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THE INSTITUTION OF ENGINEERS, MALAYSIA
Bangunan Ingenieur, Lots 60 & 62, Jalan 52/4, P.O.Box 223,
(Jalan Sultan) 46720 Petaling Jaya, Selangor.
Tel: 03-7968 4001/4002 Fax: 03-7957 7678
E-mail: sec@iem.org.my Homepage: http://ww.iem.org.my

Water Resources Challenges

By: Engr. Assoc. Prof. Dr Aminuddin bin Mohd. Baki, *FIEM, P. Eng.*

Water is one of the most important elements in life. Our body is made up of 60 to 70% water. A lost of about 20% of our body's water content will put us in serious danger of dehydration. Thus, we simply need water to live.

Water is also needed for our day-to-day activities. We need water for our domestic use including drinking, cooking, cleaning and sanitation. Apart from that, we also need water for our commercial activities, industries and irrigation.

In Malaysia, we are blessed with abundant rain, with a national annual average rainfall of about 3m. We have plenty of water, so much so that one of the challenges faced by our water engineers is how to mitigate the flooding problems which arises from having too much water.

Despite our abundant rainfall, there have been times when our dams were drying up due to the prolonged dry spells affecting our water catchment areas. Thus the challenges that the water engineers face do not stop at the condition of having too much water, but also of having too little water.

Our rapid development and urbanisation have also led to the environmental degradation of our water resources. Most of our urban rivers are polluted, partly due to urbanisation activities, such as construction, domestic, commercial and industrial waste disposal. We, as urban dwellers, are also responsible for the degradation of our river water quality. Our irresponsible attitude such as the indiscriminate throwing of rubbish, throwing rubbish out of our car windows, leaving rubbish behind wherever we go and so on, contributed to the continual degradation of our rivers. The environmental degradation of our rivers limits the use of these rivers as our sources for water supply. Thus our water engineers are presented with challenges related to water quantity, both too much and too little, and also water quality.

There are many initiatives that have been carried out such as, integrated water resources management, numerous flood mitigation projects, irrigation schemes, water supply schemes and sewerage projects for which our water engineers should be applauded for their effort. Nevertheless, there is still a lot to be done by our water engineers to fully develop the infrastructure and management of our water resources by the year 2020. ■