

VOLUME 3 – SECTOR VII

INSTITUTIONAL ASPECTS OF URBAN DRAINAGE

**THE STUDY ON INTEGRATED URBAN DRAINAGE IMPROVEMENT
FOR MELAKA AND SUNGAI PETANI
IN MALAYSIA**

FINAL REPORT

VOLUME 3: SUPPORTING REPORT ON DRAINAGE STRUCTURE PLAN

SECTOR VII: INSTITUTIONAL ASPECTS OF URBAN DRAINAGE

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Appendix 1 Integrated Urban Drainage (Legislative Review)

SECTOR VII

INSTITUTIONAL ASPECTS OF URBAN DRAINAGE

1. INTRODUCTION

The institutional aspects of urban drainage will address issues pertaining to :-

- (a) Organizational aspects particularly of agencies responsible for urban drainage
- (b) Laws and regulations pertaining to urban drainage and development.

Urban drainage as a government activity has not been specifically assigned to any particular agency in the country. The two main agencies involved in urban drainage are Local Authorities and the Drainage and Irrigation Department. The traditional emphasis on drainage activities in the country was related to agricultural purposes. These works were undertaken by the Drainage Division of the DID. An Urban Drainage Unit was set up to address the urban drainage problems and flood related problems in Kuala Lumpur. However this unit was disbanded and transferred to the Drainage Division of DID with the establishment of Drainage Division within DBKL (Kuala Lumpur City Hall). The current functional responsibility of the Drainage Division in DID is mainly on agricultural drainage for non granary areas, flood mitigation projects and providing technical advice on urban drainage upon request from local authorities/agencies. As the country becomes urbanised it is expected that the non-agricultural sectors of DID such as rivers, coast, water resources and urban drainage will become increasingly important and it is important that clear areas of responsibility are established among the various agencies involved in urban drainage. A brief description of the various agencies involved in urban drainage and development is described below. These include agencies at Federal, State and Local Level.

2. REVIEW OF EXISTING ORGANISATIONAL ASPECTS

2.1 Federal Level

Economic Planning Unit: This is the principal national planning agency which is responsible for the preparation of long-term perspective plans and 5 year development plans. The EPU is divided into a number of divisions such as the Infrastructure and Utilities Division and the Agriculture Division, which are responsible for co-ordinating development projects involving foreign technical assistance including urban drainage studies.

Drainage and Irrigation Department (DID): This department which is located within the Ministry of Agriculture is responsible for :

- (a) Drainage Works for agriculture
- (b) Flood mitigation works in rural areas and in urban areas at the request of local authorities.
- (c) Conserve and improve river flow and hydraulic efficiency
- (d) Collect and analyse hydrological data for water resource development.
- (e) Undertake research and execute coastal erosion works.
- (f) Provide engineering support services to other departments.

These works are carried out by the six main divisions in the DID such as the River Engineering Division, Hydrology Division, Coastal Engineering Division, Corporate Development Division, Drainage Division and the Irrigation Division. While the traditional functions of DID were in drainage and irrigation for agriculture development, it is anticipated that the department will play a more dominant role in urban drainage, coastal and river management in the future. This can be seen in the changes in development expenditure under the various Malaysia Plans (MP), for example, expenditure for Irrigation works dropped from 86.7% under the 1st MP to a mere 10.8% in the 6th MP compared to River (Flood Mitigation works) which increased from 2.3% under the 1st MP to 56.7% under the 6th MP. Similarly allocations for coastal protection and other non-agricultural programs including urban drainage showed significant increases. This trend is likely to continue with the increased urbanisation in the country. The Drainage Division of DID comprises two branches namely the Agricultural Drainage Branch and the Urban Drainage Branch. The Urban Drainage Branch is responsible for undertaking urban drainage master plan studies as well as the planning, design, implementation and management of urban drainage works. The Branch is also responsible for the formulation of strategies, preparation of long-term programmes as well as implementation of infrastructural facilities to overcome flooding and drainage problems in urban areas. Currently the budget for the Division is taken under the programme on Flood Mitigation.

Local Government Department of the Ministry of Housing and Local Government: This department is responsible for all administrative guidance and co-ordination of activities of Local Authorities. Other functions include:

- (a) Upgrading the administration of local authorities through the formulation of new laws
- (b) Formulating policies, implementing and co-ordinating the distribution of development grants and development projects from Federal to Local Government via the State Government.
- (c) Serves as the Secretariat of the NCLG (National Council for Local Government)
- (d) To plan, formulate and assess policies regarding new village development.
- (e) To give technical advice and expertise to Local Authorities.

All requests for federal development grants for urban drainage will have to be channelled through this division. There is also a Technical Division within the department, which provides technical advice to Local authorities on building works and municipal engineering. The Department's current programmes on urban drainage are on an ad-hoc basis and is limited to allocation for drainage improvement works. This is undertaken under the programme on Urban Drainage (Projek Perparitan Bandar) where an initial budget of about RM10 million were allocated in 1997 but has not been disbursed yet. This programme could be expanded in the future to include comprehensive feasibility studies on urban drainage for Municipal areas in the country. The Department in the past had allocations of up to RM100 million to address problems pertaining to flash floods in municipal areas. This budget however was a one-off budget to address a specific objective.

National Council for Local Government: This council is established under the Federal Constitution and is chaired by the Minister of Housing and Local Government. This council in consultation with the Federal and State governments is responsible for all policy matters on Local Government and the formulation of laws to ensure uniformity in the promotion, development and control of Local Government. All policy decisions on urban drainage as a local authority function will have to be deliberated in this council. It is important to note that the decision of the council is binding on the States. Most of the legislation pertaining to local government such as the Local Governments Act 1976, Streets Drainage Building Act 1974 and the Town and Country Planning Act 1976 were approved by the council, prior to its adoption by the respective states and local authorities.

