ACTIVITY REPORT

Two-Day Urban Futures Youth Training on Early Warning Systems: Leveraging Technology and Precision Tools (Sat2Farm)

Location: Waterfalls Hotel, Ntandabale Ward, Chongwe District, Zambia

Date:

20th to 21st May 2025

Introduction

The Urban Futures Youth Training on Early Warning Systems: Leveraging Technology and Precision Tools (Sat2Farm) was held at Waterfalls Hotel in Chongwe. This two-day capacity-building initiative brought together young farmers and climate change advocates to deepen their understanding of climate-smart technologies, data-driven decision-making, and the use of digital tools in early warning systems (EWS).

Day 1: Digital Tools, Innovation & Youth Pathways in Climate Services

The first day introduced youth to digital innovations and enterprise models within the climate services ecosystem.

- Agri-Tech Tools for Climate Monitoring
  Facilitated by Mr. Victor Bupe, Senior Meteorologist from the Ministry of Green Economy and Environment, this session exposed participants to tools that offer real-time alerts, weather predictions, and advisory services. Mr. Bupe demonstrated how digital applications and mobile platforms can empower farmers to act on timely weather information,improving yields, reducing losses, and enhancing resilience.

- **Youth Opportunities in Climate Services**
  Mr. Bupe further shared insights into emerging career pathways and enterprise models in climate-smart technologies. Participants discussed ideas ranging from data-driven agriculture advisory services to youth-led climate hubs in rural communities.

- **Action Planning & Group Presentations**
  During the afternoon session, youth worked in teams to brainstorm practical ways they can drive local climate services in Chongwe. Group presentations highlighted innovation, collaboration with local authorities, and the importance of digital access in rural areas.

Day 2: Exploring Sat2Farm and Climate-Driven Decision Making

The second day provided participants with hands-on exposure to satellite monitoring tools and practical strategies for climate-responsive planning.

- **Sat2Farm Platform Overview & Simulation**
  Mr. Lee Lwando of MicroTech introduced the Sat2Farm platform, which uses satellite-based data to monitor rainfall, soil moisture, vegetation cover, and crop health. In a practical simulation, participants navigated live datasets to inform agricultural decisions and assess field conditions.

- **Using Climate Data for Decision-Making**
  This session led by Microtech taught participants how to interpret weather data to support farm planning. Emphasis was placed on aligning planting schedules with seasonal forecasts to improve productivity and reduce risk.

- **Understanding Early Warning Systems (EWS)**
  A session on Early Warning Systems highlighted their critical role in reducing climate risk and protecting communities. Youth learned that effective EWS include:

  1. **Monitoring and forecasting** of climate indicators such as temperature, rainfall, and storm events.

2. **Risk assessment** to identify vulnerable populations, key infrastructure, and sensitive ecosystems.
3. **Communication** strategies to disseminate warnings effectively and accessibly.
4. **Response planning**, including community drills and emergency response mechanisms.

Examples of early warning systems discussed included flood alerts, drought monitoring platforms, storm surge predictions, and heatwave alerts. Participants explored how satellite imaging, modeling, and data analytics enable these systems to provide accurate and timely information.

- **Interactive Early Warning Systems Game**
  As the final session, participants engaged in a EWS simulation game designed to demonstrate real-world response to climate warnings. Through sound cues and scenario-based challenges, youth teams guided a fictional community through simulated hazards. The game taught them to interpret the severity of alerts, take coordinated action, and understand what must be done when warnings are received. The interactive design helped reinforce learning and demonstrated how behavioral response systems can be triggered in actual emergency situations.

Key Takeaways

- Youth are eager and capable of using digital climate tools to build community resilience.

- The Sat2Farm platform and EWS simulations gave youth practical experience in climate-informed planning.
- Participants emphasized the need for continued mentorship, support with start-up kits, and access to affordable digital technologies.
- The interactive EWS game was a highlight, equipping youth with knowledge in a memorable and engaging format.

Annex 1: Link for pictures below;

https://drive.google.com/drive/folders/1hKDxbd-buFvWBFaCRj2a1se3kTr40W4r?usp=drive_link