

UNDP Ethiopia 2011

Framework for UNDP Ethiopia's Climate Change, Environment and Disaster Risk Management Portfolio



Contents

1.	Situation Analysis		1
2.	Ethiopia's Priorities to Respond to Climate Change and to Manage Disaster Risk		3
	Climate-Resilient Green Economy	3	
	Adaptation	4	
	Ethiopia's DRM Strategic Programme and Investment Framework (DRM-SPIF)	5	
3.	UNDP Ethiopia's Support to the Government of Ethiopia in the area of Climate Change, Environment, and Disaster Risk Management		6
4.	Gaps for Future Programming		14
	Thematic	14	
5.	Cross-Cutting		17

UNDP Ethiopia 2011

Framework for UNDP Ethiopia's Climate Change, Environment and Disaster Risk Management Portfolio Taking the Government of Ethiopia's (GoE) priorities set-out in the GTP, CRGE and DRM-SPIF as starting points and with a view of strategically positioning UNDP Ethiopia within the national context by refining and refocusing the present Climate Change, Environment, and Disaster Risk Management (CCV) portfolio, this paper proposes three thematic areas as an organizing framework for the CCV portfolio. These are:

- i. Cross-cutting Support for Formulation and Piloting of Low-Emission Climate-Resilient Development Strategies
- ii. Pursuing a Low Emission Economic Growth
- iii. Building Resilience through
 - a. Adaptation, and
 - b. Disaster Risk Management

It also presents detailed information on each of UNDP Ethiopia's programmes and projects in the area of climate change, environment, and disaster risk management. Further, it identifies strategic areas for future consideration to either refining or adding to the existing portfolio.

1. Situation Analysis

Climate change generates various kinds of risks and opportunities for Ethiopia that would affect all sectors in the country. Preliminary projections suggest that climate change can have a sizeable impact that ranges in the order of 7-8% of GDP loss per year, with stronger impacts in later decades and on the poor.

Ethiopia's vulnerability to climate change risks has its root in various factors, including its geographic location and social and economic structure. Dependency of its population on climate sensitive sectors for livelihood, widespread environmental degradation and fragile ecosystems, limited national scientific, technological, financial and institutional capacity, poor infrastructure -- add-up to heighten Ethiopia's vulnerability to the impacts of climate change.

Agriculture, water supply, hydropower production, economic and social infrastructure, health and biodiversity are the sector primarily affected with stronger secondary downstream impact to all sectors of the economy and the society. In addition to the probable surge of natural disasters, primarily droughts and floods, it is expected that climate change will also amplify the likelihood of heat waves and other health risk and induce disasters, while at the same time it will continue to compound the challenge of running down the natural capitalservices of the country. Historically, change and variability, together with had a strong impact on the disaster situation of the country and on its economic growth. Almost all annual economic growth patterns have a one-to-one correlation with the favourable weather conditions.

Box 1

Ethiopia: Socio-Economic Profile

The population – With a population of 84.9 million (UN, 2010), Ethiopia is the second-most populous in Africa after Nigeria. The average age of the population is 17 years. With an annual population growth of 2%, Ethiopia will have more than 120 million people by 2030. Only 17% of the Ethiopians live in urban centers, almost half of those in the capital Addis Ababa

The geography – Ethiopia is a land of natural contrasts. It stretches over more than 1.1 million square kilometers and has a wide variety of climate zones and soil conditions. Large parts of the country are at high altitude; Addis Ababa is at an elevation of more than 2000m. With the Danakil depression, Ethiopia also features one of the lowest points of the continent. Ethiopia is a landlocked country with sea-access primarily via its neighbour Djibouti. **Economy** - Ethiopia is one of the fastest growing non-oil economies in Africa. [IMF] In spite of the fast growth in recent years, GDP per capita is one of the lowest in the world, and the economy faces a number of serious structural problems. Reform efforts of the last two decades have resulted in the ten percent yearly economic growth from 2003–2008 but despite economy of Ethiopia is based on (GDP), 83.9% of exports, and 85% productivity remains low, and frequent droughts still beset the country. Ethiopia is often referred to as the "water tower" of Eastern Africa because of the many rivers that pour off the high tableland. It also has the greatest water reserves in Africa, but few irrigation systems in place to use it. Just 1% is used for power production and 1.5% for irrigation.

