United Nations
Economic Commission for Africa

NINTH CONFERENCE ON CLIMATE CHANGE AND DEVELOPMENT IN AFRICA (CCDA-IX)

Draft Concept Note

Side-event on: Leveraging digital technologies and innovation for climate change adaption: climate information system, early warning system

September 13 - 17 | SANTA MARIA, CABO VERDE

1. Introduction

Climate change is one of the most important global environmental problems facing the world today. Africa has experienced the fastest rate of increase in the incidence of natural disasters over the last three decades whereby floods and droughts were the most prevalent and impactful type of disasters on the continent. From 2000-2019, floods were responsible for 64% of disaster events, followed by storms at 15%. Between 2000-2019, total disaster events recorded for Africa stood at 1143, which attributed to 46,078 deaths and a total of 337 million people affected living in disaster-prone countries. In 2019, at least 33 million people in Africa were at emergency levels of food insecurity or worse. Whereby children bear 90% of the burden of disease attributable to climate change, such as malaria and dengue fever.

Natural disasters are increasing in both frequency and intensity, exacerbated by climate change and posing threats to lives and livelihoods as well as development progress made thus far. Estimates from EM-DAT report that natural hazards in the region resulted in an average of about $400 million a year in damages. Without adequate risk management strategies, projections in population and economic growth alone are expected to quadruple baseline damages to $1.6 billion a year by 2100. This figure does not include the effects of climate change, which is likely to increase the severity and frequency of some meteorological and climatological hazards with smaller economies are impacted the most.

Digital technologies and innovation can play an important role in tackling the climate change, provided they are designed and deployed with the kind of positive societal impact that the technology could bring to the society. Digital Technologies offer solutions to monitor, mitigate and adapt to the impacts of climate change. The technologies could be applied to reduce greenhouse gas emissions and build resilience to the climate crisis from using space sensing observation to track deforestation to developing smart grids to accelerate the energy transition to strengthening early warnings systems against the rising number of extreme weather events.

The rapid development of digital technologies and innovation provides enormous benefits and holds transformative potential for the metrology and weather forecasting sectors. Promising applications including climate information and early warning systems are some impactful benefits obtained by leveraging digital technologies for climate change adaption.

Almost 90% of Least Developed Countries (LDCs) and Small Island Developing States (SIDS) have indicated in their Nationally Determined Contributions on climate change that early warning systems are a top priority. However, many of them do not have the necessary capacities and financial investments do not always reach where they are most needed.

Still, the dissemination of alerts is poor in many countries in Africa, and advances in communication technologies are not fully harnessed to reach those at risk. Observation networks

are often inadequate, and in 2019, only 26% of stations met WMO reporting requirements. Only 44 out of 100 people have access to early warnings, in countries where data is available

The COVID-19 pandemic has exacerbated the effects of extreme weather and climate change in vulnerable countries. It also highlighted the need to increase resilience to a multitude of hazards by improving early warning and risk information.

Encouraging the responsible use and uptake of digital technologies, along with the use of global ICT standards and best practices, the mainstreaming of eco-design principles and taking advantage of environmentally efficient applications of frontier technologies can help to accelerate response to climate change. Such active measures can help;

- mitigate greenhouse gases,
- improve public health and working conditions,
- preserve biological ecosystems and diversity,
- Forecast extreme weather events and continue to contribute to economic prosperity and growth.

Experts in the field should take the leadership role within their sector and to work closely with key partners that deploy these technologies to achieve this progress, many ICT companies are already deploying and partnering around digital technologies to tackle the climate change in terms of deploying.

In this regard UNECA is organising a side event in margins of the Side-event on: Leveraging digital technologies for climate change adaption: climate information system, early warning system

2. Objective

The main objective of the side-event is to facilitate discussions among policy makers, experts and stakeholders to explore the solutions that can be applied by Digital Technologies for climate change adaption in Africa.

Specifically, the event will seek to:

- Explore the relationships between digital technology and Climate Change adaption
- Discuss the impact of climate change, examine vulnerabilities, and adaptation technology needs
- Identify how digital technology innovation impacts on climate change
- Strengthen climate information and early warning systems in Africa for climate resilient development and adaptation to climate change
- Identify and assess the use of digital technologies in monitoring climate change trends (Meteorological data tracking, energy consumption by IT equipment, early warning systems, etc.), mitigate and adapt to the impacts of climate change

- Provide policy recommendations on digital technology innovation for climate action for consideration into future regional and national policy

3. Outcomes

It is expected that the side-event will accomplish the following:

- Improve understanding by participants of the role of digital technologies in climate change adaptation;
- Enhance the capacity of member States to tap into digital technologies opportunities
- Take stock of and disseminate best practices regarding the use of digital technologies
- Increased understanding of the role of climate science data and analysis in Africa‘s development;
- A set of policy recommendations (produced and shared) for consideration and adoption by Governments of Africa, Africa’s continental and regional organizations, the private sector and other stakeholders in Africa’s development.

4. Format

The format of the side-event: Hybrid and physical presentation

The discussion will be carried out in 3 separate breakout sessions during the event. These will be developed to cover the following questions:

1. Which particular sectors in your country can be affected greatly by climate change?
2. What are the challenges in leveraging Digital technologies for climate change adaption in Africa? And what could be done to mitigate some of the challenges?
3. What practical lessons could be learned from developed countries in leveraging digital technologies for climate change adaption?
4. What are the pre-requisites to ensure that Africa is optimally placed to leverage digital technology for climate change adaption? What are the minimum requirements to put the climate information systems and the digitally enabled early warning systems in place?
5. In regards to climate change, what have been the impediments to accessing the right solutions, approaches and technology needed for climate information systems and early warning systems? How can the tech sector be incentivised to focus on solving the most critical early warning and early action problems, and how can local start-up communities be better integrated into the early warning early action ecosystem?
6. Do Digital technologies have an impact in the monitory and management of climate change? In terms of what?
7. How to improve African climate information services by tapping into potential digital technologies like remote-sensing AI to measure environmental impacts
8. What are the legal and regulatory requirements needed to encourage investment and utilisation of technologies for early warning and early action? How can investor time horizons better align with climate change models and financial market activity?

9. Importance of collaboration at the global, regional, and local levels in order to enhance capacity, data-sharing, information and infrastructure in this area.

5. Participants

This session targets all stakeholders involved in nurturing and building digital ecosystem, in particular policy makers, development and funding partners, academia, business sector, financial stakeholders, innovation ecosystem stakeholders, academia as well as institutions

6. Dates

13th September 2021: 9.00 am-12.00 am (Cabo Verde Time)

Registration link:
https://us06web.zoom.us/meeting/register/tZIlduyopz4jHNxWydWp9mJ00COKY_1i996E