FINNISH METEOROLOGICAL INSTITUTE

FNEP PROJECT
– Increasing DHM service capacity in Nepal


Irma Ylikangas

Background

The purpose of the project was to increase DHM capacity in hydro-meteorological observations, services and international data sharing. FNEP was developed to increase the quality and level of services of DHM to support the development of the Nepalese community in different socio-economic sectors and to improve the DHM capacity to participate in regional hydro-meteorological cooperation and projects

Nepal is a country of challenging environmental events. Typical natural hazards occurring in Nepal are floods, landslides, avalanches, hailstorms, windstorms, thunder, earthquakes, fires and epidemics. On average natural disasters take 950 lives annually and cause damages around worth of 11 M€. Over 300 lives are lost and 28 000 families are affected by of water induced hazards e.g. floods, landslides and avalanches.

The project promotes adaptation to Climate Change by reducing risks for the loss of life and property caused by severe weather and extreme climate events in Nepal. The project main focus has been in institutional capacity development through meteorological network design, hydro-meteorological observations, data management and international data sharing. >

SOURCE OF FUNDING: Ministry for Foreign Affairs of Finland (MFA)
TYPE OF PROJECT: Institutional Cooperation Instrument
TOTAL: 493,000 EUR
DURATION: 2010–2012
PARTNER: Department of Hydrology and Meteorology (DHM), Nepal
PROJECT MANAGER: Irma Ylikangas

> Results

- **Socio Economic Study**
  The Socio Economic Scan and workshop reports of FNEP project highlighted the major improvement areas of meteorological services and the benefits to the different sectors of the Nepal society. The economic benefit of weather and climate services in Nepal is for every Euro invested in DHM will return 6–11 Euros of benefits back to the Nepalese society.
- **Real time observation data collection system with quality control of meteorological data**
  DHM meteorological observation data is now collected in real time, has quality control functions and is stored at a database.
- **Installation of new automatic weather stations (AWSs) and upgrading existing stations to real-time transmission**
  Five AWSs were updated to send real-time data and one new weather station was installed to Pokhara airport. The information from the weather stations is sent to the new database in real time and quality controlled.
- **Early Warning System (EWS) importance and the role of DHM improved**
  DHM's role and collaboration with Ministries, Disaster and Emergency Operation Centers has been strengthened. With an increasing number of meteorological and hydrological stations transmitting real-time data as result of FNEP and also other development projects, DHM can effectively support development of early warning systems and disaster risk response at national and local level in Nepal.
- **The capacity building of DHM personnel**
  40 DHM staff member participated in more than 260 training days. The FNEP project introduced lightning location data to Nepal to support nowcasting and severe weather forecasting with complementary training. Furthermore training topics included basics of socio-economic analysis, statistical R-software for climatology, data management, instrument installation and maintenance.


Evaluation workshop
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Project produced the following reports: Socio Economic Scan of the benefits of hydrometeorological services provided by DHM, Technical Feasibility Study of meteorological observation network and data management, Overview of the Nepal Meteorological network 5-year plan, 5-year plan for DHM Early Warning System and a 5-year Plan for Development of Climate Services. These plans and studies together with activities by other development actors will help DHM to build up a long term strategy in future.

Testimonial from DHM

Kamal Prakash Budhathoki, Deputy Director General of DHM: "Finland is one of the least vulnerable countries in terms of natural disasters, but their early warning system is one of the most advanced in the world. Nepal somehow lacks behind in early warning system. 5-year Early Warning Plan in the project is a valuable achievement for establishing well-functioning Early Warning System at DHM in near future".

FOR FURTHER INFROMATION

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Pokhara Weather Station Opening Ceremony


Pokhara Weather Station Installation
Pauli Rissanen