In a year of favourable weather conditions, Ethiopia's economy has performed better. Conversely, estimations show that between 2000 and 2007 the combined yearly direct cost of drought and flood, fluctuated between 370 million to 2.5 billion Birr (21 million to 146 million USD). The value of the largest recorded disaster losses amounts to about 4 percent of crop-related agricultural GDP and 7.3 percent of livestock-related GDP.

2. Ethiopia's Priorities to Respond to Climate Change and to Manage Disaster Risk

The International Monetary Fund expects Ethiopia to become one of the world's fastest growing countries over the coming years; only China and India are expected to continue growing at a faster pace. Building on this positive trajectory, the Growth and Transformation Plan (GTP), the main government policy instrument that guides major economic and social development efforts of the country -- sets-out a goal for Ethiopia of achieving a double digit growth that will elevate the country to middle income country level by 2025, while at the same time becoming climate-neutral. Boosting agricultural productivity, strengthening the industrial base, and fostering export growth have been prioritized as vehicles for reaching this goal.

The Government of Ethiopia (GoE) has a strong political commitment to respond to prevailing and emerging challenges of climate change and disasters. The GTP explicitly addresses the sustainability of growth: "Environmental conservation plays a vital role in sustainable development. Building a 'Green Economy' and ongoing implementation of environmental laws are among the key strategic directions to be pursued during the plan period." (GTP, 2011: p. 119).

To this end, Ethiopia has committed to building a Climate-Resilient Green Economy (CRGE) that aims to ensure economic development that pursues a low emissions path while building resilience to adapt to climate change. The Government has recognized the need to capitalize on opportunities created by climate change to realize these goals. Thus, the GoE's green economy strategy targets seizing the financial opportunities and sustainability co-benefits of low emissions development, while its climate resilient development strategy focuses on managing risk and building resilience to shocks through sequenced measures.

With regards to disaster management, it has also committed to shift in orientation from crisis management to a multi-sectoral and multi-hazard Disaster Risk Management (DRM) approach so as to be better able to achieve the targets articulated in the GTP.

Climate-Resilient Green Economy

The GoE's **green economy strategy** focuses primarily on emission intensive sectors, where the climate mitigation potential of Ethiopia resides -- energy, forestry, agriculture, soil based emission, livestock, cities, infrastructure, and health. Ethiopia has outlined a strategy to build a green economy. So far, it has identified and prioritized more than 50 initiatives that could help the country to achieve its economic development goals while at the same limiting green house gas (GHG) emissions in 2030 to around today's 150 Mt CO2e – roughly 250 Mt CO2e less than

estimated for the current development path. The green economy plan is built on four pillars:

- i. Improving crop and livestock practices for higher food security and farmer income while reducing emissions
- ii. Protecting and re-establishing forests as carbon stocks
- iii. Expanding renewable power generation for domestic and regional markets
- iv. Leapfrogging to state-of-the-art technology in transport and industrial sectors

Implementing the initiatives would also improve public health through better air and water quality and promote rural economic development by increasing soil fertility and food security.

Many of the initiatives that comprise the green economy plan offer positive returns on investments and thus directly promote economic growth and create additional high value-added jobs. However, a significant scale up of current investment levels is needed for implementation.

By developing a green economy, Ethiopia could tap into climate funding in exchange for GHG abatement. Such financial support will be essential to cover the total investment requirements of USD X billion to implement the initiatives.

The GoE's **climate resilience** strategy, on the other hand, tries to address risk reduction by focusing on two aspects – integrated **disaster risk reduction and management** and sectoral and regional climate **adaptation strategy** and action plans.

