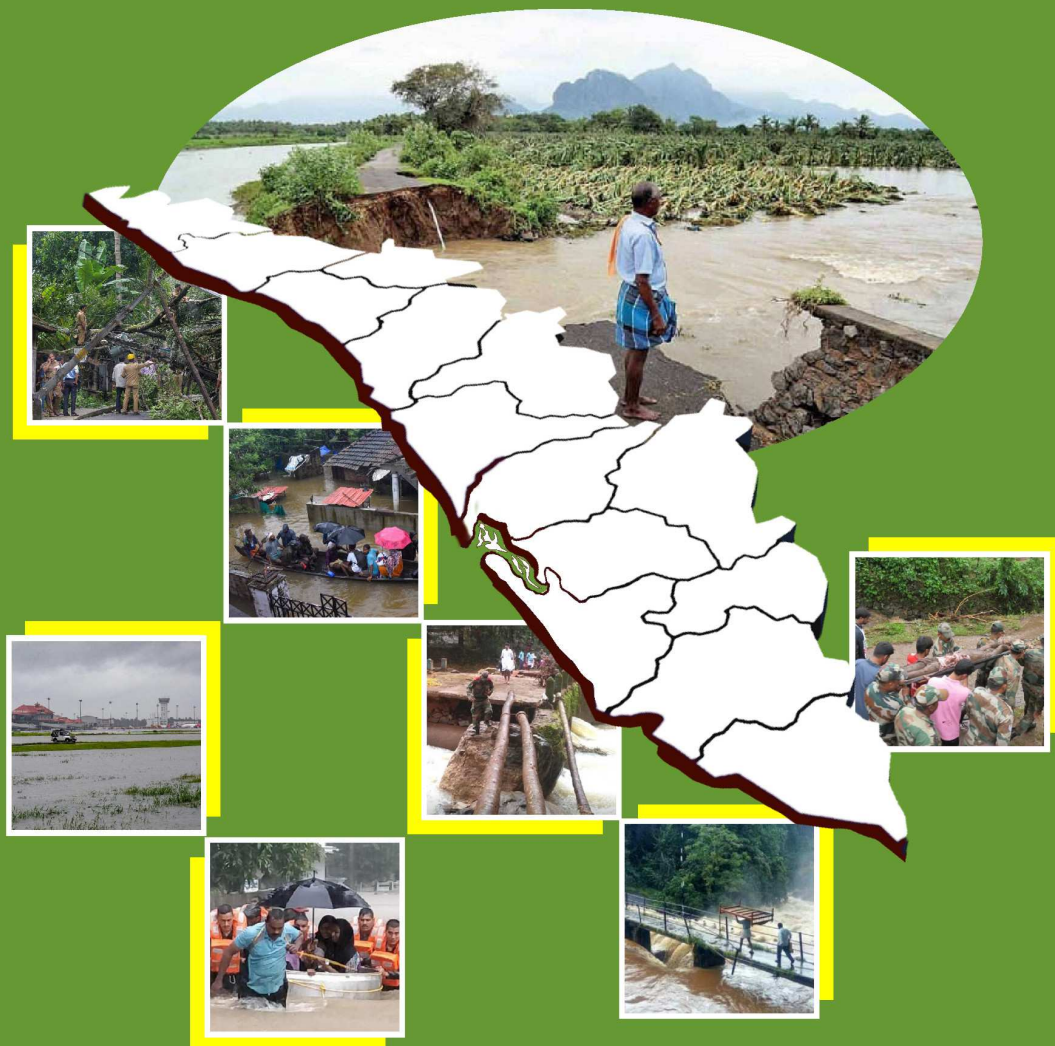


Building a New Kerala

Ideas and Reflections



The Six Lessons from the Mega floods of 2018 for Rebuild Kerala

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The Six Lessons from the Mega floods of 2018 for *Rebuild Kerala*

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The floodwaters have receded, people are slowly moving back salvaging their worldly possessions, collecting their lives and slowly starting to rebuild their shattered homes and property. The state too is quickly mobilizing funds from far and wide and is putting in place a strategy for rebuilding a new Kerala. In fact, *Rebuild Kerala* has become a cliché and has spawned a lively industry in the form various types of conversations. The present note is part of such an industry to throw and reflect on some ideas that one may consider in this reconstruction process. I hold the view that there are several good models or gold standards that are out there that we may do well in considering those well-rehearsed arguments rather in pretending to reinventing the wheel and successfully masquerading them as fresh manna from heaven.

In this context, the first reading that we may have is in understanding the flood itself so that we may be better prepared the next time to deal with its negative and lingering effects. In this spirit, I read the report of the *Travancore Flood Relief Committee, 1925* (thanks to Dr V K Ramachandran, Vice Chairman, Kerala, State Planning Board for sparing a copy of it) which has a nice account of the relief efforts of the Travancore Government in providing material relief to the victims of the last mega floods of 1924. Three issues were common between the episodes in 1924 and 2018 mega floods. First, is what caused these floods to occur. In both the times, the floods were caused by a more than average amount of precipitation in a short period of time, emptying dams to downstream rivers (although in 1924 it was only one dam and one river) and landslides, Second, is the diffusion or spread of the flood waters. Strange though it may sound, the *panchayats (in 2018)* or the *pakuthis (in 1924)* worst affected were more less the same although the scale of intensity may have been different given the differing densities in population. We also know from markings of Maximum Flood Level (MFL) in some temples (like for instance at the Parthasarathy Temple in Aranmula) that the 1924 one was more virulent than the 2018 one. On both occasions, Munnar and Alwaye were affected badly affected in almost the similar pattern. Third, was the remarkable similarity in the response to flood relief, both immediate and the long-term, from both the government and the civil society. It is remarkable that the extolled virtue of voluntarism that was characteristic of the floods of 2018 had its historical roots in 1924 as well where despite lack of communication, volunteers went about mobilizing food and clothing and in some cases medicines as well in a 'cheerful and hearty manner". It is remarkable also that the Travancore government at that time was very careful in asking for an audit of the amounts collected both large and small.

