

## REFERENCES

### LAWS

1. FEDERAL CONSTITUTION
2. WATERS ENACTMENT
3. WATER SUPPLY ENACTMENT
4. MINING ENACTMENT
5. MINING RULES
6. FOREST ENACTMENT
7. FOREST RULES
8. GEOLOGICAL SURVEY ACT
9. ENVIRONMENTAL QUALITY ACT
10. ENVIRONMENTAL QUALITY (PRESCRIBED PREMISES) (CRUDE PALM-OIL) REGULATIONS
11. ENVIRONMENTAL QUALITY (PRESCRIBED PREMISES) (RAW NATURAL RUBBER) REGULATIONS
12. ENVIRONMENTAL QUALITY (SEWAGE AND INDUSTRIAL EFFLUENTS) REGULATIONS
13. LOCAL GOVERNMENT ACT
14. STREET, DRAINAGE AND BUILDING ACT
15. ELECTRICITY ACT
16. IRRIGATION AREAS ORDINANCE
17. DRAINAGE WORKS ORDINANCE
18. FISHERIES ACT
19. MERCHANT SHIPPING ORDINANCE
20. LAND ACQUISITION ACT
21. FINANCIAL PROCEDURE ACT
22. DEVELOPMENT FUNDS ACT
23. MUDA AGRICULTURAL DEVELOPMENT AUTHORITY ACT
24. PENANG WATER AUTHORITY ENACTMENT

25. WATER SUPPLY FUND ENACTMENTS
26. STATE WATER SUPPLY FUND (FINANCIAL AND ACCOUNTING PROCEDURE) ACT
27. NATIONAL LAND CODE
28. LAND CONSERVATION ACT
29. TOWN AND COUNTRY PLANNING ACT
30. STATE CONSTITUTIONS
31. LEMBAGA KEMAJUAN PAHANG TENGGARA ACT
32. LAND DEVELOPMENT ORDINANCE
33. FARMERS' ORGANIZATION AUTHORITY ACT
34. MINISTERIAL FUNCTION ACT
35. WATER SUPPLY CHARGES, STATE GAZETTES
36. MINISTERS OF THE FEDERAL GOVERNMENT ORDER

GENERAL REFERENCES

37. BUDGET ESTIMATE, FEDERAL GOVERNMENT, 1980
38. BUDGET ESTIMATE, PERLIS STATE GOVERNMENT, 1980 (Unpublished)
39. BUDGET ESTIMATE, PULAU PINANG STATE GOVERNMENT, 1980 (Unpublished)
40. BUDGET ESTIMATE, PERAK STATE GOVERNMENT, 1980 (Unpublished)
41. BUDGET ESTIMATE, SELANGOR STATE GOVERNMENT, 1980 (Unpublished)
42. BUDGET ESTIMATE, NEGERI SEMBILAN STATE GOVERNMENT, 1980 (Unpublished)
43. BUDGET ESTIMATE, MELAKA STATE GOVERNMENT, 1980 (Unpublished)
44. BUDGET ESTIMATE, JOHOR STATE GOVERNMENT, 1980 (Unpublished)
45. BUDGET ESTIMATE, PAHANG STATE GOVERNMENT, 1980 (Unpublished)
46. BUDGET ESTIMATE, TRENGGANU STATE GOVERNMENT, 1980 (Unpublished)
47. BUDGET ESTIMATE, KELANTAN STATE GOVERNMENT, 1980 (Unpublished)
48. BUDGET ESTIMATE, PETALING JAYA MUNICIPAL COUNCIL, 1980 (Unpublished)
49. ANGGARAN PENDAPATAN DAN PERBELANJAAN, MAJLIS PERBANDARAN KOTA BHARU, 1980 (INCOME AND EXPENDITURE ESTIMATE, KOTA BHARU MUNICIPAL COUNCIL) (Unpublished)

50. BUDGET ESTIMATE, DOE, 1981 (Unpublished)
51. ANNUAL REPORT, PENANG SEDC, 1978
52. ANNUAL REPORT, MOH, 1977
53. ANNUAL REPORT, NEB, 1980
54. ANNUAL REPORT, FELDA, 1978
55. ANNUAL REPORT, DARA, 1977
56. QUARTERLY REPORT, MOH
57. DRAINAGE AND IRRIGATION ANNUAL REPORT, 1976 and 1977 (Unpublished)
58. MADA REPORT, 1977
59. 21 YEARS OF FELDA
60. STAFF FUNCTIONS AND DUTIES, DOE (Unpublished)
61. DUTY LIST OF MELAKA DID, 1980 (Unpublished)
62. DUTY LIST OF KELANTAN DID, 1980 (Unpublished)
63. DUTY LIST OF KELANTAN PWD, 1980 (Unpublished)
64. DUTY LIST OF JASIN DISTRICT, 1979 (Unpublished)
65. DUTY LIST OF KUANTAN DISTRICT, 1980 (Unpublished)
66. DUTY LIST OF KUALA TRENGGANU DISTRICT, 1980 (Unpublished)
67. DUTY LIST OF KOTA BHARU MUNICIPAL COUNCIL, 1980 (Unpublished)
68. MEMORANDUM BY DID, 1948 (Unpublished)
69. ESTABLISHMENT OF A HYDROGEOLOGICAL UNIT AT DID (Unpublished)
70. ORGANIZATION CHART, EPU, 1980 (Unpublished)
71. ORGANIZATION CHART, PWD, 1980 (Unpublished)
72. ORGANIZATION CHART, WATER SUPPLY DIVISION OF PWD, 1980 (Unpublished)
73. ORGANIZATION CHART, PERAK PWD, 1980 (Unpublished)
74. ORGANIZATION CHART, WATER SUPPLY DIVISION OF KELANTAN DID, 1979 (Unpublished)
75. ORGANIZATION CHART, SELANGOR WATERWORKS DEPARTMENT, 1980 (Unpublished)
76. ORGANIZATION CHART, DID, 1980 (Unpublished)

77. ORGANIZATION CHART, PLANNING SECTION OF DID, 1980 (Unpublished)
78. ORGANIZATION CHART, HYDROLOGY SECTION OF DID, 1980 (Unpublished)
79. ORGANIZATION CHART, PERAK DID, 1980 (Unpublished)
80. ORGANIZATION CHART, GSD, 1980 (Unpublished)
81. ORGANIZATION CHART, MINES DEPARTMENT, 1980 (Unpublished)
82. ORGANIZATION CHART, FISHERIES DEPARTMENT, 1980 (Unpublished)
83. ORGANIZATION CHART, FOREST DEPARTMENT, 1980 (Unpublished)
84. ORGANIZATION CHART, DOE, 1981 (Proposed) (Unpublished)
85. ORGANIZATION CHART, BRANCH OFFICES OF DOE, 1981 (Proposed) (Unpublished)
86. ORGANIZATION CHART, FEDERAL LAND AND MINES DEPARTMENT, 1980 (Unpublished)
87. ORGANIZATION CHART, COMMISSIONER OF LANDS AND MINING IN JOHOR, 1980 (Unpublished)
88. ORGANIZATION CHART, MINISTRY OF LAND AND REGIONAL DEVELOPMENT AND RELATED STATUTORY BODIES, 1980 (Unpublished)
89. ORGANIZATION CHART, MINISTRY OF WORKS AND PUBLIC UTILITIES, 1980 (Unpublished)
90. ORGANIZATION CHART, NEB, 1980 (Unpublished)
91. ORGANIZATION CHART, FELDA, 1980 (Unpublished)
92. ORGANIZATION CHART, MADA, 1977 (Unpublished)
93. ORGANIZATION CHART, DARA, 1979 (Unpublished)
94. ORGANIZATION CHART, PENANG WATER AUTHORITY, 1980 (Unpublished)
95. ORGANIZATION CHART, STATE GOVERNMENTS, 1980 (Unpublished)
96. ORGANIZATION CHART, JASIN LAND AND DISTRICT OFFICE IN MELAKA, 1980 (Unpublished)
97. ORGANIZATION CHART, PETALING DISTRICT COUNCIL, 1980 (Unpublished)
98. ORGANIZATION CHART, PETALING JAYA MUNICIPAL COUNCIL, 1980 (Unpublished)
99. ORGANIZATION CHART, KOTA BHARU MUNICIPAL COUNCIL, 1980 (Unpublished)
100. THIRD MALAYSIA PLAN, 1976-1980

101. JOHOR RIVER WATER AGREEMENT, 1962 (Unpublished)
102. ENVIRONMENT IMPACT ASSESSMENT HANDBOOK, DOE, 1979 (Unpublished)
103. DID MANUAL, 1973 (Unpublished)
104. BUILDING INSTITUTIONS FOR PREPARING AND EXECUTING DEVELOPMENT PLANS, EPU (Unpublished)
105. MALAYSIA'S NATIONAL DISASTER RELIEF PLAN AND PREPAREDNESS (Unpublished)
106. GEOLOGICAL INVESTIGATION IN MALAYSIA, GSD (Unpublished)
107. SEQUENTIAL ANALYSIS OF LAND ACQUISITION, 1980 (Unpublished)
108. PENINSULAR MALAYSIA'S HYDRO POWER DEVELOPMENT IN THE 1980s, NEB (Unpublished)
109. GAZETTE NOTIFICATION OF EACH STATE
110. WATER BILL, SELANGOR WATERWORKS DEPARTMENT, 1980
111. MALAYSIAN OFFICIAL DIARY, 1980
112. PROCEEDING OF SYSTEMS ENGINEERING SEMINAR ON WATER QUALITY, Abu Bakar of DOE, 1978
113. FEASIBILITY AND ENGINEERING STUDY OF THE KUANTAN URBAN AND DEVELOPMENT PROJECT (Report)
114. STUDY OF WATER RESOURCE MANAGEMENT IN THE PAHANG TENGGARA REGION, Vol. 2 of Draft Final Report, 1979
115. SEWERAGE AND DRAINAGE SYSTEM, ALOR STAR STUDY (Report)
116. MALAYSIA OFFICIAL YEAR BOOK, DEPARTMENT OF INFORMATION, MINISTRY OF INFORMATION, 1976 and 1977
117. INFORMATION MALAYSIA, Incorporating MALAYSIA YEAR BOOK, Haji Yusof Kasman, 1978/79
118. APPRAISAL OF THE NATIONAL SMALL-SCALE IRRIGATION PROJECT MALAYSIA, World Bank, 1977
119. ORGANISATION OF THE GOVERNMENT OF MALAYSIA, DEVELOPMENT ADMINISTRATION UNIT, PRIME MINISTER'S DEPARTMENT, 1967
120. NEGARA KITA, SEJARAH, PENTADBIRAN AND DASAR-DESAR PEMBANGUNAN (OUR COUNTRY, HISTORY, ADMINISTRATION AND DEVELOPMENT POLICIES), INSTITUTE TADBIRAN AWAM NEGARA, 1980
121. AN INTRODUCTION TO THE MALAYSIAN LEGAL SYSTEM, Wu Min Aun, 1978

122. ADMINISTRATIVE LAW OF MALAYSIA AND SINGAPORE, Prof. M.P. Jain, 1980
123. FARMERS' CO-OPERATIVES (INSTITUTION) FOR SMALL FARMERS IN MALAYSIA, A.H. Ahmad Sarji, 1977
124. REAL ESTATE VALUATION IN MALAYSIA, P.M. Verghese, 1975
125. LOCAL GOVERNMENT IN PENINSULAR MALAYSIA, M.W. Norris, 1980

# **TABLES**





Table 1 DISTRIBUTION OF LEGISLATIVE POWERS  
FOR WATER-RELATED MATTERS (1/4)

Item	Legislative Lists		
	Federal List	Concurrent List	State List
1. Rivers/ Water	Federal works and power, including:- .rivers and canals, except those wholly within one State or regulated by an agreement between all the States concerned (I-11(b))		State works and water, that is to say:- .subject to the Federal List, water (including rivers and canals); riparian rights (II-6(c))
2. Water Supply	Federal works and power, including:- .water supplies, except those wholly within one State or regulated by an agreement between all the States concerned (I-11(b))		State works and water, that is to say:- .subject to the Federal List, water (including water supplies) (II-6(c))
3. Drainage and Irrigation		Drainage and Irrigation (III-8)	
4. Hydropower Generation	Federal works and power, including:- .production, distribution and supply of water power (I-11(b))  Electricity (I-11(c))		

Remarks; ( ): Number of Lists and clause/section number set out in the Ninth Schedule

Source; Ref. 1

Table 2 DISTRIBUTION OF LEGISLATIVE POWERS  
FOR WATER-RELATED MATTERS (2/4)