Adaptation

The GoE is currently in the process of developing the Climate Resilient component of its CRGE Strategy. The Climate Resilient component is expected to aggregate the sectoral and regional adaptation programmes that have already been prepared by Ethiopia's sectoral ministries and regional governments; and assess (i) the current and future risks faced by Ethiopia; (ii) the most important hazards; (iii) the associated likely magnitude of loss; and (iv) how and what adaptation response measures should be prioritized for a CRGE Strategy, particularly based on economic cost benefit analysis and also taking into account all relevant response measures identified by the Government of Ethiopia in its Disaster Risk Management Strategic Programme and Investment Framework (DRM SPIF).

Ethiopia's DRM Strategic Programme and Investment Framework (*DRM-SPIF*)

The Disaster Risk Management (DRM) system of Ethiopia is divided along six pillars and three phases. Three pillars – prevention, preparedness, and mitigation – constitute the core of disaster risk reduction. It also comprises the breadth of the pre-disaster phase of the DRM cycle. Disaster response covers the disaster phase while (early) recovery and rehabilitation constitute the post-disaster phase. Institutional strengthening is the pillar which supports an enabling environment for the integration of these various components along the different phases of DRM. Providing the foundation for the DRM pillars is monitoring and evaluation and resource mobilization.

The prevention and mitigations pillars are made up of six programs, namely, communication and awareness raising, research, community disaster risk management, mainstreaming, climate change adaptation (CCA) and disaster risk reduction (DRR) integration, and DRR Programmes, which complement and support the implementation of programmes on preparedness, response, and recovery and rehabilitation.



Figure 1: Ethiopia's Disaster Risk Management Framework

3. UNDP Ethiopia's Support to the Government of Ethiopia in the area of Climate Change, Environment, and Disaster Risk Management

Taking the priorities and action plans the Government of Ethiopia has outlined in the GTP, the CRGE Strategy and DRM-SPIF as lead, under UNDAF Outcome 4 and 5 (Box 2), UNDP Ethiopia is supporting Ethiopia's transition to a climate resilient green economy in three thematic areas:

- i. Cross-cutting Support for Formulation and Piloting of Low-Emission Climate-Resilient Development Strategies
- ii. Pursuing a low emission economic growth
- iii. Building Resilience through (a) Adaptation and (b) Disaster Risk Management

Box 2 UNDAF OUTCOME 4:

By 2015, national and sub-national institutions and vulnerable communities have systematically reduced disaster risks, impacts of disasters and have improved food security.

UNDAF Outcome 5: By 2015, the governance systems, use of technologies and practices, and financing mechanisms that promote a low carbon climate resilient economy and society are improved at all levels

UNDP's Ethiopia's support under the above three thematic areas helps the GoE also meet its obligations under the three principal Rio Conventions of United Nations Framework Convention on Climate Change (UNFCCC), Convention to Combat Desertification (UNCCD), and Convention on Biodiversity (UNCBD).

The support provided under these three thematic areas ranges from:

- provision of access to technical assistance for planning and strategy formulation,
- establishment of a financing facility to enhance access to new and additional financial flows, with fiduciary capacity development to enable an eventual full administration of the financing facility;
- piloting and implementation of environmental, climate change and DRM demonstration activities, and capturing knowledge from such activities to enable

the scaling-up of proven solutions;

- policy and operational support to the implementation of a comprehensive Disaster Risk Management (DRM) system, to
- provision of institutional capacity support to enhance compliance to and implementation of the provisions of domestic and multilateral environmental regulations.

i) Cross-cutting Support for Formulation and Piloting of Low-Emission Climate-Resilient Development Strategies

Climate change has an ever-increasing impact on the ways national governments define their development strategies. This impact involves not only the need to understand and manage a tremendous amount of technical information, but also the need to bring a wide range of stakeholders together to address climate change concerns in a coherent manner. A primary challenge in Ethiopia is the effective allocation of scarce resources in order to ensure that climate change activities, programmes, and projects are not isolated from other pressing development needs.

