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REVIEW OF PRIVATISATION AND FEDERALISATION OF
WASTE MANAGEMENT SERVICES IN MALAYSIA

1 INTRODUCTION

Privatisation, which was actively pursued from the mid-1980's, is aimed at relieving the financial and administrative burden of the Government and to gradually promote greater participation of the private sector. In this regard, a Privatisation Master Plan¹ was introduced in 1991 to guide the implementation of the privatisation programme in the country. The Privatisation Master Plan identified various modes of privatisation such as the sale of assets, sale of equity, lease of assets, management-buy-out (MBO), build-own-operate (BOO), and build-operate-transfer (BOT).

Privatisation (and in the case of sewerage, federalisation) for waste management has since been undertaken for three sectors, namely that for scheduled wastes, sewerage and for clinical waste. The privatisation agreement was awarded for the former in 1995 and the latter two in 1993. The programme for privatisation of municipal solid waste was initiated in 1994 and implemented on an interim basis from 1997. It has yet to be fully implemented.

1.1 Scheduled Wastes

Privatisation of scheduled wastes, which consists of toxic and hazardous wastes as defined in the Environmental Quality (Scheduled Wastes) Regulations 1989, is undertaken by Kualiti Alam Sdn. Bhd. by way of a privatisation concession agreement. The concession, over a 15-year period, gives Kualiti Alam (KA) the **sole right** to provide **off-site treatment and disposal facilities** for the management of scheduled wastes in Peninsular Malaysia.

The concession agreement is pegged to the Environmental Quality (Scheduled Wastes) Regulations 1989 which defines the waste types covered under the agreement. Although the concession agreement provides KA with the sole right to treat and dispose of scheduled wastes, it does not limit **on-site treatment** of scheduled wastes by waste generators or the **recovery and recycling** of such wastes by other private operators who may be off-site. In view of this, waste generators have the option to either treat their own waste, send it to recyclers, or send it to KA if it cannot be treated or has to be disposed because there is no value for recycling. The principle of "polluter pays" is adopted and charges are imposed in accordance with the type of waste that is required to be treated or disposed.

KA has been operating an integrated Scheduled Waste Management Centre at Bukit Nanas in the State of Negri Sembilan since June 1998. Although the facility is a welcome development for the disposal of scheduled wastes generated particularly by industry, there has generally been reluctance by the smaller industries to use the facility in view of the perceived high tariff imposed by KA. This is compounded by the view that KA's operations are monopolistic and thus their rates are high and not subject to competitive market forces.

¹ Seventh Malaysia Plan, 1996-2000

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The operation of KA is not subsidised by the Government, and consequently the rates charged to waste generators are high. However, based on a similar experience in Singapore, where more than 3 companies are allowed to operate scheduled waste treatment facilities (not including disposal) on a competitive basis, the costs charged by KA are comparatively higher than those charged in Singapore.

1.2 Clinical Waste

Clinical waste is defined as scheduled waste under the auspices of the Environmental Quality (Scheduled Wastes) Regulations 1989. However, the management of these wastes is left in the care of the Ministry of Health (MOH) and not the Department of Environment. In 1993 the MOH made the decision to privatise the management of clinical waste in all its 127 hospitals and institutions². The concession agreement was not confined to the management of clinical waste but was made more attractive as it included four other hospital services, these being cleansing services, linen and laundry services, facilities engineering maintenance services and the biomedical engineering maintenance services.

The concession is for a period of 15 years during which the concessionaires are required to develop the necessary infrastructure for the treatment and disposal of the wastes. It is to be noted that prior to the tender process for the privatisation, the treatment technology (incineration) to be used for clinical waste was determined and set as a condition in the tender. Other features of the agreement included:

- i. The concession is divided into 3 zones, each to be managed by a concessionaire. The regions are Northern (Perak, Pulau Pinang, Kedah, Perlis as well as Sabah and Sarawak), Central and Eastern (Selangor, Federal Territory, Pahang, Terengganu and Kelantan), and Southern (Negri Sembilan, Melaka and Johor).
- ii. The fee structure is also determined such that the capital and operational costs could be recovered over the 15-year period.
- iii. A fee review is allowed after 3 years to take into account inflation, foreign exchange fluctuations and other considerations.
- iv. There is no restriction for each of the concessionaires to take clinical waste from private hospitals and other sources anywhere in the country.
- v. Detailed scope of works, performance indicators, standards and auditing mechanisms were incorporated into the agreement.
- vi. Requirement for the concessionaires to design, develop and install a computerised central management information system (CMIS), to provide up-to-date and timely information on the service nationwide.
- vii. A deduction formula to enable the MOH to deduct fees for non-performance or unsatisfactory service performance by the concessionaires.
- viii. A Monitoring Unit within the Ministry was formed to monitor and enforce the requirements of the concession agreement. A consulting company was also appointed to assist the unit to carry out its duties.