Item	Legislative Lists		
	Federal List	Concurrent List	State List
5. Water Pollution Control	<p>Trade, commerce and industry, including:-</p> <p>.industries; regulation of industrial undertakings (I-8(i))</p> <p>.factories; boilers and machinery; dangerous trades (I-8(k))</p> <p>.dangerous and inflammable substances (I-8(l))</p> <p>Medicine and health, including sanitation in the federal capital (I-14)</p>	<p>Public health, sanitation (excluding sanitation in the federal capital) and the prevention of diseases (III-7)</p> <p>Protection of wild animals and wild birds; National Parks (III-3)</p> <p>Rehabilitation of mining land and land which has suffered soil erosion (III-9)</p>	<p>Local government outside the Federal Territory, including:-</p> <p>.obnoxious trades and public nuisances in local authority areas (II-4(b))</p> <p>State works and water, that is to say:-</p> <p>.subject to the Federal List, water (including rivers and canals) (II-6(c))</p> <p>Land except with respect to the Federal Territory, including:-</p> <p>.land improvement and soil conservation (II-2(a))</p> <p>.Agriculture and forestry except with respect to the Federal Territory, including:-</p> <p>.forests (II-3(b))</p> <p>State works and water, that is to say:-</p> <p>.control of silt (II-6(c))</p>
6. Watershed Management			

Remarks; ( ): Number of Lists and clause/section number set out in the Ninth Schedule

Source; Ref. 1

Table 3 DISTRIBUTION OF LEGISLATIVE POWERS  
FOR WATER-RELATED MATTERS (3/4)

Item	Legislative Lists		
	Federal List	Concurrent List	State List
7. Fisheries	Shipping, navigation and fisheries, including:- .maritime and esturine fishing and fisheries, excluding turtles (I-9(d))		Turtles and riverine fishing (II-12)
8. Mining	Trade, commerce and industry, including:- .subject to the State List, development of mineral resources; mines, mining, minerals and mineral ores; purchase, sale, import and export of minerals and mineral ores; regulation of labour and safety in mines and oilfields (I-8(j))		Land except with respect to the Federal Territory, including:- .permits and licences for prospecting for mines; mining lease and certificates (II-2(c))
9. Land Administration			Land except with respect to the Federal Territory, including:- .land tenure, relation of landlord and tenant; registration of titles and deeds relating to land; rent restriction (II-2(a)) .compulsory acquisition of land (II-2(d)) .transfer of land, mortgages, leases and charges in respect of land; easement (II-2(e))

Remarks; ( ): Number of Lists and clause/section number set out in the Ninth Schedule

Source; Ref. 1

Table 4 DISTRIBUTION OF LEGISLATIVE POWERS  
FOR WATER-RELATED MATTERS (4/4)

Item	Legislative Lists		
	Federal List	Concurrent List	State List
10. Navigation	<p>Shipping, navigation and fisheries, including:-</p> <p>.shipping and navigation on the high seas and in tidal and inland waters (I-9(a))</p> <p>.ports and harbours; foreshores (I-9(b))</p> <p>Communications and transport, including:-</p> <p>.regulation of traffic by land, water and air other than on rivers outside harbour areas wholly within one State (I-10(d))</p> <p>.carriage of passengers and goods by land, water and air (I-10(e))</p>		<p>State works and water, that is to say:-</p> <p>.roads, bridges and ferries other than those in the Federal List (II-6(b))</p> <p>.subject to the Federal List, water (including rivers) (II-6(c))</p>
11. Planning		Town and country planning, except in the federal capital (III-5)	
12. Survey/ Research	<p>Surveys, inquiries and research, including:-</p> <p>.urvey of the Federation; social, economic and scientific surveys; meteorological organizations (I-12(b))</p> <p>.scientific and technical research (I-12(c))</p>		<p>Inquiries for State purpose, including commissions of inquiry, and collection of statistics with respect to any of the matters included in the State List or dealt with by State law (II-10)</p>

Remarks; ( ): Number of Lists and clause/section number set out in the Ninth Schedule

Source; Ref. 1

Table 5 GRANTS TO THE STATES PROVIDED  
BY THE FEDERAL CONSTITUTION

Capitation Grant <sup>/1</sup>	State Road Grant <sup>/2</sup>
<p>Payable to each State in respect of a financial year shall be at the following rates:</p> <ol style="list-style-type: none"> <li>1. For the first 100,000 persons, at the rate of M\$20 per person;</li> <li>2. For the next 150,000 persons, at the rate of M\$10 per person;</li> <li>3. For the next 250,000 persons, at the rate of M\$6 per person;</li> <li>4. For the remainder, at the rate of M\$3 per person,</li> </ol> <p>and shall be based on the population of the State as determined at the last census taken before the beginning of the preceding financial year.</p>	<p>Payable to each of the States of Malaya in respect of a financial year shall be calculated by multiplying:</p> <ol style="list-style-type: none"> <li>1. The average cost to a State of maintaining a mile of State road, including the cost of repairing and maintaining any bridges, viaducts or culverts forming part thereof or therewith for State roads in those States by the Federal Government after consultation with the National Finance Council; by</li> <li>2. So much of the mileage of State roads in that State as qualifies for grant.</li> </ol>

Remarks; /1: Refer to Part I of the Tenth Schedule to the Federal Constitution. Parliament may from time to time by law vary the rates. The Capitation Grant Act, 1976 has framed for this purpose.

/2: Refer to Part II of the Tenth Schedule.

Source; Ref. 1

Table 6 REVENUE SOURCES OF THE STATES PROVIDED  
BY THE FEDERAL CONSTITUTION

1. Revenue from today shops.
2. Revenue from lands, mines and forests.
3. Revenue from licences other than those connected with mechanically propelled vehicles, electrical installations and registration of businesses.
4. Entertainments duty.
5. Fees in courts other than federal counts.
6. Fees and receipts in respect of specific services rendered by departments of State Governments.
7. Revenue of town boards, town councils, rural boards, local councils and similar local authorities other than:-
  - (a) municipalities established under any Municipal Ordinance;
  - (b) those town boards, town councils, rural boards, local councils and similar local authorities which have power under written law to retain their revenues and control the spending thereof.
8. Receipts in respect of water supplies, including water rates.
9. Rents on State property.
10. Interest on State balances.
11. Receipts from land sales and sales of State property.
12. Fines and forfeitures in courts other than federal courts.
13. Zakat, Fitrah and Bait-ul-Mal and similar Islamic religious revenue.
14. Treasure trove.

Remarks; Refer to Part III of the Tenth Schedule to  
the Federal Constitution

Source; Ref. 1

Table 7      CORRESPONDENCE BETWEEN LEGISLATIVE LISTS  
AND WATER-RELATED LAWS IN FORCE (1/2)

Items in Legislative Lists	Federal Laws	State Laws
<b>I. Federal List</b>		
1. Rivers/Water; Inter-state	-	-
2. Water Supply; Inter-state	-	-
3. Hydropower Generation; Water power; Electricity	Electricity Act	-
4. Water Pollution Control; Trade, commerce and industry; Medicine and health	Environmental Quality Act	-
5. Fisheries; Maritime and estuarine fishing and fisheries	Fisheries Act	-
6. Mining; Development of mineral resources, etc.	-	-
7. Navigation; Shipping and navigation; Communi- cations and transport	Merchant Shipping Ordinance	-
8. Survey/Research; Scientific and technical research	Geological Survey Act	-
<b>II. Concurrent List</b>		
1. Drainage and Irrigation	Irrigation Areas Ordinance Drainage Works Ordinance	Rivers and Drainage Enactment (Kelantan) Agricultural Drains Ordinance (Johor)
2. Water Pollution Control; Public health, sanitation and the prevention of diseases	-	-
3. Watershed Management; Rehabilitation of land; Protection of wild life; National Parks	Protection of Wild Life Act National Parks Act	Taman Negara Enactment (Pahang, Kelantan and Trengganu)
4. Planning; Town and country planning	Town and Country Planning Act*	-

Remarks; \*: Enacted by Parliament as a Federal law for the purpose only of ensuring uniformity of law and policy, based on Article 76 (4) of the Federal Constitution.

Table 8 CORRESPONDENCE BETWEEN LEGISLATIVE LISTS  
AND WATER-RELATED LAWS IN FORCE (2/2)

Items in Legislative Lists	Federal Laws	State Laws
III. State List		
1. Rivers Water; Wholly within one State	-	Rivers and Drainage Enactment (Kelantan) River Obstruction Enactment (Johor) Waters Enactment (excluding Kelantan)
2. Water Supply; Wholly within one State	-	Penang Water Authority Enactment (P. Pinang) Malacca Water Authority Enactment (Melaka) Water Supply Enactment (Other States)
3. Water Pollution Control; Local government;  Water including rivers and canals	Street, Drainage and Building Act* Local Government Act*	-  Waters Enactment (excluding Perlis, Kedah and Pahang)
4. Watershed Management; Land improvement and soil conservation; Control of silt; Forests;	Land Conservation Act**  -	-**  Forest Enactment
5. Fisheries; Turtles and riverine fishing	Fisheries Act**	-**
6. Mining; Permits and licences; Mining lease	-	Mining Enactment
7. Land Administration	National Land Code* Land Acquisition Act*	-
8. Navitation; Ferries other than federal purposes; Water including rivers	-	River Traffic Enactment (Kelantan) River Launches Enactment (Other States)
9. Survey/Research; Inquiries for State purpose	-	-

Remarks; \*: Enacted by Parliament as a Federal law for the purpose only of ensuring uniformity of law and policy, based on Article 76 (4) of the Federal Constitution.

\*\* : Firstly legislated by Parliament as a Federal law for the purpose of promoting uniformity of the laws of two or more States, based on Article 76(1)(b) of the Constitution. After the adoption by a law made by the Legislative of the States, part or whole of the law is deemed to be a State law.



Table 9 PARTICULARS OF LEGISLATED PERIODS  
OF MAJOR WATER-RELATED LAWS

Classification of Period	Legislated Year	Name of Law	Identification or Number of Law
FMS Period	1920	Waters Enactment	FMS Cap. 146
	1929	Mining Enactment	FMS Cap. 147
	1932	Water Supply Enactment	FMS Cap. 203
	1935	Forest Enactment	FMS Cap. 153
FM Period	1949	Electricity Ordinance	FM 30/1949
	1952	Merchant Shipping Ordinance	FM 70/1952
	1953	Irrigation Areas Ordinance	FM 31/1953
	1954	Drainage Works Ordinance	FM 1/1954
	1960	Land Conservation Act Land Acquisition Act	FM 3/1960 FM 34/1960
	1963*	Fisheries Act	FM 8/1963
Malaysia Period	1965	National Land Code	Act 56 of 1965
	1971	Waters Enactment (amended) Malacca Water Authority Enactment	- State of Melaka 20/1971
	1972	Protection of Wild Life Act Penang Water Authority Enactment	Act 76 State of P. Pinang 7/1972
	1973	Electricity Act (revised)	Act 116
	1974	Environmental Quality Act	Act 127
		Geological Survey Act Street, Drainage and Building Act	Act 129 Act 133
	1976	Local Government Act	Act 171
		Town and Country Planning Act	Act 172
	1978	Fisheries Act (revised)	Act 210
1980	National Parks Act	Act 226	

Remarks; FMS: Federated Malay States (established in 1895)  
 FM : Federation of Malaya (established in 1948)  
 Cap: Chapter  
 \* : The Federation of Malaysia was formed in this year,  
 on September 16. The Federal Constitution, published  
 first in the Gazette on December 11, 1957, was revised  
 for the necessary arrangements before the formation of  
 Malaysia.

Table 10 DIFFERENCES OF MAJOR WATER-RELATED STATE LAWS  
AMONG THE STATES IN PENINSULAR MALAYSIA

Name of Law	FMS	UMS	SS
1. Waters Enactment	Waters Enactment (FMS Cap. 146)	Waters Enactment for each State except for Kelantan  Kelantan: Rivers and Drainage Enactment (18/1935)	Waters Enactment (Extension of FMS Cap. 146)
Additional Clause (7(A)) for prohi- bition of pollution of rivers	Included, except for Pahang	Included, except for Perlis and Kedah (Kelantan: 8A)	Included
Additional Clause (7(B)) for com- pounding offences and making of rules	-	Included, only in Johor	-
2. Water Supply Enactment	Water Supply Enactment (FMS Cap. 203)	Water Supply Enactment for each State	-
Water Authority Enactment	-	-	Penang Water Authority Enactment (7/1972) Malacca Water Authority Enactment (20/1971)
3. Mining Enactment	Mining Enactment (FMS Cap. 147)	Mining Enactment for each State, partially different from FMS Cap. 147	Mining Enactment for each State
4. Forest Enactment	Forest Enactment (FMS Cap. 153)	Forest Enactment for each State	Forest Enactment (SS Cap. 147)
Constitution of reserved forests	Included	Included, except for Perlis and Kedah	-

Remarks; FMS: Federated Malay States (Perak, Selangor, Negeri Sembilan and Pahang)  
 UMS: Unfederated Malay States (Perlis, Kedah, Johor, Trengganu and Kelantan)  
 SS : Former Strait Settlements (Pulau Pinang and Melaka)  
 Cap: Chapter  
 ( ): Law number or identification

Table 11 OUTLINE OF LEGAL PROVISIONS FOR  
RIVER AND WATER MANAGEMENT

Name of Law	Purpose of Law	Involved Provisions
1. Waters Enactment*	Control of rivers and streams	<ul style="list-style-type: none"> <li>- Property in rivers</li> <li>- Prohibition of acts affecting rivers except under licence</li> <li>- Prohibition of diversion of water from rivers, except under licence</li> <li>- Prohibition of pollution of rivers**</li> <li>- Licence to divert water may authorise interference</li> <li>- Restriction on construction of walls and building on banks of rivers or within flood channels</li> </ul>
2. Mining Enactment	Mining	<ul style="list-style-type: none"> <li>- Control of and property in water</li> <li>- Control of interference with river banks</li> <li>- Licence for use of water</li> <li>- Purification of water</li> </ul>
3. Geological Survey Act	To regulate and control geological surveys, to establish geological archives and to provide for matters incidental thereto	<ul style="list-style-type: none"> <li>- Development of certain wells to be notified</li> <li>- Certain excavations to be notified</li> </ul>
4. Rivers Obstruction Enactment (Johor)	Protection of rivers, streams and estuaries against damage or obstruction by fallen timber	<ul style="list-style-type: none"> <li>- Punishment for felling timber into river</li> <li>- Collector may order riparian owner to remove timber</li> </ul>

Remarks; \*: In the State of Kelantan, there exists the Rivers and Drainage Enactment in which the same provisions are found.