To date, narrowly-defined mitigation (lowering emissions) and adaptation (reducing vulnerability) projects have dominated climate change action policies taken by Ethiopia. This has resulted in the accumulation of many efforts, isolated in nature, to respond to a crosscutting issue. New and innovative programmatic approaches are necessary to leverage existing experiences and place them into a comprehensive policy and programmatic framework that would enable the Government of Ethiopia to integrate climate and development planning, policies, and action across multiple sectors and levels (national, regional and woreda levels).

To this end, the formulation and implementation of low-emission climate-resilient development strategies (LECRDS) will allow Ethiopia to respond more effectively to climate change. At corporate level, UNDP has developed a five-step methodology to support developing countries with formulating sound low-emissions climate resilient development strategies. The steps are:(i) Develop partnership and coordination platform and multi-stakeholder participatory planning process; (ii) Prepare climate change profiles and vulnerability scenarios; (iii) Identify strategic options leading to low-carbon, climate-resilient development trajectories; (iv) Prioritize strategic options through technological, social, and financial feasibility and cost-benefit analysis; and (v) Prepare low-emissions and climate-resilient development roadmap.

Develop Partnership & Coordination Structure repare Climate nange Scenarios Climate scenarios

GHG emissions scenarios Identify Mitigation & Adaptation options

M&A options through a multistakeholder consultive process

Assess Priority climate Financing Needs

- Assess existing financing options Undertake cost-benef analysis of
 - entify financial
- Financing options

Prepare Comprehensive Low Carbon & Climate Change Resilient Road map

With UNDP's five steps process for preparing LECRDS as a guide, UNDP Ethiopia supports the ongoing Government of Ethiopia's efforts to prepare a Climate Resilient Green Economy and Disaster Risk Reduction Strategies and Investment Frameworks, as well as pilot priority initiatives identified therein, through the following programmes:

- African Adaptation Program: supporting climate resilient sustainable development (AAP)
- Climate Change and Vulnerabilities Framework Programme (CCV)
- Support to formulate Ethiopia's DRM Strategic Programme and Investment Framework (DRM-SPIF)

It also facilitates the GoE's capacity to access climate and DRM finance through:

• Establishment of the CRGE and DRM Financing Facility to enable the implementation of the GoE's CRGE Strategy and DRM-SPIF.

ii) Pursuing low emission economic growth

Ethiopia is already a low emission country and its contribution to global emissions will continue to be negligible for years to come even under its 2011-2015 GTP economic growth scenario. UNDP Ethiopia believes that while choosing a low emission rather than carbon intensive path for the 2025 horizon is both responsible and will have significant sustainability co-benefits for Ethiopia, the primary driver of Ethiopia's pursuit of a green economy would have to be capturing the new financing and competitiveness opportunities such a path offers for Ethiopia. For example, under a carbon neutral growth trajectory, Ethiopia could offset in the region of 250 Metric Tonnes (Mt) of carbon dioxide equivalent a year. Even at a modest carbon price, this has the potential to generate around 2.5 billion per annum.

Box 3

Ethiopia – GHG Emissions Profile

development path to achieve its ambition of reaching middle-income, the results of business as usual (BAU) estimate show that Ethiopia's current pathway for economic development will increase the country's GHG emissions from 155 Mt CO2e today to almost 400 Mt in 2030 - an increase of more than 150% and roughly the amount of GHGs that South Africa emits today. On a per capita basis, emissions are projected to increase form 1.9 t today to 2.9 t in 2030. In absolute terms, the highest increase – adding more than 100 Mt in GHG emissions - will come from agriculture, followed by industry at 55 Mt and forestry at 35 Mt. [CRGE

Ethiopia stands to gain from both public and private adaptation and mitigation finance including those emerging international funds under the UNFCCC, such as the Adaptation Fund, Fast Start Finance, and the Green Climate Fund; and from the carbon market.

In forestry, the impact of human activities is a large source of carbon dioxide emissions. Ethiopia's Forestry emissions are driven by deforestation for agriculture (49% of all forestry-related emissions) and forest degradation due to fuelwood (47%) consumption and logging. As a result, forestry emissions are expected to grow from 25 Mt in 2010 to almost 45 in 2030 conversion of forested areas to agricultural land and from around 25 Mt in 2010 to more than 40 in 2030 as a result of unsustainable fuelwood use. [CRGE Strategy]

While this may be the case, the protection of Ethiopia's forests also presents tremendous opportunities. Forestry alone represents around 45% of the total potential and, as a sector, can even yield negative emissions via sequestration, i.e. storage of carbon in the form of wood, at a level that surpasses emissions from deforestation and forest degradation.

