

Ready reckoner for building flood-resilient structures

The Kerala Institute for Local Administration will soon bring out a monograph prepared by an architect for distribution to local bodies

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Stuck at home for a month because of an ankle sprain, architect Benny Kuriakose closely observed the discussions around post-flood reconstruction of Kerala and realised that very little was being spoken about the need for disaster-resilient structures.

“There was a needless hurry to brush it off as a once-in-a-century occurrence, without giving much thought to the fact that disasters could strike more often and with increased intensity. I felt a need to put together some sketches and notes that have now become a ‘Manual for Retrofitting and Flood Resilient Design for Flood Affected Areas of Kerala.’” Mr. Kuriakose, experienced in

designing villages in areas wrecked by the Latur and Bhuj earthquakes and the Tsunami of 2004, said.

The monograph, which the Kerala Institute for Local Administration (KILA) is bringing out for distribution to the 1,200 local bodies in the State in a month or so, contains elaborate sketches, plans and guidelines for existing and new structures in flood-prone areas.

Preparedness

Its opening chapters argue, with supporting studies and statistics, why Kerala should stay prepared for future disasters.

“Once flood mapping is complete, it will be prudent to fix the safe level at least 2 ft above the maximum flood level recorded in August. Even



the best engineering and architectural solution will not be able to save a building, if not built in accordance with the standards. Minor differ-

ences in elevation can drastically improve the safety of a building,” Mr. Kuriakose said.

It’s a simple but compre-

hensive handbook, as the author says in the preface, offering instructions and unambiguous illustrations on access to sites, layout, orien-

tation of structures, elevation, questions over often reckless landfill practices that surely played a part in floodwaters submerging areas thought to be safe, building in flood drainage area and standards for public structures.

Workmanship

There’s vivid mention on the importance of quality workmanship and using the right material, with how-to-use drawings.

Individual notes shed light on the way single and two-storey structures are to be made, the need for loft in single storey sloped houses, construction on stilts, foundation requirements, first floor balconies, locating external staircases, plinth protection, sewage system, use

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of water tanks and solar panels and the like.

Methods to measure the scale and criticality of damage to the flood-hit structures and the means to repair and fortify them against future disasters are also delineated lucidly.

Punctuated with remin-

ders like “the shorter side of the buildings should be oriented towards the flow of water to minimise the damage caused by the flow of debris” and “Filling along the riverside to gain elevation or create elevated land causes increased flood levels because of a reduction in the cross-section of the river”, the book is an actionable ready reckoner, according to Joy Elamon, KILA director.

Dr. Elamon says the manual, already translated into Malayalam, will have an initial print order of 2,500 for free distribution to the local bodies, which can refer to it while repairing or building public structures like anganwadis under them. KILA will also bring out the original in English.