The programme has generally proceeded smoothly with no major constraints within the terms of the concession agreement.

² Pillay, M.S. et. al (2001) Development and Management of Clinical Waste in Malaysia in Conference Proceedings Waste Management 2001.

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1.3 Sewerage

Indah Water Konsortium Sdn. Bhd. (IWK), was awarded a 28-year privatisation concession for the provision of sewerage services in Malaysia in 1993. The concession agreement gave IWK the exclusive right to undertake the following tasks during the concession period for all Local Authorities in the country. The scope included:

- i. Take over from the Government the management, operation and maintenance of the existing public sewerage systems;
- ii. Upgrade and refurbish the existing public sewerage systems;
- iii. Plan, design, construct, and commission new public sewerage systems;
- iv. Inspect, repair, replace, install the public sewerage systems;
- v. Receive, collect, convey, gather, store, transport, treat and dispose of sewage and sewage sludge entering any public sewerage system from private connections;
- vi. Clear, cleanse, empty, remove, transport, treat and dispose of sewage sludge;
- vii. Demand, collect, and retain sewerage charges from customers provided with sewerage services.

The general provisions of the agreement were:

- i. IWK had the **sole right** for the provision of sewerage services in the country, although it did not include Sabah and Sarawak;
- ii. The Government provided IWK with a **support loan** to carry out the capital works programme;
- iii. A **tariff structure** was approved but this was revised in 1996 after public protests and Government's review of the tariff; and
- iv. **Direct billing** was allowed and this was originally linked to payment of the water bill.

IWK faced numerous problems in the implementation of the provisions of the concession agreement. It could not collect tariff as projected, resulting in a large bad debt. Its weak enforcement mechanism precluded taking action against defaulters. IWK had obligation to comply with the conditions in the concession agreement, and with the provisions of the Sewerage Services Act 1993 and the Environmental Quality Act 1974. In addition, the potential impact to public health precluded action such as disconnecting services, even if this was possible.

Other major factors that contributed to the problems faced by IWK included³:

- i. Underestimation of the magnitude of the operational effort and the investment required for refurbishment and new capital works, due to poor planning prior to privatisation as a result of the absence of reliable data and information;

³ Narayama, D. & Mohan, M. (undated) Sustainable Sewerage Management through Privatisation: The Malaysian Experience.

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- ii. The requirement for sludge management was omitted from the financial model;
- iii. Unclear and undefined role of the various stakeholders, with the concessionaire taking an all encompassing roles in sewerage operation and development while ownership and authority rested with the Government. The significant role of the State Governments in the alienation and acquisition of land is fundamental to obtaining land for the development of facilities and this has to be made clear in the privatisation;
- iv. Poor customer acceptance of the privatisation due to poor public perception of the role of IWK, the lack of understanding by the public of the need for improvement of the public sewerage system, the lack of understanding for the tariff when charges for assessment remain unchanged, and lack of transparency in the privatisation process.

As a result of the difficulties faced by IWK, the Government made several changes to the concession agreement, including extending the period of the concession and extending financial assistance in the form of tariff subsidies and loans. However, the financial situation of IWK did not improve and after review the Government decided to take over the shares and assets of IWK. The takeover is an interim measure and this is to be followed by divestment or restructuring in the privatisation arrangements to enable the Government to own the capital assets, while the private sector remains as operator of the services⁴.

2. CHANGES REQUIRED FOR PRIVATISATION

The implementation of privatisation required that various changes to the legal, institutional and administrative aspects had to be undertaken. Some of these are discussed in the following sections.

2.1 Legal Changes

Changes to both the Constitution and existing legislation were necessary to allow privatisation to be undertaken. Some of these changes included amendments to the Federal Constitution, such as Article 83 and 85 of the Constitution, which removed the constraints related to land on privatisation. New laws (such as the Sewerage Services Act 1993) and amendments to existing laws (such as the Local Government Act 1976, the Street, Drainage and Building Act 1974, and the Town and Country Planning Act 1976) were made to allow the federalisation and privatisation of sewerage services to IWK.

In relation to clinical waste management, the Occupational Safety and Health Act 1994 and the Environmental Quality (Scheduled Waste) Regulations 1989 made under the Environmental Quality Act 1974, provided the basis for the formulation of a clinical waste management system to meet the requirements of these Acts. The latter legislation also provided the basis for the privatisation of management of scheduled waste to KA. These legal instruments provided the backdrop and the impetus for the privatisation process and removed constraints, which allowed privatisation to proceed smoothly.