\*\* : Not included in the Waters Enactments of Perlis, Kedah and Pahang

Source; Refs. 2, 4 and 8

Table 12      OUTLINE OF LEGAL PROVISIONS  
FOR WATER SUPPLY

Name of Law	Purposes of Law	Involved Provisions
1. Water Supply Enactment*	Water Supply	<ul style="list-style-type: none"> <li>- Notification of a water supply area</li> <li>- Imposition of water rate</li> <li>- Power to make Rules as to manner of determining the water rate</li> <li>- Private water supplies</li> <li>- Meaning of domestic supplies</li> <li>- Additional rate where private service</li> <li>- Exemption of water rate in certain cases</li> <li>- Trade supplies</li> <li>- Charges for trade and private supplies</li> <li>- Inside services to be furnished before water laid on</li> <li>- Private services to be laid in accordance with rules</li> <li>- Supply and control of meters</li> <li>- Application to water supply area outside Town Board area</li> </ul>
2. Penang Water Authority Enactment (P. Pinang)	To establish a corporate body by the name of Penang Water Authority to manage the water supply within the State of Penang	<ul style="list-style-type: none"> <li>- The membership of the Authority</li> <li>- Functions and duties of the Authority</li> <li>- Transfer to the Authority of the Government water undertakings</li> <li>- Transfer to the Authority of the City Council of George Town water undertakings</li> <li>- Establishment of the Fund</li> <li>- Balancing of Revenue Accounts</li> <li>- Accounts and Audit</li> <li>- Power to borrow</li> <li>- Power to make loans</li> <li>- Compulsory acquisition of land</li> <li>- Power to prescribe sources of water</li> <li>- Private water supplies</li> <li>- Trade supplies</li> <li>- Inside services to be furnished before water is laid on</li> </ul>
3. Malacca Water Authority Enactment (Melaka)	Establishment of the Malacca Water Authority and for the matters connected therewith	<ul style="list-style-type: none"> <li>- Establishment and incorporation of Malacca Water Authority</li> <li>- Constitution of the Authority</li> <li>- Terms and conditions of appointment of members</li> <li>- Functions and duties of the Authority</li> <li>- Funds and revenues of the Authority</li> <li>- Transfer and acquisition of properties</li> </ul>

Remarks; \*: Applicable to the States other than Pulau Pinang and Melaka.

Source; Refs. 3 and 24

Table 13      OUTLINE OF LEGAL PROVISIONS  
FOR IRRIGATION AND DRAINAGE

Name of Law	Purpose of Law	Involved Provisions
1. Irrigation Areas Ordinance	Establishment and regulation of irrigation areas in the Federation	<ul style="list-style-type: none"> <li>- Declaration of irrigation areas</li> <li>- Nature of cultivation</li> <li>- Padi cultivation</li> <li>- Classification of the lands within an irrigation area</li> <li>- Imposition of water rate</li> <li>- Management of irrigation areas</li> <li>- Delegation of powers and duties</li> <li>- Filling up obnoxious waterways</li> <li>- Power to withhold waters</li> <li>- Prohibition of waste or obstruction of water</li> <li>- Further penalty for wasting water</li> <li>- Compulsory provision of batas</li> <li>- Tempering with irrigation works</li> <li>- Power to make rules</li> </ul>
2. Drainage Works Ordinance	Drainage works	<ul style="list-style-type: none"> <li>- Declaration of drainage areas</li> <li>- Appointment of Drainage Board</li> <li>- Declaration of intention to constitute or vary drainage area</li> <li>- Board to make recommendation</li> <li>- Imposition of drainage rate</li> <li>- Remission of rate in certain cases</li> <li>- Interference with drainage works</li> <li>- Construction of unauthorized drains</li> <li>- Officer-in-charge of a drainage area</li> <li>- Power to make rules</li> </ul>
3. Rivers and Drainage Enactment (Kelantan)	Control of rivers and streams and protection of drainage works and other purposes connected with waterways and drainage	<ul style="list-style-type: none"> <li>- Prohibition of sagu and mengkuang in watercourses, drainage works and drainage channels</li> </ul>
4. Agricultural Drains Enactment (Johor)	Maintenance of agricultural drains	<ul style="list-style-type: none"> <li>- Declaration of agricultural drain</li> <li>- Duty of owners of adjacent lands to maintain drains</li> <li>- Penalty for neglecting to maintain drains</li> <li>- Government may maintain agricultural drains</li> <li>- Apportionment of cost of work done by Government</li> <li>- Penalty for obstructing a drain</li> </ul>

Source; Refs. 16 and 17

Table 14      OUTLINE OF LEGAL PROVISIONS  
OF THE ELECTRICITY ACT

Part of the Act and Title	Arrangement of Sections	Involved Provisions
I. Preliminary	1 and 2	- Short title, application and interpretation
II. National Electricity Board	3 to 27	- Establishment, incorporation and constitution of the Board - Procedure of the Board - Officers and servants of the Board - General functions of the Board - Power of Minister to issue directions - Duty of the Board to supply energy - Power to borrow and raise Capital - General duties and powers of the Board in financial matters - Reimbursement of expenditure incurred on behalf of Government - Rate and scales of charge for energy - Application of revenue - Accounts and audit
III. Transfer to Board of Government Undertakings, Etc.	28 to 38	- Transfer to Board of Government installations - Officers and servants
IV. Licensed Installations	39 to 42	- Licence required for use of installations - Security - Restriction of use to specified purposes
V. Acquisition of Property, Etc.	43 to 63	- Acquisition of land - Acquisition of installation - Purchase of bulk supplies of energy from selected stations - Acquisition of selected stations - Power to close generating stations - Distribution systems - Power to prescribe sources of water
VI. General	64 to 88	
VII. Regulations	89	
VIII. Miscellaneous	90 to 94	

Remarks; The Electricity Act was first promulgated as an Ordinance, FM 30/1949, and revised later in 1973, providing for the establishment of a Corporation to be known National Electricity Board and for the exercise and performance by the Corporation.

Source; Ref. 15

Table 15 OUTLINE OF LEGAL PROVISIONS  
FOR WATER POLLUTION CONTROL

Name of Law	Purpose of Law	Involved Provisions
1. Environmental Quality Act	Prevention, abatement, control of pollution and enhancement of the environment, and for the purposes connected therewith	<ul style="list-style-type: none"> <li>- Director General and other officers</li> <li>- Establishment of the Environmental Quality Council</li> <li>- Licences</li> <li>- Prescribed premises to be licensed</li> <li>- Prohibition against causing premises to become prescribed premises</li> <li>- Requirement and approval of plans</li> <li>- Power to specify conditions of discharge</li> <li>- Restriction on pollution of inland waters</li> <li>- Power to prohibit use of any material or equipment</li> <li>- Power to require occupier to install, operate, repair, etc.</li> <li>- Power to prohibit or control licensed persons from discharging of wastes in certain circumstances</li> <li>- Delegation</li> <li>- Power to make Regulations</li> </ul>
2. Waters Enactment*	Control of rivers and streams	<ul style="list-style-type: none"> <li>- Prohibition of pollution of rivers</li> </ul>
3. Local Government Act	Ensuring uniformity of law and policy to make a law with respect to local government	<ul style="list-style-type: none"> <li>- Committing nuisance in streams, etc.</li> <li>- Pollution of streams with trade refuse, etc.</li> <li>- Local authority may recover for work done</li> <li>- Nuisances to be abated</li> </ul>
4. Street, Drainage and Building Act	Street, drainage and building in local authority areas in West Malaysia, and for purposes connected therewith	<ul style="list-style-type: none"> <li>- Local authority to make public sewers</li> <li>- Local authority to construct and maintain drains and watercourses</li> <li>- Not to cause nuisances</li> </ul>

Remarks; \*: Additional Clause 7(A) of the Waters Enactments, excluding Perlis, Kedah, Pahang and Kalantan. In the State of Kelantan, a similar provision is found in section 8A of the Rivers and Drainage Enactment.

Source; Refs. 2, 9, 13 and 14

Table 16 OUTLINE OF LEGAL PROVISIONS  
FOR WATERSHED MANAGEMENT

Name of Law	Purpose of Law	Involved Provisions
1. Forest Enactment	Forests and forest produce	<ul style="list-style-type: none"> <li>- Constitution of reserved forest</li> <li>- Proclamation by District Officer</li> <li>- New buildings and cultivation prohibited after proclamation</li> <li>- Enquiry by District Officer</li> <li>- Regulation of privileges</li> <li>- Acquisition of alienated land for inclusion in a reserved forest</li> <li>- Notification declaring reserved forest</li> <li>- Power to stop way or water-course in a reserved forest</li> <li>- Acts prohibited in a reserved forest</li> <li>- Offences in a reserved forest</li> <li>- Power to compound forest offences</li> <li>- Charge on forest produce for money due to Government</li> </ul>
2. Land Conservation Act	Conservation of hill land and the protection of soil from erosion and the inroad of silt	<ul style="list-style-type: none"> <li>- Declaration of hill land</li> <li>- Prohibition of short-term crops except under permit</li> <li>- Restrictions on clearing and cultivation of hill land</li> <li>- Control of silt and erosion</li> <li>- Maintenance of works</li> <li>- Power to make orders and nature of orders</li> <li>- Power to cause effect to be given to orders and recovery of cost</li> <li>- Liability of owner or occupier for acts done on land</li> </ul>
3. Protection of Wild Life Act	Protection of wild life and for purposes connected therewith	<ul style="list-style-type: none"> <li>- Declaration of wild life reserves and sanctuaries</li> <li>- Permits to enter wild life reserves and sanctuaries</li> <li>- Prohibition of certain acts in a wild life sanctuaries</li> </ul>
4. National Parks Act	Establishment and control of National Parks and for matters connected therewith	<ul style="list-style-type: none"> <li>- Establishment of National Park</li> <li>- National Parks Advisory Council</li> <li>- National Park committees</li> <li>- Occupation of land within National Park</li> <li>- General prohibition of mining within National Park</li> </ul>

Remarks; The States of Pahang, Trengganu and Kelantan have their own Taman Negara Enactments for the purpose of controlling natural park areas, respectively.

Source; Refs. 6 and 28



Table 17 OUTLINE OF LEGAL PROVISIONS  
FOR LAND USE CONTROL.

Name of Law	Purpose of Law	Involved Provisions
1. National Land Code	Land and land tenure, the registration of title to land and of dealings therewith and the collection of revenue therefrom within the State of Johor, Kedah, Kelantan, Malacca, Negeri Sembilan, Pahang, Penang, Perak, Perlis, Selangor and Trengganu, and for purposes connected therewith	<ul style="list-style-type: none"> <li>- Powers of the Federation and of Federal officers</li> <li>- Powers of the States and of State officers</li> <li>- Property in land and powers of disposal</li> <li>- Classification and use of land</li> <li>- Rights of access to, and use of alienated lands</li> <li>- Disposal of land</li> <li>- Alienated lands; incidents and registration of title</li> <li>- Alienated lands; dealings</li> <li>- Alienated lands; supplemental</li> <li>- General powers and duties of the Registrar</li> <li>- Searches</li> <li>- Survey</li> <li>- Registration of statutory resting</li> </ul>
2. Land Acquisition Act	Acquisition of land, assessment of compensation to be made on account of such acquisition, and other matters incidental thereto.	<ul style="list-style-type: none"> <li>- Acquisition of land</li> <li>- Preliminary investigation</li> <li>- Declaration of intended acquisition</li> <li>- Commencement of Proceedings</li> <li>- Procedure of enquiry</li> <li>- Taking possession of land</li> <li>- Payment of compensation</li> <li>- Temporary occupation or use of land</li> <li>- Restoration of land, etc.</li> <li>- Reference where compensation cannot be agreed</li> </ul>
3. Town and Country Planning Act	Proper control and regulation of town and country planning in local authority areas in the States of Malaya and for the purposes connected therewith or ancillary thereto	<ul style="list-style-type: none"> <li>- General planning policy</li> <li>- The State Planning Committee and its functions</li> <li>- Local planning authorities</li> <li>- Functions of local planning authorities</li> <li>- Development plans</li> <li>- Planning control</li> <li>- Development charge</li> <li>- Purchase notice and acquisition of land</li> <li>- Declaration of development areas</li> <li>- Prohibition of development without planning permission</li> <li>- Prohibition of development contrary to planning permission</li> </ul>
4. City of Kuala Lumpur (Planning) Act	Control and regulating of proper planning in the City of Kuala Lumpur	<ul style="list-style-type: none"> <li>- Comprehensive development plan</li> <li>- Interim development plan</li> <li>- Planning control</li> <li>- Levy of development charge</li> <li>- Purchase and acquisition of land</li> </ul>

Source; Refs. 20, 27 and 29

Table 18 OUTLINE OF LEGAL PROVISIONS FOR FISHERIES AND NAVIGATION.

