy documents provide ample room for CSOs in Ethiopia to be part of the processes and hence openings for the mainstreaming of the agro-ecology as a development concept at various levels.
- Number of platforms working on sustainable development concepts exists at various levels for CSOs to be involved in the agricultural policy processes.

11. RECOMMENDATIONS

The following recommendations are forwarded based on the findings obtained from the review as well as the key respondent interview undertaken as part of the study. The recommendations comprise immediate actions needed as well as strategic interventions that the CSOs could undertake in Ethiopia.

Immediate actions

Involvement in 10 year development planand agriculture sector's policy updating processes

The country is currently preparing a 10 year perspective developmental plan, which is currently being deliberated upon. For mainstreaming of agroecology within the perspective plan this is a golden opportunity for the CSOs in Ethiopia can approach the various sectoral ministries and agencies and also take part in the discussions to emphasis the need to mainstream agroecology as a concept to be included into the draft updated agriculture sector's development policy andtext of the 10 year development plan. The 10 year plan and draft updated agriculture sector's development policy will align with that of the SDG, CRGE and NDC of Ethiopia to ensure sustainabledevelopment at all levels.

"The 10 year plan and draft updated agriculture sector's development policy will align with that of the SDG, CRGE and NDC of Ethiopia to ensure sustainabledevelopment at all levels."

Involvement in NDC updates

As part of the Paris Agreement processes countries are to communicate new or updated NDCs and long term strategies to UNFCCC. Currently, Federal Democratic Republic of Ethiopia through its focal agency, The Environment Forest and Climate Change commission has embarked on a process to update its NDCs by the end of the year 2020. Several consultancies have been commissioned with the support of development partners and intergovernmental organization towards updating the NDC and the sector specific plans.

This process is expected to continue until the end of 2020. Several stakeholder consultative workshops have been planned as the NDCs are being updated. It is imperative that the CSOs being part of the AFSA network get highly engaged in the process so as to mainstream agroecology as a policy option for climate change adaptation and mitigation.

Strategic interventions

All most all of the policy documents reviewed in this document provides a clear indication that agroecology as a concept is already being used in several developmental interventions, though not explicitly mentioned. However, there are number of interventions needed inorder to sufficiently mainstream agroecology into the policy discourse as well as one of the most important implementation activities in Ethiopia. The following are some of the key interventions needed.

Institutional collaboration

As is observed in the texts above it is clear that in order to mainstream agroecology as a concept into the existing policy and implementation processes within the country it is important to engage with institutions that are involved in the implementation of agroecology as a concept. The following are the key institutions that are very essential in facilitating the mainstreaming agroecology within the existing policy, programme and implementation related activities at the Federal level.

S.NO.	INSTITUTION	REMARKS
1	Ethiopian Forest, Environment and Climate Change Commission	Focal point for UNFCCC and implementor (technical wing) of CRGE/NDC in the country
2	Ministry of Finance	Implementer (Financial wing) of CRGE/NDC in the country
3	National Planning Commission	Mandated to coordinate the preparation of National Development Plans and also to monitor and evaluate the achievements
4	Ministry of Agriculture	Mandated to work on all issues pertaining to agriculture in the country
5	Ethiopian Biodiversity Institute	Mandated to conserve biodiversity including agro-biodiversity in the country and also to undertake relevant research activities
6	Ethiopian Institute of Agricultural Research	All research activities related to agriculture

The institutional collaboration should also be at all levels, including the regions as well as at the level of Wordas (districts). This is crucial for awareness creation among the institutions towards mainstreaming as well as supporting in capacity building activities.