The CRGE Strategy identifies reducing demand for fuelwood through fuelwoodefficient stoves (35 Mt) as the single most important lever while other advanced cooking and baking technologies (electric, biogas, and LPG stoves) offer an additional combined potential of 15 Mt. In addition, aforestation, reforestation, and forest management can help to increase sequestration (together 40 Mt) and hence even surpass any remaining emissions from the forestry sector. Pressure from agriculture on forests can be reduced by agriculture intensification on existing land or unlocking degraded land via irrigation, with the potential to lower deforestation and thus the associated emissions by almost 30 Mt CO2e in 2030.

UNDP Ethiopia supports the Government of Ethiopia's efforts to achieve green growth, through a range of projects and programmes that are focused on capacity development for mitigating GHG emissions from industry, for making clean energy choices that are compatible with ensuring wide spread access to modern energy services, for managing forests sustainably while drawing financial benefit for their sustainable management and gaining access to the carbon market by participating in the Clean Development Mechanism (CDM). UNDP Ethiopia's projects and programmes in the low emission growth thematic area include:

- CDM National Capacity Development Project, Phase II
- UN-REDD Programme
- Support for Program on Scaling-Up Renewable Energy in Low Income Countries (SREP)

These programmes taken together work to support Ethiopia's ambitious goal of pursuing a low-emission economic development path. They facilitate provision of technical advice, commissioning of analytical work, and experimenting via pilots and demonstration projects to define systems that are necessary for anchoring low-emission growth or arrive at solutions that can be scaled-up.

iii) Building Resilience through Adaptation and Disaster Risk Management

Climate change adaptation is defined by the Intergovernmental Panel on Climate Change (IPCC) as adjustments in human and natural systems in response to actual or expected climatic variation, with a view to moderating harm or exploiting beneficial opportunities. But most adaptation measures involve large-scale and 'high-tech' infrastructure for physical protection which while important are costly. UNDP believes that in vulnerable developing countries like Ethiopia, building overall resilience through mainstreaming adaptation and disaster risk reduction measures into core livelihoods and development activities of farmers and pastoralists should be the primary focus -- to enable a sustainable and cost effective response and resilience to climateinduced shocks.

UNDP Ethiopia's emerging response to climate change and variability can be characterized as disaster response measures, enhancing resilience through ecological restoration and environmental rehabilitation measures to attain poverty reduction and food security.

Box 4

Ethiopia - Vulnerability and Disaster Profile

Warming has occurred across much of Ethiopia, particularly since the 1970s at a variable rate but broadly consistent with wider African and global trends (Conway & Schipper 2010). Mean annual temperature has increased by 1.3°C between 1960 and 2006, an average rate of 0.28°C per decade.

Climate models suggest that Ethiopia will see further warming in all seasons of between 0.7° C - 2.3° C by the 2020s and of between 1.4° C - 2.9° C by the 2050s.

The number of people who suffered from drought peaked at 14 million in 2003 and, in the period between 2000 and 2007, was never below 1.5 million persons. The floods of 2006 were the most disastrous affecting about 1.7 million persons.

Between 80-95 percent of Ethiopia's agriculture is rain-fed. This predominantly agrarian nature of the economy makes the country exposed and vulnerable to environmental shocks which often translate into disasters.

a) Adaptation

With the country's climate projected to become even more variable due to climate change, smallholder farmers and pastoralists' resilience to drought and their adaptive capacity must be built upon and supported. Evidence suggests that, alongside improved drought preparedness planning, disaster management structures and risk reduction efforts, it would be more effective to enable and strengthen the inherent adaptive capacity of smallholder farmers and pastoralists, finding ways to encourage their autonomous adaptation, rather than providing adaptation strategies for them.