Name of Law	Purpose of Law	Involved Provisions
1. Fisheries Act	Fisheries and matters incidental thereto	<ul style="list-style-type: none"> <li>- Licences</li> <li>- Director General and Deputy Director General of Fisheries</li> <li>- Maritime and Deputy Maritime Fishery officers</li> <li>- Inland and Deputy Inland Fishery Officers</li> <li>- Officers and penalties</li> <li>- Arrest, search, seizure and forfeiture</li> <li>- Criminal liability</li> <li>- Regulations and rules</li> </ul>
2. Fishermen's Associations Act	To establish Fishermen's Associations in Malaysia and to provide for matters connected therewith	<ul style="list-style-type: none"> <li>- Formation of Area, State and Federal Fishermen's Associations</li> <li>- Registration</li> <li>- Confederation of Area and State Fishermen's Associations</li> <li>- Special powers of Minister to exempt from requirements as to registration, etc.</li> </ul>
3. Merchant Shipping Ordinance	To make better provision in the law relating merchant shipping and for the matters incidental thereto	<ul style="list-style-type: none"> <li>- Registry of ships</li> <li>- Qualification of masters and seamen</li> <li>- Regulation of passenger ships</li> <li>- Preservation of safety</li> <li>- Load line and loading of ships</li> <li>- Delivery of goods</li> <li>- Liability of shipowners</li> <li>- Wreck and salvage</li> <li>- Lighthouses</li> <li>- Pilotage</li> <li>- Ports and port officers</li> <li>- Legal proceedings</li> </ul>
4. River Launches Enactment	Control of launches used on rivers	<ul style="list-style-type: none"> <li>- Declaration of rivers</li> <li>- Launches to be licensed</li> <li>- Register to be kept</li> <li>- Reporting changes of ownership</li> <li>- Penalty for breach of Rules</li> </ul>
5. River Traffic Enactment (Kelantan)	River boats and ferries	<ul style="list-style-type: none"> <li>- Registration and licensing</li> <li>- Ferry Areas and tendering</li> <li>- Change of ownership</li> <li>- Prohibition of carrying or towing</li> <li>- Penalty for refusing to convey passengers</li> <li>- Obstructions in rivers and waterways</li> <li>- Offences and fines</li> </ul>

Source; Refs. 18 and 19

Table 19 OUTLINE OF LEGAL PROVISIONS  
FOR FINANCIAL PROCEDURES

Name of Law	Purpose of Law	Involved Provisions
1. Financial Procedure Act	Control and management of the public finances of Malaysia, and financial and accounting procedure, including procedure for the collection, custody and payment of the public moneys of the Federation and of the States, and the purchase, custody and disposal of public property, other than land, of the Federation and of the States	<ul style="list-style-type: none"> <li>- Duties of accounting officers</li> <li>- Management and control of Consolidated Funds</li> <li>- Consolidated Fund account</li> <li>- Trust account</li> <li>- Government trust funds</li> <li>- Contingencies Fund</li> <li>- State Reserve Fund</li> <li>- Custody, investment and payment of moneys</li> <li>- Refunds, etc., charged on Consolidated Funds</li> <li>- Estimates and virement</li> <li>- Yearly statement of accounts</li> <li>- Surcharge</li> <li>- State financial and accounting procedure</li> <li>- Regulations</li> </ul>
2. Development Funds Act	Development Fund of the Federation and financial procedure with respect to the Development Funds of the States	<ul style="list-style-type: none"> <li>- Moneys required to be paid into the Fund</li> <li>- Application of moneys in the Fund</li> <li>- Development estimates</li> <li>- Lapse of appropriation</li> <li>- State Development Funds</li> </ul>
3. Loan (Local) Ordinance	To authorize the raising of loans within the Federation to provide sums required for the purposes of the Development Fund	<ul style="list-style-type: none"> <li>- Authorization and application of loan</li> <li>- Principal and interest charged on Consolidated Fund</li> <li>- Issuance and registration of stock</li> <li>- Redemption of stock and creation of sinking fund</li> </ul>
4. State Water Supply Fund (Financial and Accounting Procedure) Act	Control and management of the Water Supply Funds of the States, and financial and accounting procedure of the moneys in the Funds	<ul style="list-style-type: none"> <li>- Establishment of the Water Supply Fund</li> <li>- Moneys required to be paid into the Fund</li> <li>- Application of moneys of the Fund</li> <li>- Financial policy in respect of water supply services</li> <li>- Principles and practices of commercial accounts</li> </ul>
5. State Water Supply Fund Enactment*	Payment into the State Water Supply Fund of sums appropriated from the general revenues of the State or received by loan from the Federation	<ul style="list-style-type: none"> <li>- Payment into the Fund</li> <li>- Purposes to be specified by resolution</li> <li>- Supplementary expenditure</li> <li>- Financial year</li> <li>- Power of virement</li> <li>- Contingencies Reserve</li> </ul>
6. Loan Enactment**	To authorise the borrowing of the certain sums of money from the Federation for the purpose of financing the specific state development project	<ul style="list-style-type: none"> <li>- Power to borrow from the Federation</li> <li>- Loan to be charged on the Funds</li> <li>- Application of Loan</li> <li>- Repayment</li> </ul>

Remarks; \*: Established in the States of Perlis, Kedah, P. Pinang, Perak, Negeri Sembilan, Melaka, Johor, Trengganu and Kelantan.

\*\* : Established in Pulau Pinang for Sungai Muda Water Supply Scheme, in Selangor for Water Supplies, and in Kelantan for Financing State Development Projects.

Source; Refs. 21, 22, 25 and 26

Table 20

OUTLINE OF LAWS PROVIDING FOR  
WATER-RELATED STATUTORY BODIES

Name of Law	Statutory Body Established under the Law	Functions of the Statutory Body
<b>I. Federal Laws</b>		
1. Electricity Act	National Electricity Board (NEB)	Supply of electricity and certain other matters
2. Farmers' Organization Authority Act	Farmers' Organization Authority (FOA)	Development of Farmers' Organization and agricultural development
3. Kemubu Agricultural Development Authority Act	Kemubu Agricultural Development Authority (KADA)	Regional development within the Kemubu Area
4. Land Development Ordinance	Federal Land Development Authority (FELDA)	Projects for land development and settlement
5. Lembaga Kemajuan Ikan Malaysia Act	Lembaga Kemajuan Ikan Malaysia (MAJUIKAN)	Development of fisheries enterprises and of Fishermen's Associations
6. Lembaga Kemajuan Pahang Tenggara Act	Lembaga Kemajuan Pahang Tenggara (DARA)	Regional development within the Pahang Tenggara Area
7. Muda Agricultural Development Authority Act	Muda Agricultural Development Authority (MADA)	Regional development within the Muda Area
8. National Land Rehabilitation and Consolidation Authority (Incorporation) Act	National Land Rehabilitation and Consolidation Authority (FELCRA)	Rehabilitation and development of any area in the States of Malaya
9. Perbadanan Pembangunan Bandar Act	Perbadanan Pembangunan Bandar	Projects in urban development areas
10. Port Authorities Act	Johor Port Authority Kelang Port Authority Kuantan Port Authority	Operation and maintenance of the respective ports
<b>II. State Laws</b>		
1. Malacca Water Authority Enactment	Malacca Water Authority	Water supply within the State of Melaka
2. Perbadanan Kemajuan Jengka Enactment (Pahang)	Perbadanan Kemajuan Jengka	Development and management of the Jengka Triangle Area
3. Penang Water Authority Enactment	Penang Water Authority	Water supply within the State of Pulau Pinang
4. Selangor State Development Corporation Enactment	Selangor State Development Corporation	Regional development in the designated areas

Source; Refs. 15, 23, 24, 31, 32 and 33

Table 21. GENERAL WATER-RELATED FUNCTIONS OF LOCAL AUTHORITY UNDER THE LOCAL GOVERNMENT ACT

Item	Sections in the Act	Summary of the Descriptions
1. Public Places	63 - 68	General control and care of public places
2. Pollution of Streams	69 - 71	Prosecution of polluters in or upon the bank of any stream, channel, public drain or other watercourse
3. Food, Markets, Sanitation and Nuisances	72 (a)	To establish, maintain and carry out sanitary services
	72 (d)	To establish erect and maintain public lavatories, closets and unirls
	72 (f)	To safeguard and promote the public health and to take all necessary and reasonably practicable measures
	73 (h)	To regulate and control the use of public baths, wash-houses, laundries and places for washing clothes
	73 (1)	To prohibit or regulate any method of cultivation, the use of any kind of manure or fertilizer or any method of irrigation which is offensive or is injurious to health
	81 (f)	Dealing with any polluted pool or ditch for drinking, domestic or manufacturing purpose as to become a nuisance
4. Fire Services	85 and 91	To establish and maintain a sufficient fire brigade and to provide and maintain fire alarms and fire hydrants
5. Water Works	101 (j)	To establish, erect, maintain, supervise and control waterworks, public baths, bathing-places, laundries and washing places, drinking-fountains, tanks and wells
6. Electricity Services	101 (bb)	To supply electricity to any person carrying on business or residing within or without the local authority area, subject to the Electricity Act
7. Water-course	101 (ee)	To divert, straighten, define and canalise the course of any stream, channel or watercourse, subject to the provisions of any law relating to water right

Source; Ref. 13

Table 22 MANPOWER ALLOCATION AMONG THE MAJOR  
WATER-RELATED FEDERAL AGENCIES

Agencies	Unit: Person				Total
	A	B	C	D	
1. EPU	104	15	58	71	248
2. ICU	66	20	71	54	211
3. Treasury	390	175	692	562	1,819
4. Attorney General's Chamber	87	23	69	70	249
5. PWD	185	176	393	673	1,427
6. DID*	343	152	719	946	2,190
7. Fisheries Department	118	70	487	898	1,573
8. Mines Department	43	22	115	111	291
9. Forest Department	124	96	145	385	750
10. GSD	122	15	294	321	752
11. Lands and Mines Department	70	129	115	265	579
12. DOE	34	91	62	55	242
13. Chemistry Department	99	13	264	157	533
14. Meteorological Services Department	71	53	529	133	786
15. MOH	4,477	2,966	16,810	49,649	73,902
16. Local Government Division, MOHLG	11	3	11	9	34
17. Town and Country Planning Department	50	43	121	53	267
18. NEB	567	2,780	4,165	8,078	15,590
19. FELDA	45	n.a.	n.a.	n.a.	5,787
20. DARA	35	n.a.	n.a.	n.a.	1,926
21. MADA	28	20	86	100	234

Remarks; (1) Proposed for budget estimate as of 1980, except for FELDA, DARA and MADA. FELDA: for 1978  
DARA and MADA: for 1977

(2) Classification of staff; A: Professionals, B: Sub-professionals and Technical Assistants, C: Clerical and Technicians, D: General Workers

(3) n.a.: Not available

(4) \*: Including State officers (See Table 25)

Source; Refs. 37, 53, 54, 55 and 58

Table 23 MANPOWER IN THE WATER SUPPLY DIVISION OF PWD, 1980

Section	Unit: person				Total
	A	B	C	D	
1. Headquarters	5	-	-	-	5
2. General Administration	-	-	4	11	15
3. Urban Water Supplies	2	2	3	-	7
4. Water Supply Planning Unit	3	-	6	-	9
5. FELDA Water Supplies	6	11	12	3	32
6. Regional Water Supply Department	4	2	4	-	10
7. Rural Water Supplies	4	7	14	7	32
8. General Activities	3	2	3	5	13
Total	27	24	46	26	123

Remarks; Classification of staff (A, B, C and D) is the same as shown in Table 22.

Source; Ref. 72

Table 24 MANPOWER REQUIREMENT OF FEDERAL PWD, 1980

Type of Works	Unit: person			
	A	B	C	D
1. Design	79	79*	-	237*
2. Construction Supervision	118	236**	472**	-
Total Requirement	197	315	472	237
(Existing Manpower)	(160)	(142)	(227)	(105)
Additionally Required Staff	37	173	245	132

Remarks; Classification of staff is the same as in Table 22.

