

Let's make room for the river

The floods in Europe are a wake-up call for us to adopt the Dutch mantra, 'live with water, build with nature'



venu rajamony

"There are no words in the German language for this devastation... it is a surreal, eerie situation," German Chancellor Angela Merkel said when she visited the regions in Germany hardest hit by the floods which occurred as a result of heavy rains between July 12 and 15.

No escape for any country

A month's rain poured in just 24 hours in the worst-affected areas of Germany and Belgium. This caused multiple rivers to burst their banks and flood parts of the two countries as well as the Netherlands, Luxembourg and Switzerland. It is believed that these areas of Europe have not witnessed such heavy rainfall for more than a century. The floods showed that climate change spares none. Even if a country has adequate resources and advanced infrastructure (physical as well as organisational), it can find no escape from extreme climatic events. Reports say the death toll in Germany and Belgium has crossed 214. Hundreds more are unaccounted for, and authorities are still struggling to restore normalcy. A shocked flood victim told a reporter that he thought such disasters happened only in Asia.

Heavy rainfall within a short period of time resulted in overflowing rivers, canals, and other water bodies flooding many towns and cities. The scenes of roads being washed away, houses getting inundated, and stranded people being evacuated by helicopters, earth movers and lifeboats were no different from what is normally witnessed in India during such disasters. It bore uncanny resemblance to what Kerala experienced in August 2018. Not surprisingly, Kerala Chief Minister Pinarayi Vijayan reacted to the situation in Europe. He expressed condolences and asked the Indian community in Europe to stand in solidarity with the flood victims. He also recalled with gratitude the technical assistance extended by the Netherlands to the State following the 2018 floods and the visit of the Dutch King and Queen to Kerala in 2019 when they perso-



nally reviewed the joint efforts under way for long-term flood resilience.

Superior organisation, better preparedness and an advanced flood management system helped the Netherlands, with its centuries of experience in dealing with floods, to avoid casualties. But many towns were submerged. Thousands of people had to be evacuated. Floodwaters breached a dike and entered the town of Meerssen. The Dutch military, however, managed to close the breach using hundreds of sandbags.

Chancellor Merkel, Dutch Prime Minister Mark Rutte and other leaders were quick to attribute the cause of the floods to climate change and call for urgent action to arrest global warming. Experts say the more CO₂ the world emits into the atmosphere, the warmer will be the air temperature. Warmer air holds more moisture and results in excess rainfall, which leads to flooding. Additionally, increasing temperatures at the poles result in slower movement of storms in the mid-latitudes. As a result, storms linger longer at a specific place. The combination of a slow-moving storm and the presence of surplus moisture in the atmosphere results in intense rainfall in one location within a short period of time. In 2018, Kerala, for example, witnessed 414 mm of rain in just three days between August 15 and 17. Rainfall for the period of August 1 to 19, 2018, in Kerala was 164% more than normal.

Several have asked: what did the Netherlands do right in dealing with the floods and what did the others do wrong? The advanced flood warning system of Germany (which includes a network of sensors to measure river water levels in real time) did forecast heavy rains and the possibility of floods. But local authorities were unable to respond rapidly enough and

communicate the warnings to the wider population. The rain and floods happened so fast that there was no time to evacuate all residents to safety and fully deploy the formidable rescue and relief infrastructure that they possessed. There are already demands that such warnings must be communicated to the general public in simple language. Rather than forecast the millimetres of rain expected, conveying specific information regarding the extent of damage to property and life would likely encourage affected communities to remain alert and respond quickly.

Lessons for India

The floods in Europe call attention to the global need for countries to implement ecologically sensitive flood protection measures. **The Dutch have gone beyond their conventional dependence on dikes, dams, walls and gates to protect themselves from floods. Their current disaster resilience mantra is to live with water, build with nature and make room for the river. They champion creating adequate space for rivers to overflow by protecting floodplains from human interference, deepening riverbeds and creating alternate channels for excess water.** After two major floods in 1993 and 1995, the Dutch embarked on several projects to widen riverbanks and reshape the areas around rivers.

The floods in Europe serve as a wake-up call to us in India to adopt pragmatic policies and practices that are nature friendly. **We must recognise that we will have to learn to live with water in the long term. Flood-prone areas should be identified, and projects initiated on an urgent basis to create room for rivers.** Low-risk areas such as playgrounds, maidans, or agricultural fields should be ear-

marked to store excess rainwater. **Drains must be built for diverting water into these storage units. This will relieve the stress on the existing drainage infrastructure. The stored water can later be discharged back into the drainage channel once the high water subsides.** The United Nations Development Programme-World Bank-European Union Post Disaster Needs Assessment report prepared for Kerala after the 2018 floods pointed out that the drainage capacity of the rivers and canals of the State must be increased by creating more room for the water to flow. It called for removing obstructions and encroachments from existing water channels, the proper maintenance of such channels and creating additional channels for water to flow.

In the short term, strengthened disaster readiness, planning and preparation will help us deal with sudden, intense rain and consequent floods. Climate change and global warming will continue to cause extreme climatic events. Across the world, countries are being confronted with situations of either too little or too much water and droughts interspersed with floods. Rainfall has become unpredictable. While national and State disaster management authorities have grown in experience, competence and professionalism, there is need for a higher degree of coordination and preparation across all levels of government. Practice drills need to be conducted in flood-prone areas. We need to test the effectiveness of flood warnings. The warnings should be in local languages and in simple terms.

Today, many are wondering how they can learn from the Dutch experience in preparing for floods and dealing with their aftermath. But the Dutch themselves are wisely not permitting themselves any complacency. Conscious of their vulnerability to water, they maintain a spirit of eternal vigilance to floods. Reflecting this approach, the Dutch Prime Minister has exhorted his countrymen to learn from the recent disaster and see what more can be done rather than stay satisfied that major damage and loss of lives was prevented.

Venu Rajamony is former Ambassador of India to the Netherlands and co-author of 'What We Can Learn from the Dutch: Rebuilding Kerala Post 2018 Floods'. This article has been written with inputs from Rakesh N.M., an architect in the Netherlands