UNDP Ethiopia invests in enhancing the adaptive capacity of local communities in the way they manage land, water, crops, and livestock, through such practices as agro-forestry and mainstreaming agro-biodiversity conservation in farming systems.

UNDP Ethiopia also supports the expansion and sustainable management of protected areas, and involving indigenous and local communities in these efforts since it is one of the most effective ways to reinforce nature and people's resilience to climate change. As an ecosystem-based adaptation measure, protected areas can provide cost effective and proven alternatives to costly infrastructure for communities, as they struggle to address the environmental consequences of climate change and more extreme weather events. Protected Areas contribute significantly to reducing the impacts of climate and building resilience by serving as natural buffers against climate impacts and other disasters, providing space for floodwaters to disperse, stabilizing soil against landslides and blocking storm surges. And protected areas can keep natural resources healthy and productive so they can withstand the impacts of climate change and continue to provide the food, clean water, shelter and income communities rely upon for survival. Thirty-three of the world's 100 largest cities derive their drinking water from catchments within forest protected areas. Protected areas also play a major role in reducing climate changing carbon dioxide emissions in the atmosphere. Fifteen percent of the world's terrestrial carbon stock - or 312 Gigatonnes - are stored in protected areas around the world.

In Ethiopia, maintaining the health of protected areas and the biological diversity they contain is crucial to the availability of fresh water, food, medicines and other lifesustaining benefits of nature for farming and pastoralist communities that drive their livelihoods from nature.

UNDP Ethiopia supports adaptation and building resilience through the following projects and programmes:

- Promoting Autonomous Adaptation at the Community Level in Ethiopia; (LDCF)
- Sustainable Development of Protected Area System (SDPA)
- Mainstreaming Agro-Biodiversity into the Farming System of Ethiopia

- Afar integrated dry lands management
- MDGF Environment enabling pastoralist communities to adapt to climate change and restore rangelands environment.

b) Disaster risk management

Ethiopia is confronted by a wide range of natural and human-induced hazards including drought, floods, landslides, human and animal disease, pests, earthquakes, and urban and forest fires. The wide range of hazards is associated with the country's diverse geo-climatic and socio-economic conditions. Much as Ethiopia has tried to contend with these various hazards, especially drought and floods which are the most common in the country, the magnitude, frequency, and impacts of these hazards have become more severe. Moreover, due to climate change and human-induced factors, the areas affected are expanding. Millions of Ethiopians have been affected by drought and flood in the last decade (Box 4).

Vulnerability to climate-related hazards and food insecurity is closely linked to land degradation and shrinking farm sizes. About 85 percent of the land surface in Ethiopia is considered susceptible to moderate or severe soil degradation and erosion. In the highlands, soil degradation and erosion is likely to reduce the sustainability of agricultural production if no mitigation measures are instituted.

Livestock yields will be affected negatively through the effects of temperature on annual growth, milk and wool production and reproduction; and indirectly through the changes in the quantity and quality of pasture, forage, grass and disease and increases in parasites.

Disasters also damage the country's infrastructure and natural environment, impoverish communities, and divert national priorities and development resources to emergency management operations.

UNDP Ethiopia supports DRM through the following programmes and projects:

- Strengthening National Capacities for Disaster Risk Reduction and Livelihoods Recovery (DRR&LR)
- Coping with drought and climate change (CWD)

4. Gaps for Future Programming

Thematic

i) Establishing linkages to UNDP Ethiopia's support in the area of Agriculture under the Enhanced Economic Growth team

Agriculture is the main anchor of Ethiopia's economy accounting for half of GDP, 83.9% of exports (coffee, hides, oilseeds, beeswax, sugarcane), and 85% of total employment. Agriculture will remain the core of Ethiopia's economy and provide the vast majority of employment into the foreseeable future.