Therefore the first lesson is to understand the floods itself so that we are better prepared to deal with it when we have future extreme events of this nature in the future. Towards this what is required are two types of skills. First understanding the cause of floods which involves, inter alia, a more effective dam management and also a better forecasting and conveying of those weather forecasts to localities that are most likely to be affected. Apparently there were shortcomings on this front this time. The gold standard here is from

the USA where they have perfected nearly accurate predictions of tornadoes and hurricanes. Second, is the spread of the floods or floodplain mapping. Organizations such as the National Disaster Management Agency and National Centre for Earth Science Studies (NCESS) should have easily accessible and useful floodplain maps. I understand that such maps were actually made or developed by scientists at the erstwhile Centre for Earth Science Studies (now known as NCESS), but not made public supposedly for its adverse effect on real estate prices. The first thing is for every local self-government authority to have these maps made available and used while giving planning permissions and the government and civil society organizations must institutionalize strict penalties for planning permissions given if any deviations from it are made by local bodies. Some legal institutional structures similar to pre and post-grant opposition to the issuance of patents is necessary. Second, is the immediate need precaution, which every household in the state should be taking. Easily usable mobile apps and hard copies of an illustrative manual containing a set of instructions to be followed while being holed up in flooded areas is an absolute necessity. An illustration of the kind of information that is practical and useful is ways of charging a mobile phone even in the absence of running electricity. In fact, the present author learned it from a WhatsApp message that was in circulation during the time and benefited from it. The gold standard in these preparations for a disaster at the household level is Japan- a country that is so prone to natural disasters but is able to deal with even the most intense one so admirably well. We could learn from them, and the Japanese are always willing to part with useful information for ameliorating disasters.

The second lesson is in terms of rebuilding our physical infrastructure. The first and foremost is in the construction of roads and bridges. Even at the best of times these are in bad shape. Even roads, which are constructed under the KSTP, have suffered damage. According to the *Kerala Economic Review 2017*, 'transport infrastructure of the State consists of 2.19 lakh km of road, 1,588 km of railways, 1687 km of inland waterways and 18 ports. Roads play a prominent role in public transportation over other modes of transportation owing to the geographic peculiarities of Kerala and its widely scattered habitation with a comparatively lesser rural-urban divide and limited geographical area of 38,863 sq. km'. It may not be incorrect to state that we are too far away from adopting technological changes in bituminous construction technologies. Advances are happening in materials, mix design, special bituminous mixes and in recycling quite frequently. However, we continue to follow the specifications for roads and bridge works laid down by the Union Ministry of Road Transport and Highways way back in 2001. We need to be adopting better specifications and especially those, which are meant for places affected by severe monsoon rains like Kerala is. The gold standard here is Malaysia as the portions of the MC Road (Trivandrum to Chengannur) constructed by a Malaysian company almost 15 years ago bears eloquent testimony to this line of reasoning.

The third lesson is in terms of managing the Kuttanad area prone to heavy flooding year after year. A much-touted development project has only resulted in a religious priest in charge cooling his heels in a prison at least for a short while. Kuttanad requires scientific water engineering, and we certainly do not seem to be having much capability in that direction. No need to waste time in arguing that we do have as if we had, Kuttanad would not have been under water for such a long period of time. The gold standard in water resources management and hydrology, in particular, is the Netherlands – a country one-third of which is below sea level. But through a complex combination of dikes, pumps and sand dunes, the Dutch engineers have kept their otherwise flat

country perfectly in order and have been called upon by many countries including the USA (in the aftermath of the Hurricane Katrina induced disaster in the Gulf Coast of the USA in 2005).

The fourth lesson is in the construction of houses. As said before planning permissions are not to be given for house construction in areas, which are prone to flooding, and especially in areas, which are prone to landslides. This is particularly relevant for house construction activity in the districts of Idukki and Wayanad. Further, stilt houses may be the option for areas such as Kuttanad. Unfortunately, I am not aware of any gold standards here, but the experience of Thailand and Indonesia in this direction is useful.

The fifth lesson is in terms of the need for having insurance for one's house and assets within it. Very few households and businesses have bothered to insure their house and assets. This will now become a necessity given the extent of damage and the consequent losses suffered. The state should come in a big way of sensitizing and educating the citizens on the need for and importance of having insurance schemes. Also on arriving at the Insurance Declared Value on the basis of which annual premiums are paid. The gold standard here is the UK.

The sixth lesson is for local self-government units to train and retain a set of technicians for all times like those having technical skills to repair TVs, refrigerators, electricians, plumbers and masons. It is very often hard to find those skilled in these traits although these are the skills that are required by the household immediately after any disaster such as the floods. The Kerala State Council for Science and Technology had made a proposal in this direction a few years ago, but sadly it has remained unimplemented.

Finally, whatever is the nature of the project, time and cost overruns so characteristic of public sector project implementations need to be kept under check, and there has to be a social audit of the amounts expended. Rent seeking by contractors and ambulance chasers must be kept under bay. Politics should definitely be taking a back seat in *Rebuild Kerala*.

(*The views expressed in this paper are my own and do not necessarily reflect the views of Centre for Development Studies (CDS), Trivandrum that I serve)



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