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The Need for Better Water Policy and Governance in Malaysia

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Abstract

Water is getting scarce. Many countries are already facing problems to access clean, safe drinking water. The expanding world population seems to be the culprit. It becomes more complicated with uncontrolled usage, public's ignorance and ineffective water management. This qualitative study is exploratory in nature. It analyses existing documents on Malaysian water management and governance. Early finding reveals existing water governance lacks good management and there are legal vacuums. This paper promotes appropriate water management policies and strategies at both the federal and state levels, relevant agencies, stakeholders and local communities in ensuring sustainable water resources and supply.

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1. Introduction

Demand for the water is higher nowadays (Braadbaart and Braadbaart, 1997; Wright, 2008; Mohammed Hatta, 2011). There are several contributory factors such as increased human population, which now stands at 7 billion, uncontrolled developments, industrial and agricultural expansion. Currently world water supply is inadequate, deteriorating in quality and low flow of surface water. Statistic by the Food and Agricultural Organisation (FAO) on global daily water usage shows the agricultural sector is the highest user of 62%, the industries, 21% and domestic users, 17%. Meanwhile in Malaysians daily water consumption is 300 lpcd (Melati, 2010). According to report by Malaysian Water Industry Guide in 2007, the Non-Revenue Water (NRW) was nearly 40% of the total water supply.

Wright (2008) blames humans' attitudes towards the natural resource as one of the reasons for water scarcity. The greed for money is causing water pollution and quality deterioration. As a result, water has reached its carrying capacity, where water has reached its limits in balancing the pollution and negative treatment it receives. The lack of awareness, unsustainable usage and mismanagement of water gives direct impacts towards the ecology and environment, and indirectly towards human health (MOSTE, 2002). These impacts give long-term effect or irreversible damage permanently (Feng *et al.*, 2008; FOMCA, 2009).

In 1997, research by Braadbaart and Braadbaart showed Asian countries are facing water scarcity despite the fact that Asia has large water availability. Apart from the negative effects of urbanisation, water scarcity is also due to

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limited water management capacity and unorganized management. It is also caused by poor or no communication between users. As a result, uncontrolled releases of pollutants and unsustainable usage create environmental and human health problems. Some of these contaminations are irreversible and may cause death (WHO, 2011). Rivers have been used to the maximum and polluted, making it impossible for daily basic needs.

Water governance involves multitude of actions by different authorities and organizations. In Malaysia there is overlapping of water management between the federal and state governments. The water supply management and development is not centralized. In fact they became fragmented due to the diverse implementation of policies and laws (Mohd Nor and Atikah, 2003; WHO, 2011). Even the private agencies appointed to manage water, are also without coordination rendering them inefficient. Research by Rahman (2009) discovered that mismanagement of water is causing its depletion. This could be avoided if there are standardized regulations and guidelines. Many other countries have similar water problems but they are united and very objective in solving and rectifying the problem. The UAE countries work together in formulating policies and implement strict regulations as many of them share transboundary rivers. In China and India, although they have difficulties at the earlier stage of water governance, they tried several alternatives and it proved to be worthwhile efforts.

2. The need for better legislative framework

In Malaysia, environmental policy still lags behind other pressing issue such as the industrial development (Pierce, 2006). The public lack awareness on environmental issues. They tend to leave all the responsibilities to the government. Since Malaysia achieved its independence, water policies were made by individual states according on ad-hoc basis. There are no centralised or standardized water policies or guidelines for states to adopt. As a result, there are numerous Acts and guidelines on water. Multiple agencies are managing them. In 2002, the National Policy on the Environment was established. It intends to enhance societal quality of life through sustainable economy which runs parallel with social and cultural progress (Shah *et al.*, 2009). However, the policy is too general, without any specific details in each of its section. It is unclear thus relevant departments are not able to implement them. Some are even unaware of its existence. The lack of good management could be responsible for the negative impacts of water supply systems, leading to serious water shortages in the future. Hefny (2007) has forewarned that climate change gives direct impact to water resources but mismanagement causes more harm to the natural resource.