Currently, the agricultural sector is also the highest source of emissions in Ethiopia, contributing to 52% of the total emissions. In agriculture, GHG emissions are attributable to first, livestock and second, crops. Ethiopia currently has a cattle population of more than 50 million and nearly 100 million other livestock. Livestock generates greenhouse gases mainly in the form of methane emissions arising from digestion processes (mostly attributable to ruminant animals like cattle) and nitrous oxide emissions arising from excretions. Livestock emissions are estimated to amount to 65 MtCO2e – 35% of Ethiopia's total emissions today. The cultivation of crops contributes to the concentration of greenhouse gases mainly due to the associated use of fertilizer (~10 MtCO2e), which leads to nitrous oxide emissions, as well as N2O emission from crop residues reintroduced into the ground (3 MtCO2e).

With 80-95 percent of Ethiopia's agriculture being rain-fed, the agriculture sector is also the most vulnerable sector to climate change and variability and disaster.

Given the above, there needs to be climate compatible strengthening of the agricultural sector, while also promoting Ethiopia's development in the non-agriculture sectors as means of supporting its adaptation to climate change.

In order to offer a viable alternative to the conventional development path, without foregoing growth in the short term and significant advantages thereafter, the CRGE Strategy has identified a set of initiatives that can provide the required increase in agricultural productivity and resource efficiency.

The CRGE initiative has prioritized the following initiatives to limit the soil-based emissions from agriculture and limit the pressure on forests from the extension of land under cultivation:

• Intensify agriculture through usage of improved inputs and better residue management resulting in a decreased requirement for additional agricultural land that would primarily be taken from forests

- Create new agricultural land in degraded areas through small-, medium-, and large-scale irrigation to reduce the pressure on forests if expansion of the cultivated area becomes necessary
- Introduce lower-emission techniques, ranging from the use of carbon- and nitrogen-efficient crop cultivars to the promotion of organic fertilizers. These measures would reduce emissions from already cultivated areas.

To increase the productivity and resource efficiency of the livestock sector, the following initiatives have been prioritized:

- Increase animal value chain efficiency to improve productivity, i.e., output per cattle via higher production per animal and an increased off-take rate, led by better health and marketing
- Support consumption of lower-emitting sources of protein, e.g., poultry. An increase of the share of meat consumption from poultry of up to 30% appears realistic and helps to reduce emissions from cattle
- Mechanize draft power, i.e., the introduction of mechanical equipment for plowing/tillage could substitute around 50% of animal draft power, resulting in a net reduction of GHG emissions.

These initiatives offer the combined benefit of supporting economic growth and limiting emissions and should be given serious consideration by UNDP Ethiopia, to foster a coherent approach to UNDP Ethiopia's support to doubling agricultural growth under the Enhanced Economic Growth Programme and UNDP Ethiopia's support to CRGE under CCV.

ii) Monitoring, reporting and verification (MRV) systems

The capacity of the Measurement, Reporting and Verification (MRV) systems for greenhouse gas emissions is weak in Ethiopia. Ethiopia faces obstacles in defining Nationally Appropriate Mitigation Actions (NAMAs) to turn the priority initiatives identified in its CRGE Strategy into reality. In order to fulfil its MRV requirements under the UNFCCC, Ethiopia must improve its capacities to establish national MRV systems for GHG emissions and national mitigation actions. Reporting tools and technical expertise must be made available and public, and there must be state-led action to create incentives.

The GoE has already requested support from UNDP Ethiopia to address its capacity constraints in the area of designing NAMAs and a national MRV system.

UNDP Ethiopia will be well advised to explore whether a capacity development support could be provided to Ethiopia as part of its overall support to CRGE planning

and implementation, drawing in particular on the EU-UNDP Climate Change Capacity Building Programme designed to assist developing countries in the design of lowemissions development strategies within the context of national development needs.

iii) Industry

Climate change cannot be tackled by national governments alone. The implementation of the CRGE Strategy will not be possible, without active and scaledup engagement of Industry (power, cement, and fertilizers, etc.) as it plays an equally important role in any concerted effort to reduce GHG emissions and adapt to climate change. To date, Industry's participation in adopting mitigation actions, particularly in carbon-intensive sectors, has been almost non-existent in Ethiopia. It is commonly accepted that responding to climate change and achieving low-carbon growth and development will be a major challenge for the international community, one which will require significant action and cooperation from both the Public Sector and Industry.