\*: Assumed 1 Engineer to 1 Technical Assistant and to 3 General Workers

\*\* : Assumed 1 Engineer to 2 Technical Assistants and to 4 Technicians

Source; Information from PWD, 1980

Table 25 MANPOWER IN DID, 1980

Division/Project	Unit: person				Total
	A	B	C	D	
<b>I. Federal DID</b>					
1. Headquarters	11	3	27	27	68
2. Planning	21	12	52	17	102
3. Hydrology	17	6	32	21	76
4. Design	24	19	78	10	131
5. Investigation	11	-	23	40	74
6. Supernumerary	3	-	-	-	3
<b>II. Projects</b>					
1. Muda	28	20	86	100	234
2. Johor Barat	25	24	99	222	370
3. Pahang Tenggara	5	3	27	22	57
4. Kelantan Utara	6	4	25	54	89
5. KL. Flood Mitigation	12	8	24	9	53
6. State Development	9	2	40	25	76
7. North-west Selangor	23	18	77	74	192
8. Krian/Sg. Manik	20	17	74	55	166
9. National Water Resources Study	3	-	-	-	3
10. Federal Territory	3	2	10	28	43
11. Mechanization	11	7	34	256	308
<b>III. Training</b>					
1. Secretariat Training	3	2	2	2	9
2. Workers Training	3	4	3	4	14
3. Water Instruction	3	1	6	10	20
<b>IV. States</b>					
	102	-	-	-	102
<b>Total of Federal DID</b>	<b>343</b>	<b>152</b>	<b>719</b>	<b>976</b>	<b>2,190</b>

Remarks; Classification of staff is the same as in Table 22.

Source; Information from DID, 1980.



Table 26 PROJECT PROGRESS FOR DID  
DURING THE TMP PERIOD

Projects	Unit: %	
	Financial Progress	Physical Progress
1. Irrigation	68	65
2. Drainage	80	82
3. Flood Mitigation/ Flood Forecasting	89	67
4. Hydrological/Water Resources Assessment	100	99

Source; Information from DID, 1980

Table 27 MANPOWER IN DOE, 1981

Section	Unit: person				
	A	B	C	D	Total
1. Headquarters	1	-	-	-	1
2. Noise, Air, Radiation Control	20	17	9	-	46
3. Water Quality Management and Pollution Control	18	23	4	2	47
4. Administration	3	2	15	26	46
5. Regional Offices	8	71	35	40	154
Total	50	113	63	68	294

Remarks; Classification of staff is the same as in Table 22.

Source; Ref. 50

Table 28 MANPOWER IN SEPU, SPWD AND SDID OF EACH STATE, 1980

State	SEFU				SPWD				SDID				Total	Unit: person
	A	B	C	D	A	B	C	D	A	B	C	D		
	Total				Total				Total					
1. Perlis	n.a.	n.a.	n.a.	n.a.	7	10	36	552	605	1	4	17	241	263
					(n.a.)	(n.a.)	(n.a.)	(n.a.)	(n.a.)					
2. Kedah	8	-	5	7	15	27	116	1,972	2,130	13	13	63	341	430
					(3)	(4)	(31)	(381)	(419)					
3. Pulau Pinang	3	-	3	3	12	37	95	1,430	1,574	4	10	35	690	739
					(-)	(-)	(-)	(-)	(-)					
4. Perak	3	-	5	2	40	83	228	3,932	4,283	16	22	128	1,935	2,101
					(9)	(15)	(47)	(1,024)	(1,095)					
5. Selangor	5	-	5	1	22	63	158	2,648	2,891	16	30	79	1,148	1,273
					(17)	(36)	(176)	(1,721)	(1,950)					
6. Negeri Sembilan	n.a.	n.a.	n.a.	n.a.	16	38	137	2,102	2,293	5	10	39	416	470
					(n.a.)	(n.a.)	(n.a.)	(n.a.)	(n.a.)					
7. Melaka	4	-	3	2	8	12	48	1,088	1,156	3	8	19	267	297
					(-)	(-)	(-)	(-)	(-)					
8. Johor	2	-	5	4	31	77	244	3,098	3,410	12	19	70	1,116	1,217
					(n.a.)	(n.a.)	(n.a.)	(n.a.)	(n.a.)					
9. Pahang	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	3,434	n.a.	n.a.	n.a.	n.a.	636
					(n.a.)	(n.a.)	(n.a.)	(n.a.)	(n.a.)					
10. Trengganu	4	n.a.	n.a.	n.a.	19	32	157	2,028	2,236	6	10	45	345	406
					(3)	(6)	(21)	(214)	(244)					
11. Kelantan	10	-	8	7	21	29	155	1,582	1,787	14	14	81	398	507
					(2)	(2)	(17)	(202)	(223)					

Remarks: ( ): Number of staff in the Water Supply Division of SPWD. In case of Selangor, that in the Water Works Department. Number of staff of SPWD is inclusive of that of the Water Supply Division, except for the State of Selangor. n.a.: Not available, -: None, Classification of staff: Same as in Table 22.

Source: Refs. 38 to 47

Table 29 MANPOWER IN THE PENANG  
WATER AUTHORITY, 1980

Department	Unit: person				Total
	A	B	C	D	
1. Headquarters	1	-	-	-	1
2. Administration	4	-	7	9	20
3. Engineering (Seberang Perai)	4	1	29	403	437
4. Engineering (Penang Island)	6	1	32	504	543
5. Finance	2	3	41	74	120
6. Computer	3	2	12	15	32
7. Audit	1	1	3	4	9
Total	21	8	124	1,009	1,162

Remarks; Classification of staff is the same as in Table 22.

Source; Ref. 94

Table 30 MANPOWER OF PETALING JAYA  
MUNICIPAL COUNCIL, 1980

Department	Unit: person				Total
	A	B	C	D	
1. Headquarters	2	-	-	-	2
2. Administration	6	8	35	337	386
3. Engineering	6	14	32	255	307
4. Treasury	4	5	47	164	220
5. Health	4	2	36	1,012	1,054
Total	22	29	150	1,768	1,969

Remarks; Classification of staff is the same as in Table 22.

Source; Ref. 98

Table 31 COUNCILS ESTABLISHED UNDER  
THE FEDERAL CONSTITUTION

Council	Members	Functions	Secretariat
1. National Land Council	Deputy Prime Minister Ministers of the Federal Government Mentri Besars	(1) To formulate a national policy for the promotion and control of land utilization  (2) To consult with the Federal or State Government on any matter related to land  (3) To play a role as the highest level forum for discussion on matters affecting settlers in development schemes  (4) To establish sub-committees (Example: National Forest Council)	Ministry of Land and Regional Development
2. National Finance Council	Prime Minister Ministers designated by the Prime Minister Representatives from the States	(1) To be consulted with the Federal Government in making of grants to the States  (2) Consultative role in assignment to the States of the proceeds of Federal tax or fee  (3) Consultative role in making of loans  (4) Consultative role in making of development plans  (5) Consultative role among other matters of financial relations between the Federation and the States	Ministry of Finance
3. National Council for Local Government	Ministers Mentri Besars	(1) To formulate a national policy for the promotion, development and control of local government  (2) To be consulted with the Federal or the State Governments in respect of any proposed legislation dealing with local government	MOHLG

Source; Ref. 1 and the information from the Ministry of Land and Regional Development.

Table 32 COUNCILS AND COMMITTEES  
FOR PLANNING AND POLICY

Council/ Committee	Members	Functions	Secretariat
1. National Action Council	Prime Minister Ministers	(1) To discuss all matters related to national development	ICU
		(2) To review the progress and problems of national development	EPU
2. National Economic Council (NEC)	Prime Minister Ministers	(1) To receive the reports related to development plan from NDPC	
		(2) To direct the inter-agency planning groups about development plan proposal	
		(3) To examine the recommendations for development plan formed by the inter-agency planning groups and NDPC	
3. National Development Planning Committee (NDPC)	Deputy Prime Minister Ministers Bank Negara EPU	(1) To formulate and review all plans for national development and make recommendations on the allocation of resources	EPU
		(2) To review the causes of delays and difficulties in the implementation of national development plans and propose specific solutions	
		(3) To ascertain such adjustments in national development plans as may be necessary in the light of the changing economic situation	
		(4) In the discharge of the above terms of reference, to use its discretion in making decisions itself or to make reference to the Cabinet or the economic committee of the Cabinet	
		(5) To consider all subjects to be submitted to the Cabinet by Ministries and Departments, and if necessary, to advise the Cabinet on the development aspects of each subject	

Source; Refs. 100, 104 and 120

Table 33      EXAMPLES OF COMMITTEE SYSTEM FOR  
THE SPECIFIC COORDINATION

Committee	Members	Functions	Secretariat
1. Steering Committee for National Water Resources Study	EPU DID PWD DOE NEB States	(1) To form and review the terms of reference for the Study  (2) To check, review and make recommendations for the Study  (3) To review and approve the assignments and the Study reports	EPU
2. Technical Committee for Tenom-Pangi Hydro Project, Sabah	SEPU State Treasury SPWD Audit Department	(1) To check and review the plan and the feasibility study which is prepared by the Sabah Electricity Board  (2) To make recommendations for and approve the plan	Sabah Electricity Board
3. Consultative Committee on Sungai Kesang*	State Secretaries of Melaka and Johor  State Treasuries of Melaka and Johor  Directors of Lands and Mines of the two States  Directors of Survey of the two States  DID Engineers of Melaka and Johor  District Officers of the two States  Legal Advisors of the two States	(1) To discuss about identification of water users, determination of the amount of water use by government agencies as well as private companies  (2) To discuss about determination of borderline between the two States  (3) To discuss about pollution of river water  (4) To discuss about future water uses  (5) To discuss about maintenance of the water - Capacity of the river - Stability of river banks - Quantity and quality of river flow	

Remarks; \*: Established in 1975 as a Melaka-Johor inter-state committee. The Technical Committee is also set up under this Committee.

Source; 1: Minutes of meeting, National Water Resources Study, Malaysia  
2: Information from the Sabah Electricity Board  
3: Information from the States of Melaka and Johor

Table 34 MEMBERS OF WATER-RELATED COUNCILS/COMMITTEES

Council or Committee	Agencies												Remarks	
	MOA	MOSTE	MOPI	M	M	M	M	M	M	M	M	M		
I. Constitutional Council														
National Land Council														
National Finance Council														
National Council for Local Government														
Environmental Quality Council														Other member: Ministry of Labour and Manpower
II. National Committee														
National Economic Council														
National Action Council														Secretariat: ICU
National Development Planning Committee														Other member: PSD State: Sabah, Sarawak
Estimate Sub-committee of NDPC														
Water Resources Committee														Secretariat: DID
Malaysian Natural Disaster - Relief Committee														Secretariat: National Security Council
National Forest Council														

Table 35 INTER-STATE JURISDICTIONS

Item	Present Situation	Agreement/Committee Specific Organization	Legal Ground
1. Management of Inter-state Rivers	Inter-state rivers: Perlis, Muda, Kerian, Bernam, Langkat, Linggi, Kesang, Muar, Pahang, Endau, Perai, Kurau, Sepeng, Melaka	Consultative Committee on Sungai Kesang (Johor-Melaka inter-state committee)  Private level communication is maintained between the States of Kedah and Pulau Pinang on the Muda river.	Waters Enactment of each State has not the provisions for inter-state matters.
2. Inter-state Domestic Water Supply	Implemented: Kedah-Perlis Johor-Singapore (international)  Not implemented: P. Pinang-Johor Johor-Melaka Pahang-Selangor	Existing Agreement: Kedah-Perlis Johor-Singapore  When the barrage was constructed at the river mouth of the Muda river, an agreement was concluded between the Penang Water Authority and Kedah State.	Water Supply Enactment does not provide for inter-state matters.
3. Inter-state Irrigation Schedule	Muda Irrigation Scheme: Kedah-Perlis Sg. Krian Project: Perak-P. Pinang	MADA (Specific organization for Muda Area, established as a Federal statutory body, comprising the representatives from the Federal Government and the States of Perlis and Kedah)	
4. Inter-state Control of Water Pollution		Consultative Committee on Sungai Kesang (Johor-Melaka inter-state committee)  Regional branch offices of DOE are in preparation.	

Source; Information from the interviews with respective Federal and State agencies.



Table 36

JOHOR RIVER WATER AGREEMENT BETWEEN  
THE STATE GOVERNMENT OF JOHOR AND  
THE CITY COUNCIL OF SINGAPORE

Items	Descriptions
1. Draw-off Water	The Government grants to the City Council the full right and liberty to draw-off, take, impound or use the water from the Johor River up to a maximum of 250 million gallons per day at points and in the manner agreed upon.
2. Water Supply	The City Council shall supply to the Government a daily quantity of water drawn-off the Johor River not exceeding 2% of the total quantity of water supplied to Singapore.
3. Charges	The City Council shall pay to the Government a charge of 3 cents per 1,000 gallons of water drawn from the Johor River and delivered to Singapore.
	The Government shall pay to the City Council 50 cents per 1,000 gallons of pure water supplied by the City Council.
	The Government shall pay to the City Council 10 cents per 1,000 gallons of raw water supplied by the City Council, if such supply is necessary.
4. Land	The Government may demise to the City Council for 99 years, the lands situated in Johor State upon the payment of premiums.
	Lands alienated on request by the City Council shall be free of premiums.
	Buildings, works, fittings and fixtures constructed by the City Council on such lands shall remain the absolute property of the Council.
	The Government grants to the City Council the full and free right and liberty to pass through State Land.

