NDC HIGHLIGHTS

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NDC Highlights is a bimonthly newsletter of the Environment, Forest and Climate Change Commission, focusing on disseminating information and knowledge on the implementation of Ethiopia's NDC.



Prime Minister Abiy Ahmed receiving the first electric car fully assembled in Ethiopia by Hyundai Marathon Motors

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NEWS

Ethiopia Submitted NDC Update Summary

On December 31, 2020 Ethiopia submitted a summary of its enhanced NDC. The submission summarizes the methodology used to determine and prioritize mitigation and adaptation contributions, and indicates the resources required for the implementation of the enhanced NDC as well as for strengthening MRV and M&E systems. Source

The United States of America taking steps towards a renewed climate commitment

President Joe Biden took a series of actions on climate change on his seventh full day in office - making tackling climate change a priority across the federal government. In addition to Biden's domestic policy priorities on climate, the order would set climate change as a key consideration for U.S. national security and foreign policy. Source

On the same note Patricia Espinosa, executive secretary of the U.N. Framework Convention on Climate Change, told the Reuters Next conference, "The U.S. played a very important role in getting the Paris Agreement together. So, we certainly are hoping that we will see this kind of leadership coming back,". Espinosa also called on wealthy countries to fulfil their promise, made in 2009, to deliver $100 billion each year by 2020 to help developing countries tackle climate change. According to the latest tally, they missed the goal by $21 billion in 2018.

Contribution of Transport Sector to Nationally Determined Contribution (NDC)

❑ Jobir Ayalew, Director for Environment and Climate Change, Ministry of Transport

The transport sector plays a vital role in the movement of people, as well as the flow of investments and products. Efficient transport systems provide economic and social opportunities and benefits such as improved access to markets, employment, and investment opportunities. On the other hand, inefficient transport systems, in terms of capacity and reliability, result in missed opportunities and lower quality of life. Therefore, it is imperative to aim for a sustainable, reliable, and safe transportation system that can achieve better integration of the economy while taking into account environmental impacts.

However, currently the transport sector contributes significantly to the emission of global greenhouse gases (GHGs) resulting in a rise in global temperature and climate change. According to Partnership on Sustainable Low Carbon Transport (SLoCaT), the global transport sector's carbon dioxide (CO_2) direct emissions increased by 29% (from 5.8 giga tonnes (Gt) to 7.5 Gt) between 2000 and 2016, at which point transport produced about 23% of global energy-related CO_2 emissions. Furthermore, according to the International Energy Agency 2018 report, the worldwide GHG emission from the transport sector in 2017 was 5.3 Mt CO_2e. Similarly, the Climate Resilient Green Economy Strategy of Ethiopia (2011) and (I)NDC of Ethiopia (2015) indicate that in 2010 emission from transport sector was about 5 Mt CO_2e and contributed 3% of the country's total emissions. Under a business-as-usual scenario, this will reach up to 40 Mt CO_2e by 2030. The increased emissions are driven primarily from freight (+13% p.a.) and passenger (+9% p.a.) transports.

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Low carbon transportation strategies can be among the least costly ways to reduce GHG emissions. These include reduced travel, increased use of less expensive low carbon modes of transport, and improved transport system management by reducing congestion and inefficiency. In addition, Ethiopia's NDC and CRGE strategy indicates that leapfrogging to new technologies in the transport sector in Ethiopia has an estimated abatement potential of up to 13.2 Mt CO2e by 2030. These results are expected if initiatives such as light-rail transit, Bus Rapid Transit, improved vehicle efficiency, and transition of freight transport from road to electric rail network are put in place.

Key Responses by Transport Sector to Climate Change Impacts

One of the strategies applied to reduce the amount of GHG emissions in Ethiopia is to change the energy demand of the vehicles used for public and freight transport. More specifically, a modal shift of freight and passenger transport from road to an electric rail network. Accordingly, Ethiopia had constructed a light-rail transit (LRT) system (34.25 km) in Addis Ababa and 656 km of Addis Ababa-Djibouti electric railway. In addition to these, 609 km of Awash- Mekele Route railway infrastructure is under construction.

