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Innovative Climate Adaptation and Resilience Initiatives in Ethiopia: Challenges and Prospects

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Background

- Ethiopia practice **Agriculture and livelihoods** that depend on **climate**
- Future climate change poses an even greater threat (for example, increased **incidences of drought on GDP of Ethiopia projected 10% decline by 2050**)
- combatting the negative impacts of climate change and **building climate resilience requires collective responsibility**
- The national green Legacy initiative presumed by Prime Minister of Ethiopia, H.E Dr Abiy Ahmed is showcase of strong leadership at the national level while working together with international efforts while involvement of local communities in the overall process
- **5 Billion Trees by 2026**, Mass-mobilized Watershed Management and Blue Nile Coastal shores conservation initiatives/ GERD are just few

Climate Challenges

- Temperatures have increased by 1°C since the 1960s
- There is evidence of a 20% decrease in rainfall in the south central regions/Hararghe and Baleg Regions
- The future impacts and costs of climate change on agriculture and forestry are potentially high
- Climate Fragility put our ambition of reaching middle-income status by 2025 at risk.
- The surface water bodies discharge like Blue Nile are declining due to the increasing traspo-evaporation.
- Risk of Very high dependence on rain fed agriculture/ declining rural livelihood value chain.

Climate Adaptation Innovations Ethiopia

60% of the federal budget (\$0.3bn) spent on resilience activities related to addressing key climate risks.

Planned additional spending to build resilience will be \$367m by 2030

The Ethiopian Metrological Institute, 2023 report show **frequency and intensity of rainfall**, droughts may not increase due to the growing climate adaptation interventions

Green Legacy” project promotes **eco-tourism** and combat the effects of climate change.

E.g. Ethiopia implemented Planting 500 million trees a

day campaign 2023

Mitigation and Responses

- Mitigation and response options to climate change are necessary to adjust the effects of climate change
- It Mitigates Causes for vulnerability of climate change using **clean cooking/reduced emissions**
- Development of water resource schemes and increasing clean energy service coverage among others.
- **89.5%** Hydro-power use for electricity of **exploitable hydropower potential of 45,000 MW**
- **Crop diversification; tree planting; practice of off-farm activities; soil and water conservation** were also the climate change adaptation strategies commonly used in Ethiopia.

Clean and Green Energy Initiatives



Ethiopia has **renewable energy** resources with the potential to generate over 60,000 MW of electric power from **hydroelectric, wind, solar and geothermal sources**.

Scaling-Up Renewable Energy Program for Ethiopia (SREP) with grant of 50 Million USD, 2022 is underway

GERD anticipated to produce 5250 MW, Current equivalent Geothermal project (Aluto Langano, 200 MW)

2013, Ethiopia opened one of **Africa's largest wind farms**, the **120 MW Ashegoda plant** -Wind project at Assela, and Adama II producing 153 MW in 2015

2023 Implementing 300 Million USD project of wind power to grow from **324 MW to 5,200 MW**



Conservation in Blue Nile region of Ethiopia



- Ethiopia's mean annual soil loss of **12 tons ha⁻¹**
- **43% of the country's highland area facing a higher rate of soil erosion**
- The widespread **land degradation** in Ethiopia has necessitated extensive **soil and water conservation** interventions over the last four decades in Blue Nile
- Ethiopia is implementing rain Water Harvesting in the Upper Blue Nile Basin to increase river water discharge
- Land-use for agricultural land will continue to expand from 69.5% in 2009 to 77.5% in 2025 in the Nile catchment and 25 % of the costal shore covered by trees

Conclusion

For Maximizing water resources utilization/Climate Adaptation:

- The Blue Nile Cooperative Agreement Countries need to
 - Link the issue of water to cooperation in other productive resources dev't (Land and Natural resources)
 - Establish a supra-national organization to lead joint dev't,
 - Better use of technology, Basin-wide conservation,
 - Positive spill- over for political relations on **climate mitigation cross border areas,**
 - Environmental protection, and Combating drought and conflict jointly.

Recommendations

Deepening Nile Cooperation: Accelerating the Achievement of SDGs

Changing Climate

- *The future vision for Blue Nile Countries could be designed to **avoid the disastrous consequences** of the threats that the region and lead to a future where the full potential in the Blue Nile River water resources can be readily unleashed to **stimulate and sustain growth in the region's economic development and social well-being.***
- *Promote shared vision agreed by the Nile Basin Initiative*
- *Blue Nile river may serve as a key catalyst increasing its yield and utilizing it in a rational, fair, efficient & environmentally sustainable manner*
- *Effective flood and drought management, watershed management, reversed desertification, and pollution control*



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**THANK
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