Source; Ref. 101

Table 37 AGENCIES INVOLVED IN THE MALAYSIAN  
NATURAL DISASTER RELIEF COMMITTEE

Agencies	Duties
1. Meteorological Services Department	To provide the means for collection and dissemination of meteorological and seis'mological data on real time basis.
2. Ministry of Welfare Services	To coordinate the administration of evacuation centres with the cooperation of voluntary organization such as the Red Crescent and so on.
3. Ministry of Commerce and Industry	To be responsible for the distributing and storing of food supplies in various flood prone area with the cooperation of the National Padi and Rice Board.
4. Ministry of Defence, Police	To coordinate and carry out evacuation and maintenance of communication network.
5. MOH	To coordinate, control and distribute emergency stocks of drugs, vaccines and medicine and perform curative and preventive medical and health services by medical teams.
6. SDID	To alert all the staff concerned with flood warning system on receipt of the preliminary warning from the Malaysia Meteorological Services and to carry out hydrological data collection.

Source; Ref. 105

Table 38 REVENUE OF THE FEDERAL GOVERNMENT, 1980

Unit: M\$10<sup>6</sup>

Item	Amount	Share (%)
1. Direct Taxes (Income Taxes)		
(1) Corporate	3,527	32.4
(2) Individual	1,060	9.7
2. Custom Duties		
(1) Export duties	1,520	13.9
(2) Import duties	1,525	14.0
3. Indirect Taxes		
(1) Sales tax	581	5.3
(2) Road tax	182	1.7
4. Non-tax Revenue		
(1) Licence fees	107	1.0
(2) Service fees	157	1.4
5. Others*	2,242	20.6
<b>Total</b>	<b>10,901</b>	<b>100.0</b>

Remarks; \*: Including excise duties, return of investment and non-revenue receipts.

Source; Ref. 37

Table 39 REVENUE OF THE STATE GOVERNMENT OF SELANGOR, 1980

Unit: M\$10<sup>6</sup>

Item	Amount	Share (%)
1. Forest	3	1.2
2. Land	16	6.6
3. Receipt from State Government Services	6	2.5
4. Water	43	17.8
5. Revenue from Government Properties	15	6.2
6. Other Receipts	15	6.2
7. Contribution from the Federal Government*	18	7.4
8. Grants from the Federal Government		
(1) State Road Grant	9	3.7
(2) Capitation Grant	6	2.5
(3) Revenue Growth Grant	5	2.1
(4) Compensation from the Federal Territory	93	40.4
9. Others	13	3.4
<b>Total</b>	<b>242</b>	<b>100.0</b>

Remarks; \*: Portion from tin ore export duties.

Source; Ref. 41

Table 40 REVENUE OF LOCAL AUTHORITIES

Unit: M\$10<sup>3</sup>

Local Authority	Revenue Items	Amount	Share (%)
Kota Bharu Municipal Council	1. Assessment on Properties	1,500	3.7
	2. Licence Fees	349	0.9
	3. Receipts from State Government Services	716	1.8
	4. Revenue from Government Properties	351	0.9
	5. Other Receipts	15	0.1
	6. Grant from the Federal Government		
	(1) Local Government Grant	108	0.3
	(2) Development Grant	14,940	37.0
	7. Grant from the State Government		
	(1) Local Government Grant	500	1.2
(2) Development Grant	18,858	46.7	
8. Others	3,026	7.5	
	Total	40,363	100.0
Petaling District Council	1. Assessment on Properties	488	46.3
	2. Licence Fees	83	7.9
	3. Sewage Tax	1	0.1
	4. Rents: stalls	19	1.8
	5. Grants-in-Aid from the Federal Government	95	9.0
	6. Others	369	34.9
		Total	1,055

Remarks; Revenue items of Local Authority are stipulated in the Local Government Act as follows:

1. All taxes, rates, rents, licence fees, dues and other sums payable to the local authority.
2. All charges or profits arising from any trade, service or undertakings carried out by the local authority.
3. All interest on moneys invested and all income arising from or out of the property of the local authority.
4. All other revenue accrued from the Federal or State Government or any statutory body such as grants, contributions or endowments.

Source; Refs. 48 and 49

Table 41      PURPOSES OF THE DEVELOPMENT FUNDS

1. Construction and Improvement of Works, Provision and Acquisition of Capital Asset

drainage and irrigation; public roads, bridges, ferries, railways and airways; public buildings; defence and internal security; ports, harbours, light houses, canals and river works, and the navigation of seas and rivers; telecommunications and broadcasting; the production, distribution and supply of water power, electricity, gas; education and scientific research; hospitals and other medical and health institutions; public health, sanitation, sewerage and water supplies; veterinary services; housing, including urban renewal and improvement trusts; soil conservation; the control and prevention of fires and other accidents; repair and maintenance of public property; printing; public administration; industrial development; the rehabilitation of mining land, the reclamation of land from seas, rivers and other waters; tourist resorts; recreational facilities; agricultural marketing; family planning.

2. Development and conservation of agriculture, fisheries, forests, and minerals and other natural resources.
3. Acquisition of land
4. Carrying on of any survey, research relating to 1, 2.

Remarks; 1): Water-related subjects are underlined.

2): Purpose of development fund includes;

(a) the payment of the personal emoluments in respect of any public officers and any charges or expenses incidental to 1, 2, 3 and 4.

(b) grants and loans to any Government in the Federation and grants and loans to or investment in public and statutory authorities and any other body or any person for the purposes referred to 1, 2, 3 and 4, not (a) above,

Source; Ref. 22

Table 42      CONDITIONS OF THE FOREIGN LOANS  
LENT FOR WATER-RELATED PROJECTS

Type of Projects	Interest Rate per Annum	Number of Loans			Repayment Period		
		IBRD	ADB	OECF	IBRD	ADB	OECF
1. Irrigation	3.0		1			1977-95	
	5.5	1			1970-90		
	6.0	1			1972-92		
	8.2	1			1981-94		
2. Water Supply	6.5	1			1972-88		
	6.875		1			1973-88	
	7.25	1			1978-93		
	7.5		3			1978-92	
						1976-95	
						1979-98	
	8.3		1			1983-98	
8.9		1			1982-96		
3. Electricity	3.25			3*			1981-93 1982-95(?)
	6.875		1			1975-89	
	7.5		1			1978-92	
	8.75		1			1981-95	
<b>Total</b>		5	10	3			

Remarks; IBRD: International Bank for Reconstruction and Development  
ADB : Asian Development Bank  
OECF: Overseas Economic Cooperation Fund (Japan)  
\* : For hydropower generation projects

Source; Ref. 37

Table 43 FINANCING OF WATER-RELATED PROJECTS (1/2)

Purpose/ Classification	Financing Measures	Donor/ Lender	Recipient/ Borrower	Conditions
<b>1. Water Supply</b>				
(1) Urban Water Supply	Loan	Federal Government	State Government or Water Authorities	Interest rate: 6.5% Repayment: 25 years Projects by State's own funds are also implemented.
(2) Rural Water Supply by SPWD or the Water Authority	Grant	Federal Government	State Government or Water Authorities	Two-thirds of the project cost is financed by the Federal grant for non-deficit States, while full grant is given to deficit States by the Federal Government.  Non-deficit States: Pulau Pinang, Perak, Selangor, Negeri Sembilan, Johor and Pahang  Deficit States: Perlis, Kedah, Melaka, Trengganu and Kelantan  It is anticipated that the State of Trengganu is going to be a non-deficit State.
(3) Rural Water Supply by MOH	Federal Fund	-	-	All the capital costs of the gravity water supply systems are borne by the Federal Government, as a Federal direct project of MOH.  Village people contributes M\$20 to 30, in making of the supply systems.
<b>2. Irrigation and Agricultural Drainage</b>				
(1) Federal Direct Project	Federal Fund	-	-	Capital cost and manpower cost are borne by the Federal Government. Area: larger than 5,000 acres IRR : greater than 12%
(2) Federal Reimbursable Project	Federal Fund	-	-	Capital cost is first paid by the State Government, and then reimbursed by the Federal Government. Area: larger than 50 acres IRR : greater than 8%
(3) State's Own Project	State Funds	-	-	All project costs are borne by the State Government.

Source; Information from the interviews and inside documents of PWD, DID, NEB, MOHLG, MOH and Local Authorities.

Table 44 FINANCING OF WATER-RELATED PROJECTS (2/2)

Purpose/ Classification	Financing Measures	Donor/ Leader	Recipient/ Borrower	Conditions
3. Urban Drainage	Loan	Federal and State Government	Local Authority	Sometimes, Local Authorities are granted loans or subsidies either from the MOHLG or from the State Government
4. Sewerage	Loan	Federal Government	Local Authority	Federal loans are given to Local Authorities to bear the cost of sewerage provision.
5. Hydropower Generation	Loan	Federal Government	NEB	<p>Three kinds of Federal loans are available to NEB.</p> <p>(1) Interest rate: 5% Repayment : 25 years</p> <p>(2) Interest rate: 6% Repayment : 25 years</p> <p>(d) Interest rate: 5.75% Repayment : 16 years</p> <p>Equity participation of the Federal Government is found. Acquisition of ordinary stock of NEB is carried out by the Federal Government.</p>

Source: Information from the interviews and inside documents of PWD, DID, NEB, MOHLG, MOH and Local Authorities.



Table 45 FINANCIAL AND ACCOUNTING PROCEDURE  
OF THE STATE WATER SUPPLY FUND  
UNDER THE RELEVANT LAWS

Effectiveness/ Features	Laws Concerned with the Water Supply Fund		
	Water Authority Enactment	Water Supply Fund Enactment	State Water Supply Fund (Financial and Account- ing Procedure) Act
1. The States where the Law is in force	Pulau Pinang, Melaka	Perlis, Kedah, Pulau Pinang, Perak, Negeri Sembilan, Melaka, Johor, Trengganu, Kelantan	All the States except for Pulau Pinang and Melaka
2. Financial Provisions			
(1) Establishment of the Fund	o	o	o
(2) Balancing of revenue accounts	o	o	o
(3) Expenses to be charged on the Fund	o	-	-
(4) Supplementary expenditure	-	o	-
(5) Power of virement	-	o	-
(6) Contingencies Reserve	-	o	-
3. Accounting Provisions			
(1) Accounts and audit	o	-	o
(2) Accounting procedure	o (Proper accounts)	-	o (Commercial accounting, principles and practices)

Remarks; o: Involved in the Enactment/Act  
-: Not involved

Source; Refs. 24, 25 and 26

Table 46 WATER-RELATED CHARGING SYSTEM (1/2)

Name of Charge	Legal Ground	Payer	Payee	Actual Situation
1. Fees for Water Licence	Every licensee shall pay annual fees for licence imposed by the State Authority. (Waters Enactment §12)	river water user	State Government	
2. Domestic Water Rate	The domestic water user shall pay annual water rate imposed by the Ruler in Council. (Water Supply Enactment §4)	domestic water user	State Government	The water rate is no more collected. In fact, water charge is collected according to the water consumed. The charging system varies by the State.
Charges for Trade Supplies	Trade water user shall pay water charges imposed by the Ruler in Council. (Water Supply Enactment §16)	trade water user	State Government	
3. Water Rates (Irrigation)	The irrigation water user shall pay water rates imposed by the Ruler in Council. (Irrigation Areas Ordinance §6, §7)	irrigation water user	State Government	Different areas of the States have different water rates. In some areas no rate is imposed.
4. Drainage Rate	The owner of the land shall pay drainage rate imposed on the land by the Ruler in Council. (Drainage Works Ordinance §8, §9, §10)	owner of the land	State Government	Regulations are established to decide the appropriate rate to be imposed in the drainage area.