The Addis Ababa LRT provides capacity for 94,160 passengers per day and in the last five years has served a total of 169.5 million passengers. On the other hand, in 2019/2020, the Addis Ababa-Djibouti electric railway provided service for about 79,360 passengers and 1.4 million tons of goods.



Ethio-Djibouti Railway

To encourage non-motorized transportation and minimize air pollution the Ministry of Transport has launched a monthly (last Sunday of each month) car-free day in Ethiopia. Moreover, the Ministry of Transport has recently adopted a Transport Policy which emphasizes the need to build a climate resilient transport infrastructure and service in the country. Non-motorized transport and Climate Resilient Transport Sector Strategies were also launched in 2018 and 2020, respectively, to build resilience of transport infrastructures and reduce emissions from the sector.



H.E Dagmawit Moges, Minister of Transport, attending a car- free day in Addis Ababa.

To ensure the GHG emissions from the transport sector are reduced to the levels established in the CRGE strategy and NDC, various initiatives are being undertaken. The engagement of private sector in the transport sector is recognized as particularly important in achieving the climate smart policy of the sector. In this regard, positive examples can already be seen by private sector companies such as Marathon Motors and Tom Electric Vehicles assembler, which are supporting the shift to an electric powered vehicle **Continued on Page 4**

Initiative to roll out electric buses in the City of Addis Ababa

- *Fesseha Fentahun, BRT Transport Project Development and Study Team Leader, Addis Ababa Transport Bureau*

Addis Ababa, like many African cities, is rapidly urbanizing and doubling in size every decade. Today, transport comprises 68% of the city's total emissions and air pollution is one of the top causes of death.

In response to these challenges, Ethiopia has turned its attention to shifting towards sustainable mass transit solutions. The development of 2 BRT corridors is already underway with a total of 15 planned in the current Addis Ababa city master plan 2017-2027.

As buses have yet to be tendered or procured for the BRT systems, the introduction of zero emission buses, such as battery-electric buses, on defined BRT corridors or other alternate routes provide an excellent opportunity for Addis Ababa to avoid locking-in local and global emissions from diesel fueled buses for the next 20+ years.

To support this ambition, the Addis Ababa Transport Bureau, partnered with the C40 City Solutions Platform, to facilitate an online collaboration with actors from the private, public, academic and NGO sectors, to develop scalable and tangible ideas and solutions. CDKN partnered with C40 in this initiative, which is aligned with the objectives of Ethiopia's Climate Resilience Green Strategy and will help ensure Addis Ababa is on a pathway to reach the goals of the Paris Agreement.

Addis Ababa Transport Bureau, supported by the C40 team, will analyse and evaluate the solutions pitched during the online event to outline a pathway for implementation aligned with national and municipal ambitions to decarbonize their transport sector and introduce electric mobility for a cleaner, safer and more sustainable and inclusive transport system. Read full story.

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Ten-Year Development Plan of the Transport Sector

The CRGE strategy and NDC of Ethiopia indicate that leaping to modern and energy efficient technologies is key for the sector's mitigation abatement potential. Based on this, the transport sector's Ten-Year Development Plan (2020/21 – 2029/30) aims to provide an affordable, integrated, safe, responsive, and sustainable transport system that enhances the environment, economic and social wellbeing of Ethiopia's population.

The sector's plan aims to install 25 km of cable transport infrastructure, construct 7 Bus Rapid Transit (BRT), build 3,309 km of new railway infrastructure, which will increase the electric railway infrastructure to 4,199 km and create access to transport to 648.6 thousand passengers and 5.96 million freight services. It also seeks to construct 506 km of pedestrian and bicycle infrastructures in 69 cities, and introduce 4,850 and 148,000 electric buses and automobiles, respectively by 2030.

Implementation of this plan is expected to increase the share of city public transport service from 34% to 70% and it will result in total GHG emission reduction of 13.9 Mt CO_2e. In the implementation of this plan, incentive mechanisms will be put in place to ensure high engagement of the private sector, with particular focus on the introduction of fuel efficient and electric vehicles to the country.

