

Overall Status of CIEWS/UNDP - GEF Project_Ethiopia

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Introduction

Project title:

Strengthening climate information and early warning Systems in Africa for Climate resilient development and adaptation to climate change – Ethiopia

- **Project life span: 2013-2017**
- **Implemented: In Ethiopia**
- **Budget: 4.5 million USD**
- **Overall Objective of LDCF Project**
 - To strengthen the climate monitoring capabilities, early warning systems and available information for responding to climate shocks and planning adaptation to climate change in Ethiopia

Introduction...

- This project is a Full Size Project (FSP) financed by the LDCF/GEF.
- The project is **aligned the Agency's strategic plan with global, regional and National perspectives**. Integrated African Strategy on Meteorology (IASM) of the African Ministerial Conference on Meteorology (AMCOMET) and the second National GTP.
- The project aims to strengthening the **capacity of national and sub-national entities in Ethiopia**
 - To monitor climate change,
 - To generate reliable hydro-meteorological information (including forecasts) and
 - To be able to combine this information with other environmental and socio-economic data to improve evidence-based decision-making for early warning and adaptation responses as well as planning.
- This project will build upon and converge with existing initiatives in the country
 - Climate smart investment.
 - Lay foundation for improving the national climate information system based on end-to-end approach, thorough creating systems, platforms and long-term institutional capability and exploring sustainable financing mechanism.

Introduction...

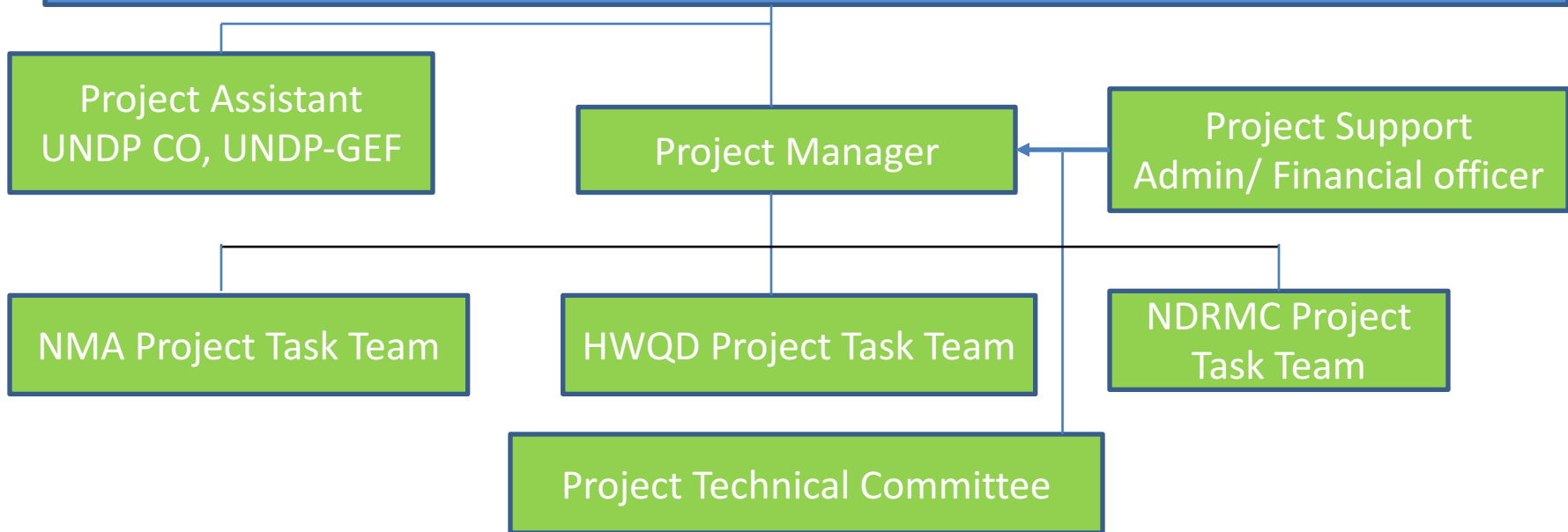
The project has the following three key outcomes:

- **Outcomes 1: Enhanced capacity of national hydro-meteorological (NHMS) and environmental institutions to monitor extreme weather and climate change.**
- **Outcome 2. Efficient and effective use of hydro-meteorological and environmental information for making early warnings and long-term development plans.**
- **Output 3: Effective and efficient project management and knowledge management, communication, stakeholder engagement**

Project Organization Structure

Project National Steering Committee

NMA, DG (Chair), UNDP, NCCS (Co-Chair), MIWE, MOFEC, NDRMC,
MoH, MEFCC, MoST, Development Bank,



NMA is the **Implementing Partner** and needed appoint a Project Manager (PM). A project office should be set up in NMA. The **RP's** are (HWQD) and NDRMC and their regional offices in the 11 regions of Ethiopia. Implementation oversight at the country level will be by UNDP Ethiopia. Climate resilient Green Growth supported at the regional and global level by UNDP-GEF.

