

DEVELOPMENT THAT IS MINDFUL OF NATURE

Relevant for: Environment | Topic: Environmental Conservation, Sustainable Development, and EIA

Environmental disaster has struck Kerala once again. Unusually heavy rains have caused landslides in Kottayam and Idukki. By October 21, 42 deaths were recorded, and the monsoon is not yet in recess. Such a high loss of life must lead to a serious review of the land-use pattern in Kerala. With a population density of 860 persons/sq. km against an all-India average of 368 persons/sq. km (Census 2011), Kerala experiences very high pressure on the land.

Historically, most of the settlements were concentrated in the coastal plain, the adjoining lowlands and parts of the midlands. However, this scenario has altered now, with significant land-use change across topographic boundaries. Population growth, agricultural expansion, economic growth, infrastructure development — particularly road construction — and intra-State migration have all led to settlement of the highlands. Kerala is experiencing high growth of residential buildings. The Census records that during the decade between 2001 and 2011, the population grew by 5% whereas the number of houses grew by 19.9%.

Interview | Even after several flood disasters in Kerala, politicians' mindset has not changed towards developmental projects, says geoscientist

Such a pace of construction has serious implications for the geo-environment. Not only the locations for siting settlements but also the demand for construction materials, with the attendant quarrying and excavations, is altering the landscape through terracing, slope modification, rock quarrying, and the construction of roads. The basin characteristics of all rivers have been altered. This has resulted in gross disturbance of the character of the terrain evolved through weathering and formation of soil under natural vegetation cover. Consequently, the water-absorbing capacity of the river catchment is lost, contributing to increasing surface run-off and reduction in ground water recharge. Road construction in hilly areas, even when cutting across the toe of the slope, is destabilising and creates conditions conducive to landslides.

Construction on hill slopes prone to disintegration during heavy rain is a threat not only to those who choose to live in the buildings but also to those who are in the path of the debris that gets dislodged in a landslide. It is clear by now that in parts of the State the hills have been overbuilt, posing a danger to life. Interestingly, the extremely complicated rules for registration of purchase and sale of property in Kerala are not matched by a due diligence of building plans. It is not even clear that the authorities responsible for the oversight of construction are sufficiently aware of the nature of the problem. While the idea of a construction-free Coastal Regulation Zone, instituted by the Government of India and applicable to the entire country, is fairly well recognised in the State, the Government of Kerala has been timid in enforcing similar regulation in its own backyard. The hesitancy towards the implementation of the recommendations by the Western Ghats Ecology Expert Panel, commonly known as the Gadgil Committee, on protection of the Western Ghats is the best example of this. We can now see how prescient they were.

While evolving a land-use protocol to be observed in all cases without exception cannot be delayed any further, it is understandable that it may take time. However, the most recent landslide in Kerala should lead the government to immediately review two major projects with a potential to lower ecological security.

Environment Package finds place in Kerala Budget

The first of these is the Silver Line project, a light railway connecting the two extremities of the

State. Its potential to usurp agricultural land and cause ecological disturbance is well known. The claim that it is vital to the development of the State, reportedly made by the government in the Legislature, is debatable. After all, a railway line exists across the entire length of the State already, and how much a saving of a few hours' travel time can contribute to the gross domestic product is not clear at all. While infrastructure for growth is necessary, Kerala's deficit is less with respect to transportation than what it is to power generation, urban infrastructure and a well-trained workforce. As the Kochi Metro network was being expanded, a prominent entrepreneur of the city rightly observed that it needs a sewage disposal system more than it needs a rapid transit network.

While the Silver Line project has been in the news, what has not been is the widening of the highway currently taking place in parts of the State. Entirely under the authority of the Government of India, this has involved mass felling of trees and the removal of habitation on both sides of the road. Overnight, tree-lined roads have been converted to bare tarmac exposed to the sun. The loss of vegetation and tree cover is sure to have an impact on local climate and water retention, impacting its availability. The question that comes to mind is whether the Government of India has consulted the people affected or just used the principle of eminent domain to have them evicted. No one wants to lose their home even if they are compensated at the market rate. Can we be sure that the social gains exceed the losses?

Catastrophic rain is the new normal

Kerala's longitudinal topographic grain combined with its east-west-running rivers gives rise to an alternating ridge-valley land form. Given this feature, construction of roads or any structure with a north-south alignment involves cutting across the valleys and lowlands, impacting natural drainage and overall landscape ecology. Therefore, development interventions should be cautious and ecologically sensitive to avoid unwarranted consequences and to be sustainable. We would ask if the governments concerned have conducted anything like a cost-benefit analysis in the two cases we have highlighted. Of course, evaluating ecosystem services lost in a developmental overdrive is a difficult exercise, but that it is so flags what we are pointing to. We often don't even know the economic consequences of our actions towards nature. Rather than acknowledging this, all signs are that we proceed with disdain in the name of development. Technical expertise is needed when re-engineering the earth, with the teams including earth scientists, independent public policy experts, elected representatives and citizens from the affected areas. There is no hurry in proceeding with the light railway or of adopting a 'one nation, one highway specification' in densely populated and ecologically vulnerable regions of the country. Rushing through these projects in the face of intimations from nature, such as landslides, that we are vulnerable would really be a case of fools rushing in where the wise refuse to tread. New railway lines and highway widening should be undertaken only after public hearings open to citizens.

Kerala's achievements in human development are legion. However, it can no longer rest on its laurels in this area, ignoring the relentless assault on its natural assets. It is by now clear that the destruction has elicited neither an intelligent public policy response nor a citizen's movement of sufficient strength to contain the gathering ecological insecurity. In some ways Kerala led States in showing that development is not synonymous with economic growth. But now it seems to be trapped in a mindless consumerism that is threatening its future. Course correction is inevitable. Even the United Nations Development Programme, which had pioneered the human development approach, has proposed a Planetary-Pressures Adjusted Human Development Index that weighs a country's human development for its ecological footprint. Living in the Anthropocene, we need to guard against any further damage to the natural world.

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