Engagement in stakeholders platforms

Apart from engaging in the stakeholders' platform at the international level including UNFCCC, CBD and other intergovernmental negotiations processes as well as CSO led platforms, it is important that AFSA parts engage robustly in the ongoing relevant national stakeholder engagement platforms. It is understood that all line ministries who are involved in NDC implementation in the country organize annual planning and review meetings for which all relevant stakeholders are invited. The following is a shortlist of platform that are very essential for AFSA's work

- Public wing and stakeholder discussions by Ethiopian Biodiversity Institute
- Watershed and Agroforestry platforms established by Ministry of Agriculture
- NDC stakeholder engagement platform established by EFCCC
- Platform of Climate Smart Agriculture by Ministry of Agriculture

3. Development partners

There are number of projects and programmes that are currently being supported by development partners and hence it is important to establish formal collaboration/relationship with the development partners who could also be a source towards influencing the policy and also support in the mainstreaming. The following are some of the institution that are key for the work related to agroecology (short list), detailed project list is provided in the CSA Strategy document.

S.No.	Development partner	Initiative (involved partially or fully)
1	World Bank	PSNP/SLM/RLLP – Ethiopian Resilient Landscape and Livelihood Project/ Lowlands Livelihood Resilient Project
2	IFAD	Participatory Irrigation Development Programme II/
3	ILRI	Program for Climate-Smart Livestock Systems (PCSL)
4	The Royal Netherlands Embassy	PSNP/SLM

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13. ANNEX I

Questionnaire survey - Agroecology as a Policy Response for Climate Change Adaptation and Mitigation

Ethiopia is endowed with numerous agro-ecological regions. Currently the country is undertaking climate action through the implementation of the Nationally Determined Contribution (NDC) as submitted to United Nations Framework Convention on Climate Change (UNFCCC) NDCs has been inspired and indicates all the key elements indicated in CRGE document. The current study is undertaken to identify key entry points for the concept of agroecology to be embedded within the plans for programmes for climate action in Ethiopia.

Name: _____
Institution: _____
Are you familiar with the Ethiopia's NDC document submitted to UNFCCC as part of Paris Agreement?
Yes
☐
No
☐
I don't know
☐
Are you aware that the NDC document has been inspired and in synergy with CRGE document?
Yes
☐
No
☐
I don't know
☐

Is your organization involved in the implementation of agricultural sector NDCs as part of Ethiopia`s CRGE strategy?
Yes
☐
No
☐
I don't know
☐

Is there a specific unit/body within your organization responsible for implementing or supporting agricultural NDCs?

Yes

☐

No

☐

I don't know

☐

If yes, please provide the details:_____ __

_____

_____

_____

Do you think agroecology as a policy response for climate change adaptation and mitigation has been included within the following documents?

Document	**Yes**	**No**	**Remarks** If yes indicate where it has been included If No indicate where it should be included (list them)
CRGE			
NDC			
NAP			
Sector's Climate Resilient Strategy			
GTP II			
10 year perspective plan			
If any, please specify			

Are there any stakeholder engagement platforms that have been established by your institution in which they could participate and provide inputs [Citizens, civil society organizations (particularly grassroots farmer organizations and rural women's associations), faith based organizations, and national non-governmental organizations]

Yes

☐

No

☐

I don't know

☐

If yes, please list them: _____
_____
_____
_____

What are the major meetings/processes that your organization is following at international and regional levels? Please list them.

_____
_____
_____
_____

What are the major meetings/processes that your institution is organizing at national and local levels where civil society can participate? Please list them.

_____
_____
_____
_____

What roles do you think the civil society could play towards ensuring and implementing agroecology as a climate change adaptation and mitigation action?

_____
_____ _____
_____
_____

In your view, is agroecology could be one of the essential entry point for the implementation of CRGE strategy and achieving the Ethiopia's NDC?

Yes

☐

No

☐

I don't know

☐

Is it significantly important using the concept of agroecology as one of the key entry points in the agriculture sector's development agendas/programs for fighting climate change related impacts in Ethiopia?

Yes

☐

No

☐

I don't know

☐

If the answer of question no 11 is yes, what are the major benefits expected, while promoting the concepts of agroecology in the agriculture sector's development agendas/programs?

_____
_____
_____
_____

Do you have, any experiences/knowledges in your organization regarding the utilization of the concept of agroecology as one of the entry points for resilient and sustainable development? If you have any what are they?