EVENTS

Globally, in view of the spread and severity of the COVID-19 outbreak, several climate change and environmental sustainability related events, continue to be digital. The following are a list of events that will be conducted online. These events are accessible to a broader audience. For further information on each event please click on the 'source' link.

- When words aren't enough: the visual climate story, Climate One, March 2021 | **Source**
- Map Builder: A Customizable Mapping Tool for Land Use Monitoring, WRI, March 2021 | **Source**
- Ceres 2021 – transform tomorrow today, Ceres, March 2021 | **Source**
- Data and Design: Making stories visible, ODI, March 2021 | **Source**
- SDG Finance Geneva Summit 2021, UNDP, June 2021 | **Source**
- 9th World Conference on Ecological Restoration, The Society for Ecological Restoration, June 2021 | **Source**
- Reimagine Series: Nature-Based Solutions, Climate Action, June 2021 | **Source**
- Reimagine Series: Oceans & the Blue Economy, Climate Action, June 2021 | **Source**
- Reimagine Series: Land Use & Agriculture, Climate Action, June 2021 | **Source**
- Climate Innovation Forum 2021, Climate Action, July 2021 | **Source**

Overview of Ethiopia's Nature-Based Solutions for Climate Change Adaptation

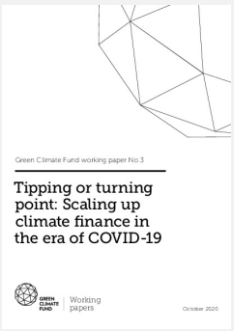
❑ Contribution from EFCCC

There is growing recognition that nature-based solutions (NbS) have enormous potential to address interlinked and multilayered environmental challenges, ranging from climate change to biodiversity loss. When it comes to the climate change crisis, NbS harness untapped potentials to reduce greenhouse gas emissions and adapt to the impacts of climate change. According to the 2019 Global Commission on Adaptation report, employing nature-based adaptation solutions can result in achieving one-third of the climate mitigation target for 2030, contributing to keeping global warming below 2°C. Despite its potential to address the impacts of climate change, however, a NbS has not been entertained well in national and international policy arenas and is neither consistently implemented nor adequately financed. Moreover, most of the discussion related to NbS has focused on the mitigation potential, sidelining its critical role in climate change adaptation interventions. Recognizing this gap, the UNEP Adaptation Gap Report (2021) emphasizes the importance to integrate the role of NbS for climate change adaptation.

This article is based on the outcome of the NbS roundtable discussion that was jointly organized by EFCCC and the Global Commission on Adaptation in December 2020. It seeks to contribute to the ongoing global discourse regarding NbS for climate change adaptation by taking Ethiopia as a case study. In so doing, it sheds light on Ethiopia's experience with the implementation of NbS for climate change adaptation over the last decade. **Continued on Page 6**

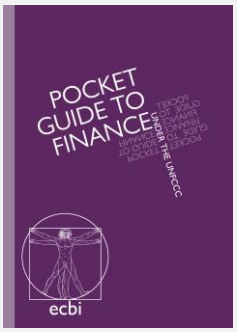
PUBLICATIONS

Tipping or turning point: Scaling up climate finance in the era of COVID-19



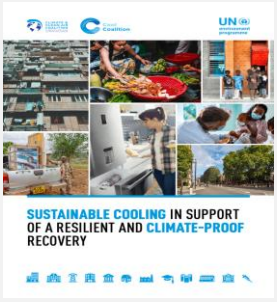
This GCF working paper assesses the impact of the COVID-19 pandemic on access to finance in middle and low income countries for low emission, climate resilient investments and identifies a combination of policy, financial and institutional initiatives to scale up climate finance. Source

Pocket Guide to Finance under the UNFCCC



Finance has always played a pivotal role in the global climate change negotiations, as an enabler of action but also as an indicator of the level of trust between developed and developing countries. This guide aims to help developing country climate negotiators navigate the complexity around the subject and understand what has gone by, to negotiate more effectively in the future. Source

Sustainable Cooling in Support of a Resilient and Climate-Proof Recovery



This brief presents how in multiple critical economic sectors or systems national governments can reorient public policy and include cooling in their recovery packages.. Source