⁴ Eighth Malaysia Plan, 2001-2005.

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2.2 Institutional and Administrative Changes

In the case of sewerage a new entity, the Sewerage Services Department (SSD) under the Ministry of Housing and Local Government, was set up to monitor and administer the Sewerage Services Act 1993. The Department operates regional offices to review and approve new applications for the construction of new sewerage systems, such as sewers and sewage treatment plants. In many instances, IWK assisted in this process by reviewing new applications but the final approval is still required from the SSD. This process is a duplication of effort but may be considered necessary as IWK had to operate the facilities while the SSD, acting for the Government, is the ultimate owner of the facilities. The SSD provides the “check and balance” mechanism to ensure that IWK does not deviate from the standards set by the former.

In respect of Kualiti Alam (KA), the Department of Environment (DOE) acts as the regulatory body to ensure that the operations of KA are consistent with the Environmental Quality Act 1974 and its subsidiary regulations, specifically the Environmental Quality (Scheduled Waste) Regulations 1989. In so far as the DOE is concerned, the operations of KA are governed by the conditions of approval of the Environmental Impact Assessment (EIA) and the licence to operate the facility that it issues. The DOE operates offices in all the States and personnel in the State offices undertake enforcement.

In respect of concessionaires for the management of clinical waste, the MOH has set up a Monitoring Unit for the purposes of monitoring and enforcement of the requirements of the concession agreements. However, a private company has since been appointed to undertake monitoring and enforcement at the hospitals and institutions on behalf of the Ministry. Non-compliance is reported to the Ministry who will take the necessary action against the concessionaires.

3 LESSONS FROM PRIVATISATION OF WASTE MANAGEMENT

The above experiences from the privatisation of the three areas of waste management highlight several important points that are useful in the privatisation of solid waste. Following are some of the observations from the analysis based on discussions with relevant authorities, personal communication and review of documents both published and unpublished (references include the Eighth Malaysia Plan 2001-2005; Narayana D. & Mohan M., (undated); and Pillay et al, (2001)).

3.1 Scope of Concession

It is clear from the experience of IWK and KA that the adoption of a single-concessionaire approach to undertake privatisation of an activity on a large scale does not promote efficiency, which can best be achieved through competition. It is also to be noted that the scope of a concession should reflect the concessionaire's ability to perform, since many of these privatisation schemes require large investments with long payback periods. This is clearly the case for IWK where the magnitude of the operational effort and the total investment required for refurbishment and new capital works was far beyond the means of a single concessionaire.

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A realistic approach needs to be taken to ensure that the concessionaire can manage the concession within its financial resources and the technical expertise and within the time frame of the concession. In this regard, the approach taken by the MOH in the privatisation of clinical waste, by dividing the concession to three (3) zones and allowing free competition in the private sector area, would seem to achieve its objectives better. The competitive approach, by having more than one concessionaire operating, is also a means to ensure that the perception of being a monopoly does not arise. Healthy competition in a free market environment is generally the most useful way to increase productivity and efficiency and this has to be given due consideration in a privatisation. The fact that costs for the treatment of scheduled wastes in Singapore is lower than that charged by KA is also a reflection of the need for a competitive approach to privatisation.

3.2 Planning Requirements for Privatisation

The availability of reliable information to assess the scope of the privatisation is important, as reflected in the case of the privatisation of sewerage services to IWK. Information relating to the size and the state of the existing sewerage infrastructure in the country was grossly lacking and underestimated when the privatisation model was formulated. This resulted in an underestimation of the total investment required for refurbishment and new capital works, which amounted to more than RM18 billion over the concession period, compared to the initial estimate of RM 6.2 billion.

It is also obvious that clear and specific policies and guidelines need to be developed for the privatisation to ensure that there is no ambiguity, and thus obviate dispute at a later date. It is also important that the area for privatisation be clearly defined as demonstrated in the privatisation of scheduled and clinical wastes management. Legal provisions were made which defined the wastes in question. In addition, an assurance of project viability is needed to satisfy not only the concessionaire but other stakeholders. Hence the financial model that is applied for the privatisation should be comprehensive and transparent.

3.3 Roles and Responsibilities of Stakeholders

The roles and responsibilities of the stakeholders involved in the privatisation should be well defined to avoid duplication of effort (such as the case of IWK and the SSD in the approval of new sewerage applications) and to ensure that the stakeholders share in the responsibility of the privatisation (such as State Governments' responsibility to resolve issues related to land for the construction of facilities and consumers' responsibility to pay for the services).