Department of Environment: The DOE is responsible for the co-ordination of all activities relating to the discharge of wastes into the environment, for preventing and controlling pollution and protecting and enhancing the quality of the environment. The main operational

statute is the Environmental Quality Act 1974 and the various regulations enacted under the main Act. The DOE may also issue licences to control certain prescribed activity that poses a hazard or danger to the quality of the environment. The other important control measure is the Environmental Impact Assessment (EIA) that is required to be done at the planning stage of projects that fall under the prescribed list of activities of the Environmental Quality (Prescribed activities) Environmental Order 1987.

Public Works Department: The Public works department or JKR is the main government implementing agency for all civil works including roads, roadside drains, culverts, water supply and government buildings. Under the Malaysia Inc policy and the on going privatisation policy of the government several major infrastructure works have been built on a turnkey basis with supervisory functions exercised by JKR. While roadside drains and culverts on Federal and state roads are built by JKR, the responsibility does not extend to urban drainage facilities.

2.2 State Level

State Economic Planning Unit: This unit is responsible for the socio-economic development programme in the state. It also finalises economic development plans and submits the state programme for inclusion in the Malaysia Plan.

State Drainage and Irrigation Department: The main responsibility of this department is the design, construction and maintenance of irrigation channels and drains for agriculture purposes in rural areas. This is a State Department with officers seconded from the Federal Level. The state DID however is not directly involved in urban drainage except for consultation. Notwithstanding this the distinction between river and drain is often a thin one, for example the river improvement works in Sungai Parit China in Melaka and the Flood Bypass are essentially part of urban drainage activities that was undertaken by the State DID. Obviously there is a need to clearly define and demarcate drains that fall within the ambit of the local authority and those that fall under DID.

State Public Works Department: This Department is responsible for the planning, construction and maintenance of civil works including roadside drains and culverts built on State roads. In the past there had been a lack of co-ordination between JKR and DID on the sizing of culverts on roads across rivers. In several locations in Sg. Petani and Melaka there were several culverts built by JKR which were too small to accommodate large discharge from the rivers. This often resulted in localised flooding at these crossings during rainy seasons.

State Town and Country Planning Department: This department is the principal advisor to the State and local authorities on physical planning and development. It also serves as the Secretariat to the State Planning Committee. The department also provides technical comments to Local Authorities on layout plans submitted by developers. It is at the layout plan stage that sufficient drainage reserves for the projects are secured. It is also imperative that the co-ordinations of urban drainage plans are achieved in the Structure and Local Plans of the Local Authority.

State Planning Committee: This is probably the only committee within the framework of planning administration established through legislative provisions i.e. section 4(1) Town and Country Planning Act 1976. This committee which is chaired by the Chief Minister comprises most of the senior government officials in the state including the State Secretary, State legal Advisor, State Director of Lands and Mines, e Director of State Planning Unit, State Director of Public works, the State Financial Officer, the State Development Officer, the State Director of Environment and four other members appointed by the State Authority. The State Director of DID is not specifically mentioned as a Committee member. In view of the growing importance of river management, flood control, urban drainage and coastal erosion management in urban planning and development, it may be necessary that the State Director of DID be made a permanent member of the SPC. The function of the SPC are:-

- (a) Promote within the framework of the national policy, the conservation, development and use of all lands in the state.
- (b) Advise the State government on matters relating to the conservation, use and development of land in the state.
- (c) Give direction to the Local Authority on matters pertaining to physical planning and development.
- (d) To approve Draft Structure Plans with or without conditions. In practice the SPC also approves the Draft Local Plan before it is adopted by the Local Authority.
- (e) Collection and publication of information and statistics on town and country planning.

The SPC should be used as an effective forum for the advancement of integrated urban drainage practices in the State.

The State Economic Development Corporation : The SEDC was established in every state by state enactment. Generally they are set up to promote and undertake land development in the state for purposes of agriculture, industrial, residential, mining and commercial development. The SEDC operates as the commercial business enterprise of State Governments. In the past most industrial estates in the State were developed by the SEDC including the drainage systems within the industrial estate. It is only in recent years that the private sector has taken an active role in providing for industrial estates.

State Department for Local Government: This department is often located within the State Secretariat. It is responsible for implementing policies and guidelines of the NCLG. It also provides administrative guidance and supervision of local authorities and review of financial plans and budget of local authorities prior to the submission to the State Government for approval.

2.3 Local Level

Local government is a state responsibility and the powers are often limited. There is no elected authority and all councillors are appointed by the State Government. The Federal Government with the exception of City Hall of Kuala Lumpur has no direct authority in relation to local authorities (LA). However, the Local Government Department within the MHLG does monitor and assist the LA with specific grants. At a policy level, the National Council for Local Government plays a co-ordinating role.

The fiscal resources and revenue generating capacities of local authorities are generally weak relying on a combination of Federal Grants, State Grants and local collections from rates and licenses.

The strength of the local authorities varies considerably among the LA's. The larger municipalities are comparatively strong in staff, institutional capacities and financial position.

LA councils generally manage through committees made up of councillors, local authority officials and from various public agencies such as JKR and JPS. All decisions of the committees must be endorsed by the full council.

The Town and Country Planning Act also makes the LA's the local planning authorities. However, this comes into force only when the provision has been adopted by the State Government.

Both the Municipalities of Sg. Petani and the City of Melaka (MPMBB) have an Engineering Department which is responsible for urban drainage works. However, both the local