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National context and Nature-Based Solutions

At the policy level, Ethiopia has recognized the importance of nature and NbS to address environmental problems. Ethiopia's environmental policy underscores the importance of nature-based solutions to address multifaceted environmental challenges, including climate change. Similarly, Ethiopia's Nationally Determined Contribution (NDC) and National Adaptation Plan (NAP), which are designed based on the Climate Resilient Green Economy (CRGE) Strategy (2011), clearly recognize the significance of nature-based solutions to address climate change adaptation. For instance, its NDC has identified clear intervention areas that are directly or indirectly related to NbS.

Such interventions range from enhancing agroforestry and sustainable afforestation of degraded forest areas to improving ecosystem health through ecological farming. It also includes sustainable land management practices to reverse soil erosion, restore water balance, and increase vegetation cover as well as developing the adaptive capacity of ecosystems, communities, and infrastructure through an ecosystem rehabilitation approach. Similarly, intervention areas identified under the NAP have embraced NbS for climate change adaptation. These include, inter alia, enhancing food security by improving agricultural productivity through climate-smart interventions, strengthening sustainable natural resource management through safeguarding landscapes and watersheds, improving ecosystem resilience through conserving biodiversity, and enhancing sustainable forest management. **Continued on Page 7**

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Achievements

In the line with the aforementioned national policy context, Ethiopia has been undertaking many NbS actions, particularly for climate change adaptation. Such interventions range from restoring and greening degraded landscapes to sustainably managing land, water, and forest resources to boost the adaptive capacity of its people, environment, and economy and build resilience. Some of these important undertakings include:

i. Restoration of degraded landscapes

Restoration of degraded landscapes has been one of the most important aspects of Ethiopia's NbS for climate change adaptation. Ethiopia is committed to the African Forest Landscape Restoration Initiative (AFR100), the Bonn Challenge, and the New York Declaration on Forests with the aim to restore 15 million hectares of degraded and deforested land, which is one of the largest commitments made globally. Ethiopia has a good track record in terms of restoring degraded landscapes. This success story is primarily attributed to the strong political commitment that Ethiopia has demonstrated over the last decades. The country has also been mobilizing millions of its citizens nationwide to rehabilitate degraded lands through soil and water conservation activities and afforestation/reforestation efforts.

In addition, the Government of Ethiopia has embraced Sustainable Land Management (SLM) approaches to reduce land degradation and improve land productivity. Three sequential projects were designed and implemented to achieve the SLM Programs' objectives. The first two projects introduced SLM practices and improved livelihood activities in significantly degraded highlands, improving more than 1,200,000 hectares of degraded landscapes. In the ongoing third phase (2019-2024), 1,581,000 ha of land is targeted. In the current phase, establishing community watershed users' cooperatives or associations in each micro watershed, preparation of land management and use plans for rehabilitated micro watersheds and strengthening knowledge management and information systems of the associations are planned.

Ethiopia has recently intensified its commitment to NbS by launching a new ambitious national flagship program called the Green Legacy Initiative. The Initiative aims to plant 20 billion seedlings over four years; more than 9 billion seedlings have been planted in the previous two years. The successful implementation of the program is expected to bolster, among others, the adaptive capacity of the country by reducing land degradation, restoring degraded areas, augmenting watershed hydrology, and improving soil fertility, thereby ensuring healthy ecosystems and improving livelihoods.

Ethiopia's NbS has also embraced urban landscape greening. Through its urban greening interventions, Ethiopia seeks to address not only one of the prevailing challenges in most cities, including poor green infrastructure, pollution, and GHG emissions, but also strives to improve the diversify of available livelihoods of its urban residents. As part of this endeavor, Ethiopia has recently embarked on undertaking the most spectacular greening projects nationwide.

