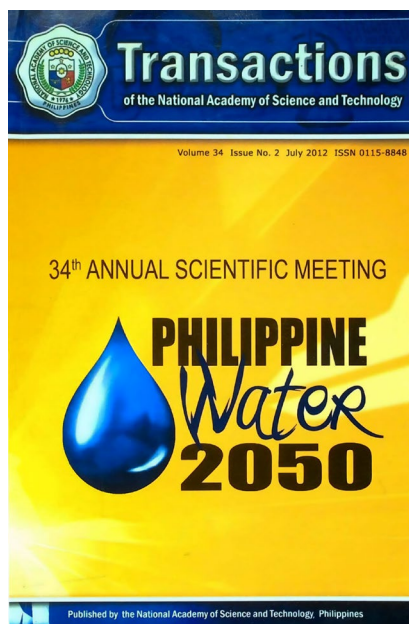


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The Country's Water Resources and Issues

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Keywords

droughts, freshwater, groundwater, pollution, population growth

THE COUNTRY'S WATER RESOURCES AND ISSUES

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Abstract

The Philippines is endowed with freshwater resource mainly due to the high amount of rainfall. As of 2009, 57% of the country's freshwater resource is used for power generation, 34% for irrigation, 4% for industrial use, and just about 3% is for household use. Groundwater is the main source of potable water for most municipalities, surface and groundwater are tapped by a considerable number, and a few rely solely on surface water. Salt water intrusion, lowering of the piezometric level and ground subsidence are some of the effects of over-exploitation of groundwater, which has been occurring in several places in the country. In Metro Manila, Bulacan and Pampanga, over-extraction of groundwater has led to subsidence that can be several centimeters per year. Subsidence has enhanced the frequency and magnitude of floods in those areas.

Pronounced seasonal variations and geographic distribution often result in water shortages in urban areas especially during the dry season. During droughts, when the amount of rainfall is less than what is expected, the problem expands and may become severe. Deforestation and land conversions have certainly contributed to the decline in groundwater and consequently of river discharge during the dry season. Pollution caused mainly by untreated wastewater from agricultural, industrial, and municipal sources is the major reason for the decreased availability and access to safe water for drinking from both surface- and groundwater resources.

In addition to the above issues, population growth will certainly put greater pressure to the potable water resources of the country; some projections indicate doubling of the present population by 2050. As such, management of the freshwater resource will become even more critical. A direction that should be considered by the local and national government is increasing the use of surface water as source of potable water. This will give the country a greater motivation in the cleaning up of our rivers and lakes, and in protecting our watersheds. Efforts should include increasing our ability to store surface- and rainwater. Given the potential of more

acute droughts and the possibility of disruptions in water conveyances, the groundwater reserve can be set aside as emergency supply. This would require extraction not exceeding the safe yield, increasing recharge, and protecting it from contamination. Strategies can also be put in place to reduce the demand for freshwater by other uses such as having more efficient power generating plants and irrigation practices. Lastly, water conservation should also become part of our culture.

Keywords: droughts, freshwater, groundwater, pollution, population growth