

# **ECA Hackathon on leveraging digital technologies for climate change and adaptation**

## **1. Background**

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.

Digital technologies and innovations can play an important role in tackling climate change, provided they are designed and deployed with the kind of positive 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, through the use of space sensing observation to track deforestation to developing smart grids to accelerate the energy transition, to strengthening early warning systems to facilitate preparedness for the rising number of extreme weather events.

To facilitate the uptake of digital technology and AI solutions, many African countries have launched initiatives to curb the impacts of climate change and safeguard the socio-economic development of the continent. Further, it is important for tech innovators to bring digital technologies on board to raise awareness of climate challenges amongst the tech and start-up community and increase their exposure to relevant, real-world climate mitigation, adaptation and resilience needs; and to create triple-bottom-line business frameworks and models for climate action.

In this regard, in margins of the 9<sup>th</sup> session of the AFRSD, UNECA is organising an Hackathon on leveraging digital technologies for climate change and adaptation from 25 to 27 February. This hackathon will bring together innovators, technology experts and mentors to develop new ideas and innovative solutions for green-focused, sustainable business practices, geared towards combating climate change. During the hackathon, participants will define the scope of climate change-related challenges, share understandings of the challenges and expertise in a particular research area, participate in break-out sessions, capture outputs for highly innovative research projects, and use real-time peer review to develop projects. They shall then deep dive into developing MVPs (Most Viable Products) for building climate resilience and ensuring just transitions for consideration and use by African member states.

## **2. Objective**

The main aim of the Hackathon is to invite software engineers, partners, and service providers/representatives to devise creative solutions and explore how to incorporate emerging technologies in contributing to climate resilience. To this end, the categories of this innovation challenge broadly address the following key focus areas:

- **SDG GOAL 2:** Zero Hunger
- **SDG GOAL 6:** Clean Water and Sanitation
- **SDG GOAL 7:** Affordable and Clean Energy

- **SDG GOAL 13:** Climate Action
- **SDG GOAL 14:** Life Below Water
- **SDG GOAL 15:** Life on Land

The Hackathon will also connect participants to a global network of like-minded individuals to collaborate and develop solutions to address climate change, and in turn, contribute to inclusive and sustainable development in Africa.

### **3. Expected Outcomes**

The expected outcomes of the Hackathon may include:

- An opportunity for youngsters to collaborate across borders for better understanding of the climate change induced challenges faced by the continent.
- Engagement of innovators, stakeholders, experts and investors in developing climate resilient innovations and techniques.
- Increased awareness of the impact of climate change in Africa among innovators, stakeholders, experts and investors.
- Enhance the engagement of students on issues related to climate change.
- Encourage students to conceive technology-based start-ups that contribute to the reduction of the impacts of climate change in Africa and in the process create employment.

### **4. Participants**

Participants of the Hackathon will be any African with innovative projects i.e., individuals, start-ups and organisations (including NGOs, Associations, Youth Groups and African institutions such as universities) working on innovative solutions to address climate change impacts.

### **5. Platform for submissions**

To be eligible for the competition, participants (individuals or organized groups) should upload their project that addresses the issues described in the above list of focus areas and any prototype video demo via the link on the banner. If information and other content from a third party has been used to develop the prototype/application, etc., all rights, authorisations, and agreements should be obtained prior to submission.

### **6. Judging criteria**

A Technical Advisory Group (TAG) formed by UNECA and the government of Niger will provide substantive and hands-on technical support to the management team of the Hackathon as well as advising on new approaches to popularising innovation in response to climate change concerns in Africa. TAG team will be composed of 3 independent experts, one UNECA representative and one partner representative, with a track record in various aspects of technological innovations and entrepreneurship. The following are key criteria that the judges will use to assess the submissions:

<b>Criteria</b>	<b>Value</b>
Use-case feasibility and impact	30%
Implementable and scalability	30%
Entrepreneurial and innovativeness	20%
Technical competence	20%

## 7. Prizes

The winners of the hackathon competition will be those whose contribution has appreciatively met the hackathon objectives. They will be announced as per the schedule outlined in the section below. They will be honoured during an online ceremony and will be promoted internationally as well as across the continent. They will also receive cash or computing devices as an honorarium for their efforts and to enable scaling up with potential partners. The award money will therefore be used to further develop the ideas through guidance of mentors and to prepare for market launch and investment.

## 8. Timetable

- **Submission:** Submit a short clip / presentation of a proposed solution.
- **Selections:** The shortlisted pitches will be required to attend a physical hackathon in Niger between 25<sup>th</sup> and 27<sup>th</sup> February.
- **Hackathon:** The hackathon will be a 3-day activity with selected sessions, training, hacking/coding and mentorships.
- **Pitching / Presentation:** Shortlisted Teams or individuals will be required to demo the solution physically.

# The climate change adaptation hackathon

## Draft Program

Register in advance for this event: [\(EVENT LINK\)](#)

DAY	TIME	ACTIVITY	RESPONSIBLE
25 Feb	9.00-9.30	<b>Opening ceremony</b>	
	9.30-10.30		
	10.30 -13.00	<b>Project Pitching &amp; Deliberations</b> 1. Project Pitching Training (1 hr.30) 2. Working Group formation (1 hr.)	Trainers, Coders
	13.00-14.00	<b>Lunch break</b>	
	14.00-15.30	Work on projects (validation of ideas)	Trainers, Coders
	15.30-16.00	<b>Coffee Break</b>	
	16.00-17.30	Work on projects (validation of ideas)	Trainers, Coders
26 Feb	<b>TIME</b>	<b>ACTIVITY</b>	<b>RESPONSIBLE</b>
	0800 -0900	Warm-up session	Trainers
	9.00-12.00	Group Mentorship sessions	Mentors (Engineers, business, marketing)
	1300 – 14.00	<b>Lunch break</b>	
	1400 – 16.00	Working and mentorship	Mentors (Engineers, business, marketing)
	16.00-16.15	<b>Coffee Break</b>	
	16.15-18.15	Project Pitch training (validation of ideas)	Trainers
27 Feb	<b>TIME</b>	<b>ACTIVITY</b>	<b>RESPONSIBLE</b>
	0800 - 1200	Finalizing and preparing prototypes of projects	Trainers, Coders
	1200 - 1300	<b>Lunch break</b>	
	13.00-17.00	Hackathon Closing Judging Dry Run Presentation Pitching	