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A case in point is Addis Ababa City, where two new parks, namely Entoto Mountain and Friendship Park, were built as part of the beautifying Sheger Project. Undoubtedly, the building of such parks helps to harness domestic and foreign tourism apart as well as provide great opportunity to create green infrastructure in the city**.**

ii. Area exclosure

Area exclosure has also been practiced as an approach for restoring degraded lands for a very long time in Ethiopia. It is a common tradition that follows the natural succession process in order to regenerate trees and grasses. Currently, the country has managed to treat more than 3.5 million hectares of land through area-exclosure mechanism. Apart from restoring fauna and flora, and obviously improving land productivity, this practice is very valuable to the local communities, particularly in terms of improving their livelihoods. Access to fodder for livestock and utilization of forest and non-forest products, such as honey and spices, are some of the benefits to the communities.

iii. Participatory Forest Management

Participatory Forest Management (PFM) was introduced in Ethiopia with the goal of reducing the deforestation of the country's forest reserves. PFM was initiated in 1994/5 with three specific goals: decentralizing specific property rights from the state to the community; giving locals the opportunity to administer and run forest resources sustainably; and minimizing the misuse of forest resources for livelihood purposes.

A range of tangible benefits have been enjoyed at community level as a result of the introduction of PFM apart from home consumption and maintenance of ecosystem services. PFM has given communities a sense of ownership and has become a source of household income from the sale of forest and non-forest products. Currently the national REDD+ program is being implemented through PFM.

In addition to the aforementioned interventions, the country has been implementing various National flagship Programs and initiatives that can be considered as NbS actions for climate change adaptation. These include Productive Safety (PSNP), REDD+, and Agricultural Growth Program (AGP).

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Gurage zone Gumer woreda: before and after pictures of Fusirbad micro watershed bench terrace technology, SLMP

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Financing Nature Based Solution

The CRGE strategy has identified about 60 initiatives across 7 economic sectors. Of these initiatives, about 13 are related to climate change mitigation and adaptation in the agriculture sectors and 80% of them meet the definition of NbS. In terms of the financial needs, the forest sector was estimated to need around 7.9 billion USD to realize the CRGE Strategy initiatives and achieve its targets. The agriculture intensification and irrigation expansion will also require 30 billion USD while the livestock sector needs 7.5 billion USD. Therefore, collectively the implementation of NbS initiatives will require over 45.5 billion USD by 2030. Additionally, investment in clean energy generation requires significant investment. The CRGE Facility is established to mobilize funds from domestic, international, public and private sources and create access finance to implement climate actions.

Payment for Ecosystem Services (PES) as a tool for promoting nature-based solutions

Based on lessons from previous practices, Ethiopia has designed a national PES strategy. The strategy provides a framework on how national PES law is enacted and how sectoral ministries enact directives to implement robust PES programs. It further defines sources of PES funds, mobilization, administration, and channeling of the funds from a national single account to key sectors responsible for ecosystem restoration and development.

According to the assessment carried out in 2018, Ethiopia has the potential to mobilize 100 million USD every year from its PES scheme, which is a highly innovative domestic financing mechanism to finance its conservation investment.

Lessons learnt from practicing the PES pilot scheme in Ethiopia that are important in the context of NbS include:

- Ethiopia has an opportunity to create a national fund that augments its green development initiative**,** providing a new avenue to partially address challenges related to financing NbS actions. PES is a strong tool to modify land-use practices, as it brings primary land developers to the front line of conservation work**.**
- High degradation of ecosystems in the nation increase demand for ecosystem services that prompt PES policy and programs. In short, it is an enabler for intensifying NbS for land degradation, food insecurity, and livelihood vulnerability.

Challenges faced in NbS implementation

Some of the challenges faced in implementing the various NbS activities include:

- Lack of available financial resources for implementation and scaling up. The main challenges in terms of resources are unpredictability of the availability of international finance, and low flow of secured finance.
- Weak implementation capacity of Government experts at various levels.
- Slow benefit from Participatory Forest Management and high Level of land degradation which require a long-term investment and may not appeal to communities that are looking for short term results.
- Absence of farm machineries or technologies to intensify agriculture and avoid expansion of cultivation into nature reserves and hilly landscapes.
- A need to take time to popularize and initiate implementation of the PES concept and practices at expert and institution level.
- The COVID-19 pandemic which has affected the implementation progress of programs.

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