

Too little, too big

Government ramps up efforts to secure PHL's dwindling water supply amid climate change, growing population

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ON October 14, senators passed and approved on final reading Senate Bill 1844, which authorizes President Duterte to expedite the processing and issuance of national and local government permits, licenses and certifications in times of national emergency. The House of Representatives, however, has yet to come up with a counterpart measure.

The bill, which covers all government agencies under the Executive branch, will give the President the power to remove bureaucratic red tape, accelerate and streamline regulatory processes for new or pending applications from businesses for government permits, licenses, clearances, certifications, or authorizations, or if the President deemed it necessary, suspend or waive the requirements for securing them.

Such measure, once enacted into law, will pave the way for the Duterte administration to accelerate the implementation of flagship projects, notably, those involving the water resource sector, a perennial problem that over the years has become grossly alarming.

As of August 19, 2020, a Revised List of Infrastructure Projects of the National Economic and Development Authority identified a total of 104 priority projects, including 12 infrastructure projects that will boost the country's water security—both for irrigation and domestic consumption.

These are the Angat Water Transmission Improvement Project, National Irrigation Sector Rehabilitation and Improvement Project, Malitubog-Maridagao Irrigation Project, Balog-Balog Multipurpose Project Phase II, Tarlac, Jalaur River Multipurpose Project Stage II, Iloilo, Lower Agno River Irrigation System Improvement Project, Pangasinan, ADB Water District Development Sector Projects, Wawa Bulk Water Supply Project, New Centennial Water Source Kaliwa Dam Project, and Bohol Northeast Basin Multipurpose Dam Project.

The P12-billion New Centennial Water Source Kaliwa Dam Project, a Marcos-era project revived by the Duterte administration, is currently being pushed by the Metropolitan Waterworks and Sewerage System (MWSS) to boost water supply for the estimated 15 million water consumers in Metro Manila and nearby towns in Bulacan, Cavite, and Rizal provinces.

Climate-change factor

THE Philippines's water security challenges are aggravated by its vulnerability to climate-change impacts to this very important economic resource, especially because of the threats of new and emerging infectious diseases such the Covid-19 pandemic.

Aside from water shortage and severe flooding, climate-change impact on water may eventually cause a decline in food production and an increase in water-related diseases in the Philippines, an official of the National Water Resources Board (NWRB) said.

Reporting on the Status of Philippine Water during a webinar held October 19 as part of the 31st National Statistics Month, Josephine R. Billones, head of the Water Resource Assessment Section of the NWRB, said the country's water resource is under various threats.

She said the Philippines has been experiencing water scarcity since 2007.

While blessed with an abundant supply of freshwater that is replenished every time it rains, the Philippines may be facing severe water shortage due to increasing demand brought by population growth.

During his talk, Billones presented the current water resource situation in Philippines.

The Philippines's total water potential is estimated at 146 billion cubic meters and it receives an average rainfall of 2,400 mm per year, says Billones.

Not enough despite abundance

RICH in both surface and groundwater, the Philippines boasts of having 421 rivers and 221 lakes. It also has 18 principal rivers. Its aggregate surface water supply with 85 percent dependability is estimated at 125.8 billion cubic meters. It also has a groundwater supply of approximately 20.2 billion cubic meters.

However, Billones said around 58 percent of the country's total water resource is already allocated for consumptive use for various purposes based on the water permits issued by the NWRB.

“Irrigation accounts for more than 78 percent of allocated water both for surface and groundwater as of June 2020,” she said.

Meanwhile, for non-consumptive use, around 60.43 percent goes to power and only 30.93 percent goes to irrigation.

By purpose, municipal is a major water user for groundwater accounting for more than 53 percent of the total allocated groundwater.

For surface water, irrigation is the major user of water, accounting for 81 percent of the total allocated surface water.

“Based on the water index threshold, the Philippines is already experiencing water scarcity since 2007. Water availability is 1,000 to 1,700 cubic meters per capita,” she reported.

“Although theoretically, the country is assured of supply because of high precipitation, seasonal variation is considerable and geographic distribution is biased. Together with increasing demand, this often results in supply shortages especially during the dry season,” she said.

Based on a study, she said, there are now 11 water-stressed rivers in the Philippines. These are Cagayan, Agno, Pampanga, Pasig, Laguna, Bicol, Jalaur, Cagayan de Oro, Tagoloan, Tagum, Ligubanon, Davao and Agus Rivers.

“Water in these rivers is nearly, if not fully, allocated already,” she said.

‘Constraints’

ON top of these, she said nine highly urbanized areas identified in the 1998 Japan International Cooperation masterplan are already groundwater constraint areas, where extraction or use is exceeding the water recharging capacity.

These are Metro Manila, Metro Cebu, Baguio, Bacolod, Zamboanga, Davao, Cagayan de Oro and Iloilo.

Moreover, she said the NWRB also identified three other areas as water constraint areas—Cavite, Laguna and Batangas.

“These water constraint areas are experiencing groundwater deficit,” she said.

According to Billones, as a water regulatory body, the NWRB has issued a moratorium on groundwater development. “No permit will be given in these areas,” she said. The policy is now in effect for Metro Manila and Metro Cebu, she said.

According to Billones, addressing water challenges becomes even more urgent under climate change.

“Study revealed that there are certain areas in the country experiencing a decline in groundwater. In 1991 and 2004 studies show that there has been lowering of groundwater in Metro Manila and surrounding areas.”

In 1991 the lowering of groundwater was observed only in Metro Manila. However, she said, in a 2004 study, many areas in the Philippines are now below the mean sea level, which means the groundwater level is significantly lowered.

She said this is detected in Bacolod, Bacoor and Tawi-Tawi. There is also some lowering of groundwater level in Dasmariñas, Cavite, she said.

“Lowering of groundwater level increases chances of saltwater intrusion,” she warned.

Saltwater intrusion, she said, affects groundwater supply. As more people use groundwater, the more an area becomes vulnerable to saltwater intrusion.

“Population growth, increased economic demand and improved standards of living are placing tremendous pressures both on the resource supply and service delivery systems,” she said.

During her talk, Billones said water systems, especially in highly urbanized areas, are polluted. “Solid waste management is a major concern. Declining water quality affects water quantity. It limits the usability of water,” she said.

According to Billones, the Philippines is highly susceptible to typhoons, being situated in the typhoon belt.

Moreover, the projected increase in temperature means much intense typhoons. “Even monsoon rains are pouring more water and causing rivers to overflow,” she said.

Shared responsibility

ACCORDING to Billones, the weather is becoming wild and rainfall pattern is becoming variable because of climate change, which impacts water resources.

Either the Philippines will have a problem with “too much water or too little water.”

A higher temperature is also affecting water quality, she said. As it triggers sea level rise, there will be a saltwater intrusion to groundwater in coastal areas and estuaries.

In effect, she said, there will be a water shortage, a decrease in crop production, flooding, and increased water-related diseases.

Billones appealed to the public to wisely use water, saying conserving this very important economic resource is “a shared responsibility.”

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