Source; Refs. 2, 3, 16 and 17

Table 47 WATER-RELATED CHARGING SYSTEM (2/2)

Name of Charge	Legal Ground	Payer	Payee	Actual Situation
5. Electricity Fee (Price of Energy)	The consumer of energy shall pay the charges for energy. (Electricity Act §21, §89)	consumer of energy	NEB	Electricity fee is the major source of revenue of NEB.
6. Licence Fee (Licence to discharge effluents)	Licensee shall pay the licence fee imposed by the Minister. (Environmental Quality Act §17)	licensee	Federal Government	
7. Sewerage Improvement Rate, Drainage Rate	The owner of the holdings shall pay the rates. (Local Government Act §131, §132, §146)	the owner of the holdings	Local Authority	
8. city Drainage Cost	The frontager or developer shall pay the cost of improving and making sewers. (Street, Drainage and Building Act §51)	frontager or developer	Local Authority	

Source; Refs. 9, 13, 14 and 15

Table 48 DISTRIBUTION OF FUNCTIONS FOR RIVER AND RIVER WATER MANAGEMENT (1/2)

Officer (Agency)	Functions	Legal Ground
1. State Authority	(1) To approve the licences to divert river water for private of domestic purposes.	Waters Enactment (§7)
	(2) To approve the licences to divert river water for industrial and other purposes.	Waters Enactment (§7)
	(3) To issue the licences to divert river water for the use in electricity generation.	Waters Enactment (§7)
	(4) To declare any lake, river or waterway to be a prescribed source of water for the purpose of electricity generation.	Electricity Act (§50)
2. District Officer (District Office)	(1) To issue the licences to divert river water for the use (a) for private of domestic purposes, (b) in the cultivation of rice, and (c) for industrial and other purposes, with the approval of the State Authority except for (b).	Waters Enactment (§7)
	(2) To inspect any buildings or premises to which permission given with regard to construction of walls and buildings along bank of rivers or within flood channels.	Waters Enactment (§14)
3. Senior Inspector of Mines (Mines Department)	(1) To permit alteration or interference with the bank of any river, stream or watercourse in the course of mining operations (reference to the State Authority is required).	Mining Enactment (§64)
	(2) To issue to any person who is mining a licence to divert, make use of and discharge water (prior approval by the State Authority is required, if the discharge come into paddi fields).  Consultation with the State DID Engineer and the District DID Engineer is mandatory.	Mining Enactment (§65)  Correspondence between DID and the Mines Department, 1947
4. Forest Officer (Forest Office)	To stop any public or private way or watercourse in a reserved forest.	Forest Enactment (§19)

Source; Refs. 2, 4, 6 and 15

Table 49 DISTRIBUTION OF FUNCTIONS FOR RIVER AND RIVER WATER MANAGEMENT (2/2)

Officer (Agency)	Functions	Legal Ground
5. Drainage and Irrigation Engineer (SDID)	(1) To fill up, construct, widen or drain any canal, watercourse, drain, ditch, pond or swamp whether within or without an irrigation area.	Irrigation Areas Ordinance (§77)
	(2) To require the owner or occupier of any land within irrigation areas to clear the banks or sides of the irrigation works.	Irrigation Areas Ordinance (§12)
	(3) To prohibit the owner or occupier of any land within irrigation areas from planting any tree or plant on the banks or sides of the irrigation works.	Irrigation Areas Ordinance (§12)
	(4) To require the owner or occupier of any land within irrigation areas to provide proper banks or batas.	Irrigation Areas Ordinance (§18)
	(5) To permit to operate the irrigation works within a irrigation area.	Irrigation Areas Ordinance (§24)
	(6) To require the owner or occupier of any land within drainage area to clear along the drainage works.	Drainage Works Ordinance (§11)
	(7) To permit to construct any canal, watercourse, drain, ditch or pond within any drainage area.	Drainage Works Ordinance (§12)
	(8) To prosecute in respect of an offence and to arrest any person found committing an offence without warrant.	Drainage Works Ordinance (§15, §17)
	(9) To be consulted by the District Officer on the matters pertinent to river and river water management.	
	(10) To be consulted by the officers of SPWD and by the District Officer as to the possible extraction volume of river water.	
	(11) To give the technical advice to the Senior* Inspector of Mines, on the deviation or interference with the natural course of rivers when an application comes from a miner.	Correspondence between DID and the Mines Department, 1947

Remarks; \*: The District DID Engineer also gives the technical advice to the Inspector of Mines, at District level. For both cases, reference is made to the State Authority when the river width exceeds 15 feet.

Source; Refs. 16 and 17

Table 50 DISTRIBUTION OF FUNCTIONS FOR  
GROUNDWATER MANAGEMENT

Agency	Functions	Legal/Administrative Ground of Functions
1. GSD	(1) To search for groundwater in order to supplement surface water source for water supply. (2) To assess groundwater potential. (3) To prepare hydrogeological maps of the whole country. (4) To provide consultative services to the other government agencies in respect of groundwater development. (5) To be notified of the development of certain wells and certain excavations.	Geological Survey Act
2. DID, SDID	(1) To develop wells for irrigation purposes where the surface water is insufficient (usually assisted by GSD). (2) To extract groundwater for the irrigation.	(Irrigation Areas Ordinance)
3. PWD, SPWD	(1) To extract groundwater for the supply of domestic or industrial water, from its own wells or from the wells developed by GSD. (2) To monitor the extracted groundwater whether it is suitable for water supply or not.	(Water Supply Enactment)
4. MOH	(1) To survey groundwater potential at the request of rural community. (2) To provide the materials for the supply of groundwater. (3) To assist rural communities technically in well development or the improvement of wells.	As a part of the "Rural Environmental Sanitation Programme"

Remarks; In addition to the sources shown below, information from the personnel of each agency was provided.

Source; Refs. 3, 8 and 16

Table 51      DISTRIBUTION OF FUNCTIONS FOR WATERSHED  
MANAGEMENT AND LAND USE CONTROL

Officer (Agency)	Functions	Legal Ground
1. Land Officer/ Collector of Land Revenue (Land Office)	(1) To control hill land.	Land Conservation Act
	(2) To control silt and erosion.	Land Conservation Act
	(3) To express conditions and re- strictions in the interest of alienated land.	National Land Code
	(4) To administer the State land or the reserved land.	National Land Code
	(5) To restrict the construction of walls and buildings on banks of rivers or within flood channels.	Waters Enactment
	(6) To handle the procedures of land acquisition.	Land Acquisition Act
2. Forest Officer (Forest Office)	(1) To manage the Reserved Forest.	Forest Enactment
	(2) To safeguard water supplies and environmental quality of the protective forest.	
	(3) To minimize flood damage and erosion in the protective forest.	
3. Town Planning Officer (Local Authority)	To control development in Local Authority areas.	Town and Country Planning Act
4. Drainage and Irrigation Engineer (SDID)	(1) To be consulted regarding re- striction of land use along the river.	
	(2) To carry out river conservancy works.	
5. State Authority	To approve all the matters pertaining to land administration including land acquisition.	Federal Consti- tution and various land- related laws

Source; Refs. 1, 2, 6, 27, 28 and 29

Table 52 DISTRIBUTION OF FUNCTIONS FOR WATER POLLUTION CONTROL

Agency	Functions	Legal Ground
1. DOE	(1) To survey pollution sources and to inventory these sources. (2) To develop the Regulations or the Guidelines, coordinating the Federal and State agencies in the preparation. (3) To review, evaluate and document effluent treatment technology. (4) To advise governmental agencies along the Guidelines in relation to development projects. (5) To evaluate the environmental implications for new industrial projects. (6) To process the licence along the Environmental Quality Act and its Regulations. (7) To monitor, inspect and investigate the pollution, and to prosecute the cases against the Environmental Quality Act.	Environmental Quality Act
2. Chemistry Department	To analyze water samples taken by the other governmental agencies such as DID and DOE.	
3. DID	(1) To monitor river water quality, together with the hydrological data collection. (2) To control irrigation water pollution.	Irrigation Areas Ordinance
4. MOH	(1) To study water pollution problems at the request of the State Government. (2) To monitor the water quality in the rural water supply schemes.	
5. Mines Department	To enforce the legal provisions prohibiting water pollution incidental to mining operations.	Mining Enactment
6. Land Office	To prohibit to pollute river water by any matter harmful, detrimental or potentially dangerous to public health, safety to health or other beneficial uses of the river.	Waters Enactment (S7A)
7. Forest Office	To prohibit to poison water in Reserved Forests.	Forest Enactment
8. Local Authority	To prohibit pollution of streams in Local Authority areas.	Local Government Act

Source; Refs. 2, 4, 6, 9, 13 and 16



Table 53 PARAMETER LIMITS FOR EFFLUENT DISCHARGE (1/2)

Unit: mg/lit  
(except for temperature)

Parameter	Prescribed Premises				Sewage and Industrial Effluents		
	Crude Palm-oil		Raw Natural Rubber		Effluent Discharged into		When licence to contravene is granted if the sewerage system is to be provided Within the Any Other Inland Waters Catchment Area (Standard B)
	Jul. '80	Jun. '81	Other than of Conc. (A)	Latex (A)	Inland Waters Within the Catchment Area (Standard A)	Inland Waters	
1. Biochemical Oxygen Demand (BOD)	1,000	500	200	6,000	20	50	400
2. Chemical Oxygen Demand (COD)	2,000	1,000	500	12,000	50	100	1,000
3. Total Solids	2,000	1,500	1,000	13,000	-	-	-
4. Suspended Solids (SS)	600	400	250	500	50	100	400
5. Oil and Grease	75	50	-	-	-	-	-
6. Ammoniacal Nitrogen	15	10	70	900	-	-	-
7. Total Nitrogen	75	50	100	1,100	-	-	-
8. pH	5.0-9.0	5.0-9.0	6-8	3.5-8.0	6.0-9.0	5.5-9.0	5.0-9.0
9. Temperature	45°C	45°C	-	-	40°C	40°C	45°C
10. Mercury	-	-	-	-	0.005	0.05	0.10
11. Dadmium	-	-	-	-	0.01	0.02	1.0
12. Chromium, Hexavalent	-	-	-	-	0.05	0.05	2.0

Source; Refs. 10, 11 and 12

Table 54 PARAMETER LIMITS FOR EFFLUENT DISCHARGE (2/2)

Unit: mg/lit

Parameter	Prescribed Premises		Sewage and Industrial Effluents		When licence to contravene is granted if the sewerage system is to be provided Within the Any Other Catchment Area (Standard B)
	Raw Natural Rubber Other than of Conc. Latex (A)		Effluent Discharged into Inland Waters		
	Crude Palm-oil Jul.'80	Jul.'81	Within the Catchment Area (Standard A)	Any Other Inland Waters (Standard B)	
1. Arsenic	-	-	0.05	0.10	0.10 2.0
2. Cyanide	-	-	0.05	0.10	0.10 2.0
3. Lead	-	-	0.10	0.5	0.5 2.0
4. Chromium, Trivalent	-	-	0.20	1.0	1.0 10
5. Copper	-	-	0.20	1.0	1.0 10
6. Manganese	-	-	0.20	1.0	1.0 10
7. Nickel	-	-	0.20	1.0	1.0 10
8. Tin	-	-	0.20	1.0	1.0 10
9. Zinc	-	-	1.0	1.0	1.0 10
10. Boron	-	-	1.0	4.0	4.0 -
11. Iron	-	-	1.0	5.0	5.0 50
12. Phenol	-	-	0.001	1.0	1.0 5.0
13. Free Chlorine	-	-	1.0	2.0	2.0 -
14. Sulphide	-	-	0.50	0.50	0.50 2.0
15. Oil and Grease	-	-	Not detectable	10.0	10.0 100

Source: Refs. 10, 11 and 12

Table 55 FEES FOR EFFLUENT DISCHARGE

Unit: M\$

Specification	Prescribed Premises Rubber Processing Plant	Palm Oil Plant	Sewerage and Industrial Effluents
---------------	--	----------------	-----------------------------------

1. Fee for Written Permission	100.00		100.00
2. Licence Fee (including renewal of licence)	100.00	(Licence to contravene)	100.00
3. Fee for Transfer of Licence	30.00		30.00
4. Effluent-related Licence Fees			
(1) Effluent discharged into inland waters	Per metric tonne of BOD waste effluent	Organic/Inorganic Contaminants	Per kg of contaminants
	10.00	Per tonne of BOD load	(Mercury; Cadmium; Chromium, Hexavalent; Cyanide; Lead; Chromium Trivalent; Copper, Manganese, Polychlorinated Biphenyls; Selesium; Arsenic; Silver; Beryllium; Vanadium; Radioactive Material.
	(Minimum amount charged is M\$150.00)		(Zinc; Boron; Iron; Phenol; Free Chlorine Sulphide; Oil and Grease)
(2) Effluent discharged onto land	Per 1,000 metric tons	Effluent discharged into specified water catchment areas	100.00
	10.00	Other inland waters	500.00
	50.00		
	(Minimum amount charged is M\$150.00)		
			10.00

Source; Ref. 9, 10, 11 and 12

Table 56 MONITORING ACTIVITIES BY DOE AND DID

Item	Monitoring by DOE	Monitoring by DID
1. Program	National Water Quality monitoring Program, 1978	Water quality monitoring, as part of long term hydrological observation program
2. Area Monitored	River Basin Control Regions 49 regions designated in Peninsular	No control area is set-up. Stations are located mainly at major tributaries and main rivers
3. Sampling Points	479 sampling stations in 1979 510 stations in 1980	Out of 200 permanent stations, water quality is measured for 66 stations excluding ground-water sampling (1977).
4. Frequency of Sampling per Year	One to twelve times per year depending on the stations	Once a month for water quality
5. Water Quality Analysed	BOD <sub>5</sub> , pH, COD, SS, NH <sub>4</sub> N	pH, SS, Alkalinity, Conductivity, Chlorine
6. Water Quantity Gauged	Measured only for limited number of stations	Discharge (cu.ft./sec), water level
7. Chemical Analysis	Chemistry Department	Chemistry Department except for sediment analysis
8. Data Exchange between DID and DOE	Making use of the data between DID and DOE done on adhoc basis.	