Industry's enormous role in meeting this challenge consists of spearheading the investment and technological innovation that will underpin low-carbon growth, of providing financing for mitigation and adaptation, of adopting low-carbon production processes, and of encouraging and facilitating more climate-conscious purchasing decisions by consumers.

UNDP Ethiopia may wish to explore what kind of catalytic role it may be able to play in this space, especially in light of the fact that private sector engagement is one of its priority areas.

As an aside, in reference to (ii) above, the MRV system is also a critical tool that will act as a liaison between Industry and the Public Sector to achieve this cooperation.

iv) Energy

Providing support for SREP opened the space for UNDP Ethiopia to be an active partner to the GoE in the area of energy.

Beyond articulating priority investment initiatives, building on the work done for SREP, Ethiopia now needs a comprehensive energy policy and enabling environment for scaling-up renewable energy generation and use, building on the effort already underway between the GoE & GIZ.

The CRGE has identified reducing demand for fuelwood through fuelwood-efficient stoves as the single most important lever for GHG abatement. UNDP Ethiopia could consider supporting the GoE development a programme in this area, beginning with accessing funds available from the Global Alliance for Clean Cookstoves - http:// cleancookstoves.org/.

5. Cross-Cutting

v) South-South Cooperation particularly for Technology and Knowledge exchange and dissemination

Efforts such as the recent exchange with Mali and the forthcoming one with China are encouraging but more needs to be done in this area, particularly given that is a corporate priority for UNDP, and that in the changing landscape of development partners, partnerships with emerging economies offer tremendous opportunities for Ethiopia.

vi) Projects being managed within Programmatic framework

UNDP Ethiopia's portfolio presented above is a mix of strategic initiatives that take a programmatic approach and small projects in a given thematic area with high transaction costs. It will be optimal if the identified three thematic areas (after consultation and the necessary adjustments) could serve as the programmatic frameworks of UNDP Ethiopia's portfolio and projects with high transaction costs could adjust their objectives and activities towards meeting strategic programmatic goals.

To enhance strategic focus and impact of the portfolio, consolidating and limiting the geographic spread (i.e. the number of woredas and regions in which UNDP Ethiopia's CCV portfolio operates) could be considered. This is applicable more for future projects and programmes as it will require some forward planning, prior discussion with the GoE and pre-selection of geographic areas after careful mapping and prioritization, to determine in which areas most of the CCV activities should be concentrated.

vii) Knowledge management and communication

There are knowledge products resulting from the various projects but more often than not, as part of a project deliverable with the project donor as audience or end-user, rather than producing and codifying knowledge for dissemination within Ethiopia, for sharing with other countries, or contributing towards UNDP's corporate effort of being a knowledge organization. In other words, knowledge products generated from projects are not mainstreamed into UNDP for corporate use or aligned with UNDP's system of knowledge management. Knowledge from each of UNDP Ethiopia-supported activities needs to be captured not only in descriptive terms but also in a quantified manner. This is important for demonstrating impact. The CCV team needs to cultivate and practice a culture of knowledge capturing, codification as well as communication. To foster such a culture, the following tools are needed:

- a repository (e.g. online system) for depositing documented and codified results and knowledge.
- Various communication products for public consumption associated with each knowledge piece, starting with a brochure and website
- dedicated CCV capacity that oversees result/knowledge management across the team, working closely with the Knowledge Management and Communications Units of UNDP Ethiopia and utilizing the resources available therein while ensuring a continual CCV focused content management

viii) Resource Mobilization

UNDP Ethiopia's CCV framework, once approved should be complemented by a comprehensive resource mobilization strategy, particularly by mobilizing resources from GEF V, Adaptation Fund, and Fast Start finance, as well as bilaterals in both the domestic and international arenas.



Form more information, please visit:

http://www.et.undp.org https://undp.unteamworks/node/18009 http://www.facebook.com/UNDPEthiopia