Progress and Achievement Summary

- Climate Information and Early Warning Systems (CIEWS) project was initially developed to improve monitoring and forecasting of hydro-meteorological events through enhancing multi-institutional capacities by availing and coordinating new resources from government and donor organizations.
- Some of the key activities so far accomplished are worth mentioned as follows; *Forty one Automatic Weather Stations (AWSs) were established* by taking into account the country's meteorological stations master plan.
 - Newly established and automated communication of weather information filled data gaps and covered areas where there were extensive scanty of meteorological monitoring stations, particularly from remote regions.

Progress and Achievement Summary...

- *Installation of one upper air Radio Sonde was successfully accomplished in northern Ethiopia, i.e., at Mekelle Town .*
 - This has doubled the number of operational upper air meteorological stations.
 - The newly established Upper Air station has capability of monitoring vertical atmospheric profile from surface to 32km, which usually operated every day at fixed World Meteorological Organization observational time.
 - Among atmospheric parameters routinely observed include moisture status, wind speed and direction, atmospheric pressure and temperature. In the long-term atmospheric information routinely generated from this station enable to monitor northward progress of monsoon systems

Progress and Achievement Summary...

- Ninety percent of National Meteorological Agency Head Quarter and Regional Meteorological Centers were trained on project implementation modalities, linking CIEWS project with other national and international projects as well as with the country's medium and long-term social, environmental, developmental and economical strategies.
- Ninety five percent of NMA's meteorological science technicians, experts, professionals and middle managers were also trained in meteorological data acquisition, interpretation, forecasting, application and translation of climatic information for the end users
- National-based dekadal, monthly and seasonal climate forecasts and impact advisories downscaled and disaggregated to regional and Zonal administrative levels.

Progress and Achievement Summary...

- Weather assessment and forecasts have prepared and disseminated three times a week to Ministry of Agriculture, Disaster Risk.
- Management and Food Security Sector and Regional State Bureaus. Federal Government and Regional States have openly recognized the values of such climate related information for early planning and early action practices the government adopted in minimizing the risk of 2015/16 droughts and 2016 floods.
 - Preparation and dissemination of localized climate information and impact advisories became viable, particularly over parts of Ethiopia where social and economic practices are very much sensitive to seasonal climatic variability.

Progress and Achievement Summary...

- In particular, in association with El Nino of 2015/16, more than seventy five percent of the farmers, Agricultural extension agents and local disaster risk managers were estimated to receiving hydro-meteorological advisories and forecasts every two days, dekad, month and season.
- As a result, farmers and agriculturalists have started to utilize climate information and agro-meteorological advisories in the provision of minimizing climate related agricultural risks while maximizing well-being of good rainy seasons to improve their agricultural productivity
- Since the project has launched, spatial and temporal coverage of weather and climate forecasts were significantly expanded through time.
- Digitization and data rescue of climate data conducted.

Progress and Achievement Summary...

- A meteorological mobile calibration unit and equipment have been procured and they are already functional.
 - Instruments installed at a meteorological observational site need to be checked and calibrated regularly. The purchase and use of the calibration facilitate calibration activities. If meteorological instruments are not calibrated regularly or periodically as per the international agreed time readings may drift and data quality will be in question. So use of calibration units enhance data quality.
- Project Management Unit Established .
 - This can give a way to better project management and administration.
 - It helped align similar project activities together for value add services.

Capacity building/ Experience sharing

- Training on downscaled weather and climate forecast based on WRF model given.
- Experts were sent to Turkey, China and Korea for an experience sharing in meteorological offices. The experience they gained during their stay brought changes to NMA activities.

July-Dec 2016 Activity report

- **Steering Committee** prepared TOR for Assessment of the cost of male-**functional Radar** and submitted to UNDP. Not successful
- Bid document prepared and posted on the web for procuring and installing Message **switching system (GTS)** in **2016**. Rebidding done in June 2017. Winner is identified. It is expected to be completed in 2017.
- Bid document prepared to procure **satellite receiving system** and put in place NDVI tools.
- TOR and specification prepared for the purchase of **High Performance Computer (HPC)**. From the specification and TOR bid document was made ready. [HPC image.png](#) already in place.

