**Rampaging rivers**

BY ALI TAUQEER SHEIK H | 11/10/2019

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| SINCE 2007, an early warning system (EWS) is operational at Nullah Lai, a seasonal stream in Rawalpindi with a catchment area stretching into the recesses of the Islamabad Capital Territory.  This EWS has six rain and two water level gauges, taking measurements of the water level every two minutes; the data is wirelessly transmitted to a control room for analysis by meteorologists. The forecast is then passed on to Rawalpindi`s city administration, from where, through 10 warning stations, instructions can be issued to the residents to get to higher ground or evacuate. All this is done to protect local communities and their possessions against flash floods that have a cruelly brief warning time: 80 minutes.  This excellent system, which was supported by the Japanese government, cost barely $5.5 million to set up. The Fourth National Flood Protection Plan identified 24 additional locations across the country to instal similar EWS but the progress has been uneven and sluggish.  In the transboundary context, several seasonal streams and tributaries of the Ravi and Sutlej flow from India to Pakistan. For these, an integrated EWS can be set up to give one or two days` notice to local populations to save their lives and livelihoods. In fact, India and Pakistan can instal pollution monitoring gauges and inform each other about the level of pollutants during the lowflow periods.  Pakistan needs to desperatelyinvestin its EWS capacity by upgrading installed technologies in order to manage river flooding and the increasingly serious challenge of urban flooding. For now, this country has only seven radars installed in different cities for weather forecasts. These radars are essential, but not the only component of any EWS. Of them, only two are said to be working properly, while the reliability of the rest is questionable. Flood telemetry is needed the most for Balochistan, Azad Kashmir and the hill torrents of Punjab.  Experts argue that the country needs to instal at least 13 weather radars to deal effectively with river floods and other extreme events. Therefore, there is an urgent need to step up efforts to complete such stations in Karachi, Sukkur, Multan, and Lahore. In addition to the ongoing collaboration with Japan, agreements have recently been signed with China under CPEC to fill the void. The progress with the World Bank on hydrometeorological hazards is uneven, owing primarily to the malaise in governance.  Pakistan needs to instal the latest gauging system to keep a check on rainfall and river flows so that forecasting centres in provincial capitals can get timely and accurate information. The improved capacity will indeed helpin dealing with floods, but Pakistan will still need to focus on improving climate and disaster governance to deal effectively with the growing list of climate induced risks including landslides, glacial lake outburst floods (GLOF), droughts, heatwaves, etc.  Meteorological predictions need to be supported by an augmented capability in decision-making systems and the ability to implement decisions at the communitylevel.  This will call for interdepartmental and interprovincial coordination.  Multi-hazard and vulnerability risk assessments using various methodologies have been designed and developed for scores of districts in each province. These assessments go beyond floods and cover a wide range of vulnerabilities, including climateinduced disasters. The GLOF-II project, supported by the Green Climate Fund, has provisionforalargenumberofcommunity-based EWS for eight districts of Gilgit-Baltistan.  Bangladesh and India are also supported by international donors to develop community-based solutions to deal with disasters.The World Meteorological Organisation needs to engage with India and Pakistan and help them develop mechanisms for sharing meteorological and environmental data. This would also benefit their neighbouring countries.  The Global CommissiononAdaptationconvened by 18 nations has just released its report, concluding that a 24-hour `warning of a coming storm (or heatwave) can cut the ensuing damage by 30 per cent, saving lives and protecting assets worth at least 10 times the cost of the alert system`.  According to some estimates, over 700,000 people in Pakistan are affected by floods each year resulting in an annual loss of about 1pc to the GDP, ie almost $2 billion.  This is bound to increase: according to a study by the World Resource Institute, an estimated 2.7m people could be affected annually by river floods in Pakistan by 2030.  Bangladesh, China, India and Pakistan are four of the five most exposed countries in the world to river-based floods (Vietnam is the fifth one). Given their population density, growing urbanisation, and the vulnerability of their populations to floods, they need to take river flooding as a regional and not just a domestic national challenge.  The writer is an Islamabad-based expert on climate change and development.  atauqeersheikh@gmail.com |