Definition of Agroecology

Agroecology is an integrated approach that simultaneously applies ecological and social concepts and principles to the design and management of food and agricultural systems. It seeks to optimize the interactions between plants, animals, humans and the environment while taking into consideration the social aspects that need to be addressed for a sustainable and fair food system (FAO, 2019).

WHAT MAKES AGROECOLOGY DISTINCT?

Agroecology is fundamentally diffeAArent from other approaches to sustainable development. It is based on bottom-up and territorial processes, helping to deliver contextualized solutions to local problems. Agro-ecological innovations are based on the co-creation of knowledge, combining science with the traditional, practical and local knowledge of producers. By enhancing their autonomy and adaptive capacity, agroecology empowers producers and communities as key agents of change (FAO, 2019).

14. ANNEX II

List of organizations responded

[The respondents names have been withheld as per their request

S,No,	Details	Respondent Nos.
1	Climate Change Planning Implementation and Coordination Directorate Environment, Forest and Climate Change Commission Addis Ababa, Ethiopia	Respondent 1
2	STAS – Climate Change Mitigation and Adaptation DU Ethiopian Agricultural Transformation Agency	Respondent 2
3	Crop Development Directorate Ministry of Agriculture and Natural Resources P.O.Box 62347 Addis Ababa, Ethiopia	Respondent 3
4	Climate Smart Agriculture - Sustainable Land Management Program(SLMP/RLLP) Ministry of Agriculture (MoA)	Respondent 4
5	Ethiopian Biodiversity Institute	Respondent 5
6	Productive Safety Net Programme Ministry of Agriculture	Respondent 6

15. ANNEX III

Policy / Strategy		Remarks
Agricultural-Development Led Industrialization (ADLI) strategy	Since 1993	Agriculture is the main source to generate primary surplus that fuel the growth of other sectors notably, industry, infrastructure, and social services; tailored interventions to address the specific needs of the country's varied agro-ecological zones
National Energy Policy	1994	A comprehensive national energy policy with the goal of addressing the problem of energy supply and its utilization.
Article 43 and 44 of the Constitution	1995	Environmental rights and a policy of promoting sustainable development
Environmental Policy of Ethiopia	1997	Overall guidance in the conservation and sustainable utilization of the country's environmental resources
Environmental Impact Assessment Proclamation	2002	Ensure that the environmental implications are taken into account before decisions are made
Sustainable Development and Poverty Reduction Program (SDPRP)	2002-2005	Poverty reduction strategy program that formulated to achieve the MDGs
Plan for Accelerated and Sustained Development to End Poverty (PASDEP)	2006-2010	Poverty reduction strategy program that were formulated to achieve the MDGs
Community Based Participatory Watershed Development strategy	2005	Guide on how to plan, design and implement community watershed development activities. The Guideline provides consolidated and normative information for field workers and woreda sector offices
Ethiopian Policy and Strategy on the development, conservation and use of forests	Since 2006	Meet public demand in forestry products and foster the contribution of forests in enhancing the economy of the country; through appropriately conserving and developing forestry resources.

Policy / Strategy		Remarks
National Adaptation Program of Action (NAPA	2007	The NAPA represented the first step in coordinating adaptation activities across government sectors
Nationally Appropriate Mitigation Actions (NAMAs		Any action that reduces emissions ranging from project-based mitigation actions to sectoral programs or policies; Include policies directed at transformational change within an economic sector, or actions across sectors for a broader national focus
CAADP Compact	2009	One of the pillars of CAADP is extending the area under sustainable land management and reliable water control systems
REDD+ strategy	Since 2008	Alternative mechanism for financing the forestry development in Ethiopia and enhancing the country's climate change mitigation potential
Growth and Transformation Plan (GTP I and II)	Since 2010	Growth and Transformation Plan (GTP) strategic framework for the period 2010-2020; The GTP recognizes that the environment is a vital pillar of sustainable development
Ethiopia's Agricultural Sector Policy and Investment Framework (PIF)	2010-2020	Provides a strategic framework for the prioritization and planning of investments that will drive Ethiopia's agricultural growth and development
Agriculture Sector Program of Plan on Adaptation to Climate Change/APACC	2011	The Agriculture Sector Climate Change Adaptation Plan.
Ethiopian Program of Adaptation to Climate Change (EPACC)	2011	More programmatic approach to adaptation planning. Seeks to build a climate resilient economy through adaptation at sectoral, regional and community levels. The EPACC updates and replaces Ethiopia's National Adaptation Program of Action (NAPA) which was formulated in 2007 and submitted it to the UNFCCC Secretariat
Climate Resilient Green Economy Strategy	2011	Ethiopian overarching strategy to become carbon-neutral middle-income status before 202

