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Headline: What is missing in our flood management system

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It's becoming more apparent that the government is not learning from the repeated suffering of people from frequent and severe floods due to climate change.

The recent rounds of floods and landslides in Davao are yet another disaster that has left 10 dead and 14,000 families displaced. To make matters worse, the severely hit provinces are still reeling from the disaster deluge just last January.

Despite the laws on disaster risk management and climate change adaptation, and the government's adoption of programs and projects to mitigate climate-induced disasters, there is something missing from all of these efforts as deaths and destruction continue unabated.

A cursory review of laws, policies, and programs on flooding shows that we do not have a national policy on stormwater management.

There is mention in the Local Government Code that rainwater collectors, seawalls, dikes, drainage, and flood control are among the basic services that local government units (LGUs) are mandated to provide. However, in practice, only a handful and the affluent LGUs have stormwater management systems because flood control is widely perceived as a national responsibility because of the interjurisdiction nature of flooding, and it is also expensive.

While it is true that flooding is interjurisdictional, the perception that its solution is expensive is rooted in the traditional mindset that flooding needs to be "controlled" through engineered infrastructure, such as dikes, seawalls, floodways, and drainage canals.

This mindset stems from the thinking that floodwater is a form of waste that should be kept away from people and disposed of as quickly as possible.

The Department of Public Works and Highways (DPWH) has the responsibility for planning and implementing such infrastructure solutions, usually at the regional and provincial levels. The DPWH infrastructure, however, requires to be connected to the LGUs' local drainage system for it to work effectively. But the LGUs undertake drainage infrastructure only when it is a component of a road, or if there is a budget allocated for it.

In most cases, the LGUs' drainage system is limited to urban areas.

The current situation reflects a lack of understanding by government officials at all levels of the nature of water and the relationship between stormwater and land. Stormwater is rain that cannot soak into impervious land surfaces such as streets, parking lots, and rooftops during rainfall events. Because it cannot soak into the ground, it "runs off" into drainage canals and waterways, carrying pollutants such as garbage, animal excreta, fertilizers, pesticides, oil, and grease that adversely affect water quality.

In areas that do not have man-made impervious surfaces, such as forests, farmlands, and open green spaces, rainwater takes a longer time to reach a river. When impervious surfaces are added to a watershed, the water reaches rivers very quickly and in much larger quantities.

In addition, urban areas are serviced by a system of drainage pipes and catch-basins that are designed to get the water off the land as quickly as possible and convey it to the river. However, the excessive volume of water is more than the river can handle, which results in flooding and erosion of the riversides.

In other countries, stormwater management is evolving beyond engineered infrastructure solutions to a hydrologically informed approach that manages stormwater at the regional, city, neighborhood, and site scales. For example, Australia has a water-sensitive urban design policy; the United States has a low-impact development approach; the United Kingdom has a sustainable drainage system; and China has adopted the sponge city approach. These policies include land development policies, regulations, and ordinances that are aligned with water quality goals.

Philippine LGUs are already empowered by the Local Government Code to make decisions about where and how to grow, which are the most important development decisions related to managing floods and related water quality issues. A national stormwater policy should reinforce this.

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