

## PAKISTAN NEEDS EFFECTIVE EARLY WARNING SYSTEM TO FIGHT FLOODS

Though 715,000 people are affected by floods each year, Pakistan is yet to put in place an upgraded early warning system to minimise the damage to lives and livelihoods



Experts are discussing a new global action plan for disaster risk reduction at the ongoing March 14-18 conference in Japan (Photo by DVIDSHUB)

Usman Bhatti, 43, was playing volleyball one evening when he received the news. His three bedroom home in Chahoor village in Pakistan's Punjab province had been washed away by flash floods and with it his five buffaloes, two cows and all his belongings.

"Fortunately, there was nobody at home as my wife and two sons were in Karachi to attend a wedding ceremony," he said, remembering that fateful day in August 2013, thankful that his family was safe but aware that a warning could have saved him from virtual ruin.

Remembering what had happened that day, Bhatti said 19,500 cusecs of water had reached Nullah Dek, a seasonal stream near his village in Sialkot district, from neighbouring India and inundated 47 villages. "Had the government installed an early warning system in the area, at least I would have saved my buffalos and some precious household goods."

Sialkot is located at the foot of the Kashmir hills near the Chenab river, about 125 kilometres north of the Punjab capital Lahore.

Bhatti's story finds echo across the country and underscores the necessity of early warning systems so that lives and livelihoods can be saved.

An estimated 715,000 people in Pakistan are affected by floods each year resulting an annual loss of almost 1% to the country's GDP, which translates into \$1.7 billion, according to a report by the World Resources Institute, a US-based think-tank.

In what is a cascading effect, as many as 2.7 million people could be affected annually by river-floods in Pakistan by 2030. However, the country has yet to upgrade its obsolete early warning system and install latest technology in flood-prone cities to minimise damages caused by urban and river flooding.

A long-term water policy, upgraded technology and the sharing of information with neighbouring countries could help steer Pakistan through these troubled waters, say experts.

The country has only seven radars installed in different cities for weather forecasts, one of the major components of an early warning system. Of these, only two are working efficiently, said Dr Ghulam Rasul, chief meteorologist at the Pakistan Meteorological Department (PMD).

"We have 15 years old radar technology and this needs to be replaced with the latest one at the earliest if the country is to effectively deal with natural disasters like floods, tsunamis and cyclones," he said.

### **Sharing environmental data with neighbours**

Pakistan needs at least 13 weather radars to be installed across the country to effectively deal with the floods and other natural disasters, he added, suggesting that the government upgrade the system with the help of international donors like India and Bangladesh have done.

Pakistan and India, both members of the World Meteorological Organisation, should share meteorological and environmental data. This would benefit both countries but hostile relations between them prevented them from doing so, Rasul said.

India and Bangladesh have developed community-based solutions to deal with natural disasters, Tariq said. Flood-prone communities have been equipped with technology to minimise the losses. Special information centres have, for instance, been set up in flood-prone areas to inform people and relevant aid agencies with information on their mobile phones when the water reaches a critical level.

"The Pakistani government should also set up special media centres in disaster-prone areas to inform the people about any threat well in advance," he suggested.

Pakistan also needs to enhance water storage capacity from the current 7% of total average flow of its rivers to at least 40% to reduce intensity and loss caused by the yearly floods, said Sardar Muhammad Tariq, former regional chair, Global Water Partnership South Asia.

“The country has had no water policy, let alone preparation of an effective policy and management to deal with the floods,” he said.

In his view, the government should formulate long-term policies to cope with natural disasters like floods instead of relying on ad hoc management. “We have a poor early warning system in the region as there is no mechanism to inform the people at least 24 hours in advance about the impending disasters.”

Though medium and long range weather forecast could help deal with floods, the government should also focus on improving climate and disaster governance to better deal with manmade disasters, said Ahmed Kamal, member of the National Disaster Management Authority.

“The meteorological predictions can be interpreted to a certain extent only... we need to focus on inter departmental coordination and better preparation to deal with the floods.”

According to Kamal, Pakistan needs to install the latest gauging system to keep a check on rainfall and the rivers flow; so that forecasting centres could get timely and accurate information. Some steps have already been taken and are showing results.

An early warning system was installed on Nullah Leh, a seasonal stream in Rawalpindi district of Pakistan’s Punjab province, in 2007 with a \$5.5 million grant from Japan International Cooperation Agency (JICA) and this is helping residents get an evacuation alert at least 60 minutes before a flash flood, he said.

Six rain gauges and two water level gauges with up to five days of back-up power were installed. These gauges take measurements of the water level every two minutes; the data is then wirelessly transmitted to a control room in PMD’s Islamabad headquarters; meteorologists analyse the data and pass on the forecast to a control room in Rawalpindi from where warnings can be issued to people. Ten warning stations in different parts of the city have been set up to issue instructions to the residents to get to higher ground, or evacuate the area.

“Around 24 locations have been identified across the country to install an early warning system but the project could not be initiated due to the paucity of funds,” said Kamal.

The Japanese government and UNESCO recently also agreed to initiate a \$4.05 million project to improve Pakistan’s flood warning and management capacity. This will, however, take time, said PMD’s Rasul. It will take at least two years to install the latest

technology at PMD's Islamabad and Karachi stations and improve the country's medium-range weather forecasting.

As experts in Pakistan debate the issue, a new global action plan for disaster risk reduction is to be adopted at the ongoing March 14-18 conference in Japan where Pakistan could suggest a vibrant regional model to exchange meteorological and environmental information with member countries to effectively cope with natural calamities.

Source : <http://www.thethirdpole.net/pakistan-needs-effective-early-warning-system-to-fight-floods/>