Policy / Strategy		Remarks
Ethiopian Soil Information System (EthioSIS)	2011	A National Soils Database and soil fertility map of Ethiopia developed, through a combination of remote sensing and in-field sampling, to determine soil nutrient deficiencies and develop tailored fertilization regimes
Working Strategy for Strengthening Ethiopia's Teff Value Chain	2013	Includes nutrient management practice through legumes in crop rotations to supply biologically fixed, atmospheric nitrogen as a replacement or supplement for inorganic nitrogen fertilizer
National Policy and Strategy on Disaster Risk management	2013	Disaster risk management framework, including early warning and risk assessment, information management, capacity building, and integration of disaster risk reduction into development plans. Focus on droughts
Ethiopia's Climate-Resilient Green Economy Climate Resilience Strategy: Water and Energy	2015	Sectoral chapter of the Resilience Strategy of the CRGE. Focuses on water and energy
Growth and Transformation Plan (GTP-II)	2015	Second federal,5-year national development plan
Agriculture and Forestry Climate Change Resilience Strategy	2015	Sectoral chapter of the Resilience Strategy of the CRGE. Focuses on agricultural crops, livestock, forestry, food security and disaster prevention; under a transformation of the agriculture and forestry sectors into services and industry base
Water and Energy Climate Resilience Strategy	2015	Sectoral chapter of the Resilience Strategy of the CRGE. It assesses and addresses rainfall variability challenges to hydropower and food security
Intended Nationally Determined Contribution (INDC)	2015	Emission reduction targets as well as broader climate change mitigation and adaptation strategies; Sectors included are Agriculture (livestock and soil), Forestry, Transport, Electric Power, Industry (including mining) and Buildings (including Waste and Green Cities)

Policy / Strategy		Remarks
Climate Smart Indicators for GTP II Results Framework	November 2017	Handbook for Climate Smart Indicators: Part of the Agriculture Sector Indicator Handbook
Guideline for Mainstreaming CRGE	2018	This mainstreaming guideline is developed to provide guidance for the agriculture sector and particularly for the Ministry of Agriculture and Natural Resources and the Ministry of Livestock and Fishery to mainstream CRGE and climate smart agriculture (CSA) into different programs and projects in the sector as well as at policy level
Climate Smart Agriculture a field manual for extension workers	2019	Aims to implement sustainable agriculture production system by capacitating the extension workers
Ethiopia's Climate Resilient Green Economy National Adaptation Plan, Federal Democratic Republic of Ethiopia (NAP-ETH)	2019	The goal of NAP-ETH is to reduce vulnerability to the impacts of climate change by building adaptive capacity and resilience. It aims to strengthen holistic integration of climate change adaptation in Ethiopia's long-term development pathway, supported by effective institutions and governance structures, finance for implementation and capacity development and strengthened systems for disaster risk management and integration among different sectors.
Revised Watershed Development Strategy of Ethiopia	2019	Identifies 'poor climate change adaptation' as a bottleneck to watershed development and proposes measures to address it.

NATIONAL CLIMATE POLICY STUDIES *for* A CAMPAIGN ON AGROECOLOGY FOR CLIMATE ACTION

NOVEMBER 2010

ALLIANCE FOR FOOD SOVEREIGNTY IN AFRICA

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