

## FLOOD AND LANDSLIDE DISASTER MANAGEMENT, WAYANAD (KERALA)

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**In a nutshell:** The Wayanad district administration had put in place a Standard Operating Procedure (SOP) that helped it to reduce the casualties caused by landslides during the 2018 floods that hit Kerala.

**Nodal agency:** District administration, Wayanad

Wayanad is a hilly district lying in the North-East part of Kerala. It is situated at the tip of the Deccan Plateau and is part of the Western Ghats. The geography of Wayanad is largely dominated by hillocks, valleys and forests. The flood and landslides that hit the district in a major way in August 2018 were mitigated through well laid out disaster management efforts of the district administration, Wayanad. It was a race against time and a test of resources, strength and capacity. Almost all parts of the district were severely inundated due to the incessant rainfall that virtually paralyzed the lives of people in the district.

The continued occurrence of high intensity rainfall resulted in the occurrence of nearly 250 major and minor landslides, as well as land subsidence in different parts of the district. Major road connectivity to other parts of the State was also virtually cut off. The total loss sustained to the district due to the flooding was estimated at ₹2251 crore.

Preventive evacuation was done from disaster prone areas, by assessing the risk through direct field visits by experts. These preventive evacuations helped to minimize casualties. Despite this being the worst calamity in the district in this century, the proactive and systematic interventions of district administration resulted in saving the lives of several people. Expert field level risk appraisal teams were deployed by the district administration to assess field level risk. Based on the feedback, immediate preventive evacuations were conducted.

Proper coordination between all the departments, agencies, functionaries and population was made through effective, pre-planned, pre-installed, well-rehearsed and well-established communication modalities and protocols. Role of agencies and responders were defined and decided beforehand, in the form of SOPs. This had resulted in proper management of the disaster and minimising the distress of population. The district administration manned the DEOC with additional staff from revenue department, police, fire and rescue and health department apart from technically qualified engineers, communication experts, multilingual experts, psychological counsellors, hazard analyst and disaster risk reduction experts.

Relief camps were started at safe public buildings to accommodate the rescued population. The centralised control facility of the district administration is the District Emergency Operating Centre (DEOC). Communication experts, engineers, medical officers, volunteer co-ordinators, disaster management experts, Hazard Analysis experts etc were deployed as part of the initiative.

Thousands of phone calls as well as emails were handled by the DEOC every day. All available means of communication, including VHF radio, satellite communication devices and HAM radio were utilised in addition to telephone and internet. Coordination between the district administration and all rescue teams from Army, Navy, NDRF, Police, Fire force, NGO, Local volunteers etc. minimized human causality to the maximum extent possible.

Special communication devices like satellite phones, HAM radio, VHF radio were utilized in addition to internet, telephone and mobile phones. Fully charged power banks were distributed to the people of remote areas to always maintain communication with the population. Vehicle-mounted HAM radios were deployed in the field to ensure proper communication in any adverse situation. Social media channels like Facebook and WhatsApp were also utilized for communication with the population. These platforms were effectively utilized for mobilizing manpower and resources also. Special care was exercised to keep the power supply of mobile communication towers active all the time.

The district administration was successful in ensuring the restoration of vehicular traffic through roads promptly through targeted interventions. Special teams were deployed for re-opening and re-establishing roads with the minimum possible down time. In isolated areas, alternate transport arrangements like boats were deployed.

It was ensured that the opening or widening of dams and reservoirs were done only after sounding pre-warnings. It was further ensured that preventive evacuation was carried out from the disaster-prone areas before opening or widening of the spill of reservoirs.

## **Impact**

- Though the disaster was very severe in its intensity, preventive evacuations helped in saving more than 100 lives. As a result of the initiative, a total number of 30,186 persons were evacuated. 29,768 citizens were safely accommodated in 223 relief camps.
- Despite having 223 relief camps with 29,768 inmates, the district administration ensured food, clothing, medicine and drinking water supply to all relief camps without any interruptions.
- Counselling sessions were also provided. Special care was also given to children, lactating mothers, old and sick inmates.
- Immediate relief of ₹10,000 and free ration for three months were provided. 50 days of additional wage employment is provided under MGNREGA.
- Crop loss compensation issued to 14000 beneficiaries and moratorium on agricultural loans is also provided.



Rescue activities during the floods in Kerala in 2018