Good water governance is therefore needed in Malaysia to handle water problems complexity, for a better or efficient water use and management. It is also to ensure economic, social and environmental sustainability (Sampford, 2007, Shah *et al.*, 2009). However, in implementing good water governance, legislation becomes the central mechanisms (MOSTE, 2002; Ahmad Fariz *et al.*, 2009). The legal instrument would then support the water policies, programmes or projects. It also allows the development of water resources management and water services sustainably (Institute of Water Policy (IWP), National University of Singapore (NUS), 2012; GWP, 2012). Hefny (2007) implied that ethical frameworks are also necessary to address water issues such as allocation of water resource, efficiency, productivity and valuation. Aros (2009) emphasized government agencies and state authorities should collaborate more and draw up state and national regulations to ensure proper and sustainable utilization. Wolf and Stanley (2011) added that law performed on behalf of the environment and local authorities should have preventive, remedial and compensatory functions. The water management needs to be under a single entity, improved planning and continued attention must be given. Unifying water related activities under one ministry or agency is also a good alternative for good water governance (Melati, 2010). Ahmad Fariz *et al.* (2009) pointed that the communities, industries and stakeholders should be made aware of the importance of water and take part to protect the natural resource. According to MOSTE (2002), well trained monitoring and enforcement officers are also required to effectively manage and enforce water issues.

3. The role of policy in water sustainability

Water has reached its carrying capacity in balancing the pollution and negative treatment it receives. Malaysia depends on rainfall for its water resource (WHO, 2011), averaging of 3000 mm per year (MWP, 2011). Water supply is from catchment areas; rivers; lakes and reservoirs around 566 km² in 2005 (FAO). By 2020, the total annual demand for clean water supply is estimated to reach 14 bcm, around 12% of total water availability. Aros

(2009) suggested that water use should be planned to be sustainable in every aspect thus sufficient for every usage for present or future. Achieving good water governance requires the impact of the water usage in the long run at every turn of action. Water resources should be managed in a holistic manner. In order to be sustainable, water management should be able to serve various users while protecting the ecology, minimize the damage of human activities (Wolf and Stanley, 2011) and physical processes (Mohd Nor and Atikah, 2003). Many other countries have similar water problems but they are united and very objective in solving and rectifying the problem.

4. Malaysian Water Governance

Prior to 1957, water resource management, supplies and services were under the State Water Board / State Water Authorities and their agencies. The Federal government only provided loan for public water supply infrastructure and grants for rural water supply. In 2006, Malaysian Parliament amended the Ninth Schedule of the Federal Constitution to establish Suruhanjaya Perkhidmatan Air Negara (SPAN) or the National Water Services Commission. SPAN is the national regulatory agency for water sector. SPAN draws its authority from Article 11(b) of Federal Constitution. Water services is now shared between the States and the Federal Government under the Concurrent list, 9_D of Article 95_B (1) (b) under the purview of water supplies and services. The objective is to strengthen the role of Federal government in state water governance and to make the water sector in the country more efficient. Also mentioned in the amendment whichever concession signed prior to the amendment is to be maintained until the agreement expires i.e the privatisation to oversee water supply in Kuala Lumpur and Selangor by the Syarikat Bekalan Air Selangor (SYABAS) signed in the 1990's. Unfortunately, this distribution of power only applies to Peninsular Malaysia. As far as Sabah and Sarawak are concerned, they still control and manage water supplies and services therein.

Following the reforms and amendments, there have been major distributions of water governance in the country. Water policy making is under the Ministry of Energy, Green Technology and Water; forming of guidelines to the National Water Services Commission (SPAN), assets ownership to PAAB (a national water asset holding company) and service provision to the state water companies. The Federal government also distributes water resources and supply management to several departments under different ministries. Looking at Table 1 below shows too many departments are involved in the water sector hence many guidelines and reports to comply.

Table 1: Water Administrative under the Federal Government

Departments	Tasks / Responsibilities
The Department of Irrigation and Drainage (DID)	hydrology, river management, flood mitigation, coastal management and storm water management
The Public Works Department (PWD)	domestic and industrial water supply.
Department of Environment (DOE)	quality of rivers, reservoirs or any water catchment areas
The Ministry of Health (MOH)	quality of raw water supply especially for drinking water purposes
The Ministry of Energy, Green Technology and Water	setting water supply and sanitation policies

The water supply distribution among each state also differs between the organisation and departments in charge. Table 2 shows that even though water in the state is under Federal governance, the department in charge are not the same. Each state in the country does not apply the same guidelines or tasks concerning water. Amendments to the Federal Constitution and the overlapping management among the departments have the public confused on which department is in charge of certain matter or who has the final say to water. It has also provoked conflicts of interest between the Federal and the State government in cases such as the dispute between the State of Selangor and SYABAS, which is unresolved till now.