In this regard, transparency in the privatisation process is a means to avoid conflicts and to ensure acceptance of the privatisation. Public awareness and education and participation in the privatisation process are important to ensure that each stakeholder understands its role to avoid unnecessary questions in the future. The lack of understanding by the public in the privatisation of sewerage resulted in their unwillingness to pay for the services of IWK as it was perceived to be another scheme to "tax" the public. This arose in part by the perception that payment of assessment covered sewerage services and assessment was not reduced proportionately with privatisation. In addition, the bad debt problem of IWK was exacerbated with the lack of support of the water authorities in the collection of tariff for sewerage.

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Land is a crucial matter in the successful implementation of programmes in a privatisation. This is clear in the case of the privatisation of scheduled wastes management, where the State Government of Negri Sembilan contributed to the effort to acquire the land that was needed for the construction of the KA facility.

The support of the States was important in the case of privatisation of sewerage, since it involved amendments to existing legislation (such as the Local Government Act 1976, Street, Drainage and Building Act 1974 and the Town and Country Planning Act 1976), which are within the jurisdiction of the States. The need to consult and to obtain State support for these changes to allow for privatisation is thus important. Similar considerations will need to be given to the privatisation of solid waste management.

3.4 Financial

As highlighted earlier, the financial model that is used in the development of the privatisation proposal has to be comprehensive and realistic, based on reliable information and data. Important issues that need to be addressed are the “willingness-to-pay” and the tariff structure that is to be used in the model. This is obvious in the case of IWK.

Reduction in the tariff for sewerage, as a result of the Government review due to public complaints, resulted in a significant loss of revenue to IWK which affected its financial status substantially. The need to establish a tariff that is reasonable and generally acceptable by the consumers is an area of concern. This is a consideration in the privatisation of solid waste as the same principle for sewerage applies to solid waste.

It was also clear that despite the financial assistance of the Government in the form of loans and subsidies to IWK, the latter was unable to operate in view of the enormity of the operations and development programme that it had to fulfil, and for which it did not have the financial resources and the manpower. This is an important issue in the privatisation of solid waste management, because it would be difficult for the concessionaires or the State Governments to finance the high investment required for waste treatment and disposal facilities without significant increase in tariff or property assessment.

The assistance of the Federal Government in the financing of these facilities is required. Therefore, at the present moment, “full privatisation” of all functions within solid waste management may be an unacceptable financial burden on the public. Hence, the division to grant a concession for collection service only.

3.5 Institution and Administration (Monitoring and Enforcement)

Monitoring and enforcement are important aspects in privatisation to ensure that the concessionaire fulfils the conditions of the privatisation agreement. As such the necessary institutional and administrative arrangements to undertake this require to be in place to ensure compliance.

In the case of the privatisation of scheduled wastes, the DOE was nominated to act on behalf of the Government in the implementation of the concession agreement. The Scheduled Waste Section in the Control Division of the DOE, with the assistance of the State offices, is responsible for the enforcement (and licensing) of the activities

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of KA (as well as other scheduled waste operators). The powers for enforcement and monitoring are provided under the Environmental Quality Act 1974 and the Environmental Quality (Scheduled Wastes) Regulations 1989.

The Monitoring Unit of the Engineering Services Division of the MOH is responsible for the monitoring and supervision in respect of the privatisation of clinical waste management. However, as indicated earlier, the Unit is supported by a private company appointed by the MOH to monitor and enforce at the work place (which are the hospitals and institutions identified in the concession agreement). In this regard, there is no necessity for the MOH to have a large work force to undertake monitoring and enforcement. However, this arrangement is beneficial if it results in cost effective, professional and independent enforcement.

The Sewerage Services Department (SSD) was set up to monitor and enforce the Sewerage Services Act 1993 and to oversee the activities of IWK. It was also the responsibility of the SSD to approve projects that were submitted to it including those that were proposed by IWK. Like the DOE, it had to have substantial manpower and a large organisation (which included regional offices) to manage and enforce the provisions of the Act and ensure compliance of IWK to the concession agreement. The Department has been constrained by the lack of qualified manpower to deal with a large workload. Thus, unlike the MOH, the burden of responsibility was significant to the function of the Department.

The constraints of the regulatory authorities in the enforcement and monitoring of the privatised sectors have been recognised by the Government in the Eighth Malaysia Plan, and the Government undertook steps to restructure and streamline these authorities into sector-based regulators or commissions. These regulatory authorities will be entrusted "to establish economic and safety regulations to safeguard consumer interests and to promote a healthy development of the respective sectors". The regulators or commissions proposed include one for "water and sanitation" to regulate the areas of "water, sewerage and solid waste management".