HPC



July-Dec 2016 Activity report

- **Calibration facility** and system installation. Not successful
- Upgrade the NMA Climate Data Base System, CLIDATA. CLIDATA upgraded in Jan 2017. Two experts from Czech came to Ethiopia
 - a) Upgraded both clidata, the data base part and the GIS part. Totally 27 trainees trained in two separate trainings;
 - 1st training from 16 to 27 January 2017 and 2nd from 20 to 24 February 2017.
 - 1st training mainly focuses on upgrading CLIDATA to the new version.
 - 2nd is about CLIDATA GIS level 2. All trainers and resource persons were from Czech Republic

Clidata



Activity report ...

- **Strategic plan** prepared and submitted to UNDP, HWQD and NDRM.
- **July – September 2016 performance evaluation** and projects implementation way forward meeting held at Momona Hotel.
- International Conference proceeding on “**Seasonal to Decadal Climate Forecast**” reviewed and it is ready for publication.
- Workshop on **Kiremt 2016 assessment and Bega 2016/17** climate outlook conducted at 10 meteorological services Centers (Assossa, Adama, Bale Robe, Jimma, Jijiga, Semera, Bahir Dar, Kombolcha, Mekele, Gambella). A total of about 800 trainees attended the training.
- **Observers, Forecasters and Agrometeorology manuals** preparation ideas and comments gathering meeting held in November 2016. The manuals will be published in 2017.
- **Financial evaluation** meeting undertaken in Adama in Nov. 2016. 54 peoples participated.
- **Observers training** held at Benshangul Gumuz Meteorological Service Center (MSC), Assossa, West Amhara MSC, Bahir Dar, West Oromia MSC, Jimma, East Amhara MSC, Kombolcha and Tigray MSC, Mekele. A total of about 174 trainees attended the training.

Jan-June 2017 activity report

- Bid documents prepared and posted on the web for the purchase of WMO-GTS system. Winner identified - already installed in Oct and Nov 2017 by COROBOR.
- Training delivered for both administrators and operators
 - 1) **Administrators** (2 days for 5 administrators)
Content:
 - Network configuration, Overview of the used protocols, The Stations of the LAN and their IP addresses, Analysing line status, The modems, Other line interfaces, Installing the MESSIR-COMM application, and etc.
 - 2) **Operators** (3 days in 2 sessions 1.5 day each for 7 operators per session)
 - Bulletin correction, Bulletin editing, Reception of service messages, Warning consultation, Message retrieval, Message re-sending, Reports retrieval, TAC - TDCF conversion, Statistics consultation, etc.



Activity report Jan-June 2017...

- Training on the influence of climate change on Women executed in SNNP, Hawassa. 53 people trained.
- Consultancy works on Cost Benefit Analysis, Knowledge Management & Communication Strategy and Terminal Evaluation are underway
- Finally the steering committee meeting will be held in January 2018.

Problems encountered

- Failure to edit and publish documents prepared.
- Delayed transfer of budget
- Difficulties in preparing TOR's for some activities like
 - Cost benefit analysis
 - Knowledge management and communication system
- Extended bid process for tasks to be executed by consultants.

Future Plan

- Aligning the current activities of different projects together to enhance the monitoring of the agriculture, water, health sectors and generate tailored products and disseminate products to end users.
- Develop a high resolution grid surfaces of rainfall, evapotranspiration, etc.. From Blended grid data.
- Develop python based agrometeorological toolbox that generate agromet advisory and disseminate agromet advisory through SMART phones in the form of telegram SMS.
- High resolution (1Km X 1Km) grid digital NDVI data which is based on the 160 different Agroecological Zones analyzed and generated, based on Geodata Information for Agricultural Crop Insurance scheme(GIACIS) be integrated with other data sets to generate value added different services, which is underway, for multi peril Insurance scheme based on crop specific WRSI.

Future Plan..

- Enhancing ENACT based maproms for more value add services: for agro, hydro and biometeorological services, monitoring of the agriculture, water, health sectors and generate tailored products and disseminate products to end users.
- Enhance the existing high resolution GeonetCast system for forecasting and early warning platform for different socio economic sectors.
- Align the result obtained from different projects for modernizing hydro-meteorological services.

**THANK YOU FOR YOUR
ATTENTION**