

2014 Momentum for Change Award at the UNFCCC COP 20, Lima, Peru 1-12 December 2014

About Community-Based Flood Early Warning System (CB-FEWS) Project

The International Centre for Integrated Mountain Development (ICIMOD) is jointly implementing the Community-Based Flood Early Warning System (CB-FEWS) project with Aaranyak, India and Sustainable Eco Engineering, Nepal under the Himalayan Climate Change Adaptation Programme (HICAP). The project is implemented in the catchments of two rivers -- the Jiadhah in Dhemaji District and the Singora in Lakhimpur District -- in the Eastern Brahmaputra River Basin (EBRB). Every year during rainy season, floods in these rivers cause human casualties and destroy public infrastructure (roads, railways), private property and assets (crops, agricultural land, fisheries, houses, livestock).

The CB-FEWS makes an innovative use of ICT through a social process of networking and information exchange. It uses simple and low cost technology which includes a wireless transmitter and receiver unit, and voice and sms service via mobile phones.

The transmitter, charged with solar batteries, has a flood gauge set up on a river and the receiver has a control unit installed in a household on the river bank. As the water rises, the electronic sensors fitted at different risk levels inside the flood gauge produce alarm, which is communicated to the

receiver through a wireless device across a distance of upto 700 m. The care taker, chosen usually from the local household where the receiver unit is installed, observes the risk level and sends a flood warning message by making a call through a mobile phone. The SM based SMS generation has been successfully tested in the two districts, where the SMS is generated automatically as the water level rises. The message is relayed to the focal person living in the downstream flood prone villages, the project team and the district disaster management authorities, who in turn disseminate it widely to the vulnerable communities further downstream.

The service has benefited at least 45 vulnerable villages downstream of the Jiadhah and Singora rivers, providing average lead time of 1-2 hours to prepare the communities to cope with flood.



*Flood early warning system installation at Dihiri along Jiadhah River (Dhemaji District).
Credit: ICIMOD*

‘Momentum for Change’ and ‘Lighthouse Activities’

[Momentum for Change](#) is an initiative spearheaded by the UN Climate Change secretariat to shine a light on the enormous groundswell of activities underway across the globe that are moving the world toward a highly resilient, low-carbon future.

Such activities are referred to as ‘Lighthouse Activities’. They are shining examples of the most practical, scalable and replicable examples of what communities, cities, businesses and governments around the world are doing to tackle climate change.

The 2014 Lighthouse Activities recognized climate change action in four key areas: a) Urban Poor: climate action that improves the lives of impoverished people in urban communities. B) Women for Results: critical leadership and participation of women in addressing climate change. C) Financing for Climate Friendly Investment: successful and innovative climate-smart activities; and d) ICT Solutions: successful climate change activities in the field of information and communication technology.

About [ICT Solutions](#)

As the world faces increasing environmental challenges, the imperative for shifting economic development onto a green, resource-efficient growth pathway is clear. The increased use of Information and Communication Technology (ICT) can reduce energy use, cut greenhouse gas emissions and build resilience to the effects of climate change. According to a recent report, SMARTer 2020: the role of ICT in driving a sustainable future, ICT can slash global greenhouse gas emissions by 16.5 per cent, saving \$1.9 trillion in energy and fuel costs

and cutting 9.1 gigatonnes of carbon emissions.



*Early warning receiving unit at at Dihiri along Jadhah River (Dhemaji District).
Credit: ICIMOD*

In November 2013, Momentum for Change launched a new partnership with the Global e-Sustainability Initiative (GeSI) to underscore the critical role ICT plays in tackling climate change. At a special event at the UN Climate Change Conference in Warsaw, Poland, senior government officials and influential corporate leaders from the ICT sector highlighted how the increased use of these technologies can reduce energy use, cut greenhouse gas emissions and build resilience to the effects of climate change.

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