Table 2: Water Supply Organisation in Malaysia

Type	Water Supply Areas
State Public Works Department	Kedah, Perlis, Labuan and Sarawak (Excluding Kuching, Sibul, Miri, Bintulu and Limbang)
State Water Supply Department	Negeri Sembilan, Sabah and Pahang

State Water Supply Board	Melaka, Perak, Kuching and Sibul
Corporatised Company	Selangor (including Kuala Lumpur), Terengganu and LAKU (Miri, Bintulu, Limbang)
Privatised Company	Penang, Kelantan and Johor

Thus, in spite of the reform, cooperation between agencies, between the States and Federal in dealing with water management and supply has failed. In addition, any amendments of policies are slow and time consuming. Some policies established are also not applied by the departments. Moreover, the authorities lack manpower and not accredited in quality management system to guarantee consistent results (WHO, 2011).

Despite the amendment to the Federal Constitution, there are still a few drawbacks in the Act as it did not state or specify any actions to be taken or penalties if either parties (Federal or State) ignores or refuses to abide to the law. Thus, specific details or clarifications are indeed needed in the act for the water governance in Malaysia to be clearer and thus effective.

Apart from the administrative measures, the government has allocated millions of Ringgit for a five-year plan for water related projects. Since the 8th Malaysian Plan (2001 – 2005) up until now, the 10th Malaysian Plan (2011 – 2015) the Federal government has identified several environmental priorities which includes pollution prevention and water quality, river projects inclusive of rehabilitation, beautification, cleaning and flood mitigation, upgrading water supply and sewerage services. Yet, the success of water supply management is slow so much so they become problems to be concerned with.

5. Relevant Acts

Several Acts were enacted to protect water resources in the country. Table 3 listed some of the available Acts for water management in Malaysia. Notably some states have more laws than the others. The list shows that these Acts are enacted on a case-by-case basis. Hence, sometimes in several occasions they overlap with each other.

Table 3: Relevant Water Acts and Guidelines

Acts and Guidelines	Responsibilities
Water Act 1920	Only applies to states of Negeri Sembilan, Pahang, Perak, Selangor, Melaka, Penang and Federal Territory. The provisions cover property of rivers, restoration, prohibition of diversions and pollution, licensing, penalties and compensation. An Act to provide the control of rivers and streams
Water Supply Enactment (1955)	Empowers state water authorities in supplying water to domestic and commercial users. Only serves as a regulatory body to oversee operations of supply company and ensure compliance with drinking water standards. No legal power to enforce compliance from the companies or for them to initiate corrective actions.
Environmental Quality Act 1974	Prevent, abate, control of pollution and enhancement of the environment.
Water Supply (Federal Territory of Kuala Lumpur), (Act 581)	Water supply and distribution of water in Selangor be applied to the Federal of Kuala Lumpur with modifications.
National Water Services Commission (SPAN), Act 2006	To transfer water supply services from the State List to the Concurrent List. Its vision is towards sustainable, reliable and affordable water services for all. To regulate and supervise water supply and sewerage services, enforce water supply and sewerage services laws and related matters.
Water Services Industry Act (Act 655)	To provide and regulate water supply services and sewerage services and incidental matters thereto.

6. Conclusion

The problem of short supply of water and depletion of clean water resources seems inevitable, if no appropriate action is taken immediately. There is already a lot of demand for water supply. They are putting a strain on the sustainability of the resource. With proper water management, establishment of good strategies, effective legislation, proper maintenance of water resource would eventually materialize. For that reason the fragmentation of jurisdictions, authorities, powers and lack of clear legislative provisions as well as policies and guidelines must be overcome first. Therefore, this paper promotes a revamp of the current system. It must be replaced by a new and

appropriate water management policies and strategies at both Federal and State levels. Relevant agencies must be included into this program where they must be properly and adequately informed. So does the stakeholders and local communities too. It also requires a mindset change amongst the public. This is to create a more informed and concerned society. The communities, industries and stakeholders should be made aware of the importance of water and take part to protect the natural resources.

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