Source; Information from DOE and DID

Table 57 WATER SUPPLY BODIES AT STATE LEVEL

State	Urban Water Supplies	Rural Water Supplies	
		Areas of Less than 10,000 Residents	Areas of 200-500 Residents
1. Perlis	SPWD	SPWD	MOH
2. Kedah	SPWD	SPWD	MOH
3. Pulau Pinang	Penang Water Authority	Penang Water Authority	MOH
4. Perlak	SPWD	SPWD	MOH
5. Selangor*	Waterworks Department	Waterworks Department	MOH
6. Negeri Sembilan	SPWD	SPWD	MOH
7. Melaka	Malacca Water Authority	Malacca Water Authority	MOH
8. Johor	SPWD	SPWD	MOH
9. Pahang	SPWD	SPWD	MOH
10. Trengganu	SPWD	SPWD	MOH
11. Kelantan	SPWD	SPWD	MOH

Remarks; \*: Including the Federal Territory

Table 58 CONTENTS OF RURAL WATER SUPPLIES

Item	Rural Water Supply by SPWD or the Water Authority	Rural Water Supply by MOH
	1. Area to be supplied	Less than 10,000 residents
2. Source of Water	(1) Any source (2) Extension from the existing system	(1) Hill water (2) Waterfalls (3) Shallow wells
3. Treatment	Treated	Untreated
4. Supply system	(1) Pumped supply (2) Gravity supply, in case of extension from the existing system	Gravity supply system
5. Construction of Capital Works	SPWD or the Water Authority	(1) Done by Kampong people, while the materials are provided by MOH. (2) Each household receiving services contributes M\$20. (3) Moneys collected are managed by the Kampong Committee and used for repair works.
6. Operation and Maintenance	SPWD or the Water Authority	Kampong people
7. Water Charges	Collected by and paid into the State account or the Fund of the Water Authority	Free of charge

Source; Information from the Ministry of Works and Public Utilities and MOH, 1980.

Table 59 DIFFERENCES OF WATER CHARGES  
AMONG THE STATES

Unit: M\$

State	For Domestic Uses		For Industrial Uses	
	Minimum Charge	Excess Charge (per 10 <sup>3</sup> gallons)	Minimum Charge	Excess Charge (per 10 <sup>3</sup> gallons)
1. Perlis	1.00	1.00	1.00	2.00
2. Kedah	2.00	1.00	4.00	2.00
3. Pulau Pinang	2.00	0.62	5.00	1.50
4. Pelak	-	0.30	-	0.30
5. Selangor	-	1.20	4.00	2.00
6. Negeri Sembilan	1.00	1.20	2.00	2.00
7. Melaka	2.50	1.36	7.50	2.64
8. Johor	2.00	1.00	4.00	2.00
9. Pahang	1.00	1.00	2.00	2.00
10. Trengganu	n.a.	n.a.	n.a.	n.a.
11. Kelantan	-	0.50	-	1.00

Remarks; n.a.: Not available

Source; Ref. 35

Table 60 WATER CHARGES IN KUALA LUMPUR

Unit: M\$/m<sup>3</sup>

Served Facility/ Kind of Water Supply	Water Charge	Water and Sewage Charge
1. Residential House, Government House, Club, School, Local Authority/Public Building and Swimming Pool	0.27	0.36
2. Commercial/Residential House	0.38	0.54
3. Commerce	0.44	0.66
4. Supply to Ships	0.66	-
5. Religions/Welfare Building or Cheap Charge Rate	0.14	0.23
6. Mosque	0.11	0.20

Remarks; Minimum charges is calculated for 9.09218 m<sup>3</sup> if the using volume is less than 9,09218m<sup>3</sup> a month.

Source; Ref. 110

Table 61 EXAMPLES OF IRRIGATION PROJECTS

State or Region	Name of Scheme	Total Irrigated Area (acres)	Construction Cost (M\$/acre)	Total Maintenance Cost (M\$)	Rate Imposed (M\$/acre per annum)	Cost Covered by Rate (%)
1. Kelantan	(1) Repek	1,120	125	73,853	5.00	6
	(2) Jubakar	1,230	47	18,618	5.00	33
	(3) Batu Balai	341	-	3,336	5.00	51
	(4) Ulu Sat	1,251	280	10,100	5.00	62
2. Selangor	(1) Tanjong Karang P.4	47,824	482	1,495,674	6.00	19
	(2) Sugei Buloh	198	505	28,795	-	0
	(3) Sesapan Batu	470	635	18,500	-	0
3. Muda*	Muda	237,000	986	3,656,225	5.00 to 8.40	n.a.
4. Kedah	(1) Pekula	4,400	386	243,037	6.00	11
	(2) Pulau Langkawi	6,563	350	79,819	1.40	12
	(3) Kota Bukit Meriam	3,591	77	39,163	4.80	44
	(4) Kampung Binjal	425	294	5,030	2.80	24

Remarks: \*: Under the responsibility of MADA, n.a.: Not available

Source: Ref. 57

Table 62 DIFFERENCES OF IRRIGATION  
RATES AMONG THE STATES

Unit: M\$ per acre

State	Region/ Classification	Categorization of Irrigation Area*		
		Class A	Class B	Class C
1. Perlis	(1) North		5.60	
	(2) Central and South		10.00	
2. Kedah	(1) Muda, Old		10.00	
	(2) Muda, New		8.00	
	(3) Areas except for Muda	4.20	2.80	1.40 (Pumping Scheme: 6.00)
3. Pulau Pinang	(1) Single Crop	6.00	4.50	3.00
	(2) Double Crop	9.00	6.75	4.50
4. Perak		4.50	3.00	1.00
5. Selangor			6.00	
6. Negeri Sembilan			3.00	
7. Melaka		3.00	2.00	1.00
8. Johor			None	
9. Pahang		5.00	3.00	2.00
10. Trengganu		6.00	4.00	2.00
11. Kelantan	(1) Single Crop		6.00 or 5.00	
	(2) Double Crop		10.00	

Remarks; \*: Based on the rice yield in gantangs per acre.  
In the States other than Kedah,  
Class A: more than 400, Class B: 250-400 and  
Class C: less than 250.  
In the State of Kedah, Class A: more than 450,  
Class B: 350-450 and Class C: less than 50.

Source; Ref. 118



Table 63 EXAMPLES OF THE AGRICULTURAL DRAINAGE RATE

State	Agricultural Drainage Schemes	Drainage Rate
1. Pulau Pinang	(1) Bt. Minyak/Tegah	10.80
	(2) Nibong Tebal, etc.	8.00
	(3) Tasek Glugor	4.00
	(4) Bertam	3.60
2. Perak	(1) Tg. Ketapang	5.00
	(2) Batang Datok	4.60
3. Selangor	(1) Klan Valley Selatan, Pulau Lumut, etc.	6.00
	(2) Sabak Bernam, Sg. Buloh Valley, etc.	5.00
	(3) Sg. Buloh Selatan, etc.	4.00
4. Negeri Sembilan		3.00
5. Melaka		5.00
6. Johor		6.00

Remarks; In the States of Trengganu and Kelantan, no drainage rate is imposed.

Source; Ref. 118

Table 64 FINANCIAL FEATURES IN IRRIGATION AND AGRICULTURAL DRAINAGE

Item	Irrigation Schemes	Drainage Schemes
1. Responsible Officer for the collection of the Respective Rates	Collector of Land Revenue (Together with the collection of land tax)	Collector of Land Revenue (Together with the collection of land tax)
2. Financing (1) Capital Works (2) Operation and Maintenance	State or Federal funds Rates have no relation.	State or Federal funds Rates should cover the cost.
3. Accounting	-	There is usually deficit due to failure in collecting the rates.
4. Report to the State Authority	Report on expenditure is prepared by the DID Engineer.	Some form of balance sheet is prepared by the DID Engineer.
5. Formulation of the Respective Rates	-	Drainage rate is formulated according to the drainage facilities provided.
6. Formulator of the Respective Rates	-	District DID Engineer
7. Amount of Rate	M\$6.00/acre (No change since 1975)	M\$4.50/acre (No change since 1976)

Source; Information from the District DID Office, Kuala Selangor, State of Selangor, 1980.

Table 65 DISTRIBUTION OF FUNCTIONS FOR  
SEWERAGE WORKS PROVISION

Agency/ Authority	Functions	Legal Ground
1. Local Authority	(1) To cause to be made and constructed and maintained sewerage works.  (2) To take the initiative of sewerage projects to be forwarded, for obtain- ing the approval of the State Authority.  (3) To supervise, construct and maintain the sewerage.	Local Government Act Street, Drainage and Building Act
2. State Authority	(1) To chair the steering committee of the sewerage project in implementation phase.  (2) To coordinate the Federal agencies and Local Authorities in institutional arrangements.	
3. MOHLG	(1) To advise Local Authorities.  (2) To coordinate Local Authorities in preparation and implementation of projects in view of effective execution of local government policies.	Minister of Federal Government Order, 1979
4. MOH	(1) To review the plan and design of sewerage system.  (2) To give advice in the aspects of public health and environmental health.  (3) To chair the technical committee of sewerage in both study and implemen- tation phases.	Minister of Federal Government Order, 1979
5. EPU	(1) To coordinate the Federal Treasury and the State/Local Authorities.  (2) To chair the steering committee of the feasibility study of sewerage.	
6. Treasury	To allocate funds for the approved sewerage projects and to disburse the moneys.	
7. DID	To be responsible for the master plan study of urban drainage which is conducted con- currently with the sewerage study.	
8. DOE	To make advice on the sewerage effluent and sewer treatment facilities.	Environmental Quality Act

Source; Refs. 9, 13, 14 and 36

## ***FIGURES***



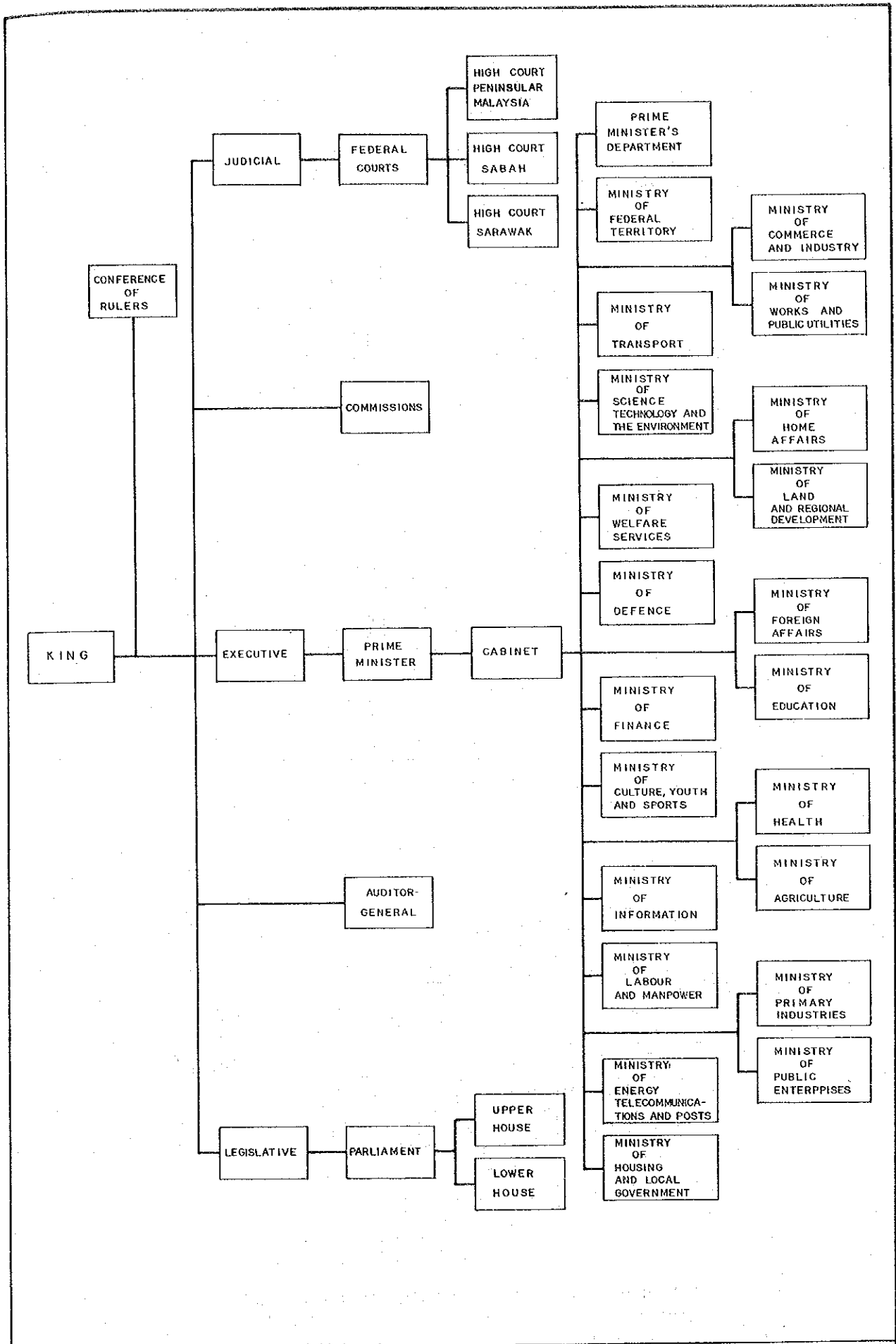


Fig.1 The Government of Malaysia

GOVERNMENT OF MALAYSIA  
 NATIONAL WATER RESOURCES STUDY MALAYSIA  
 JAPAN INTERNATIONAL COOPERATION AGENCY

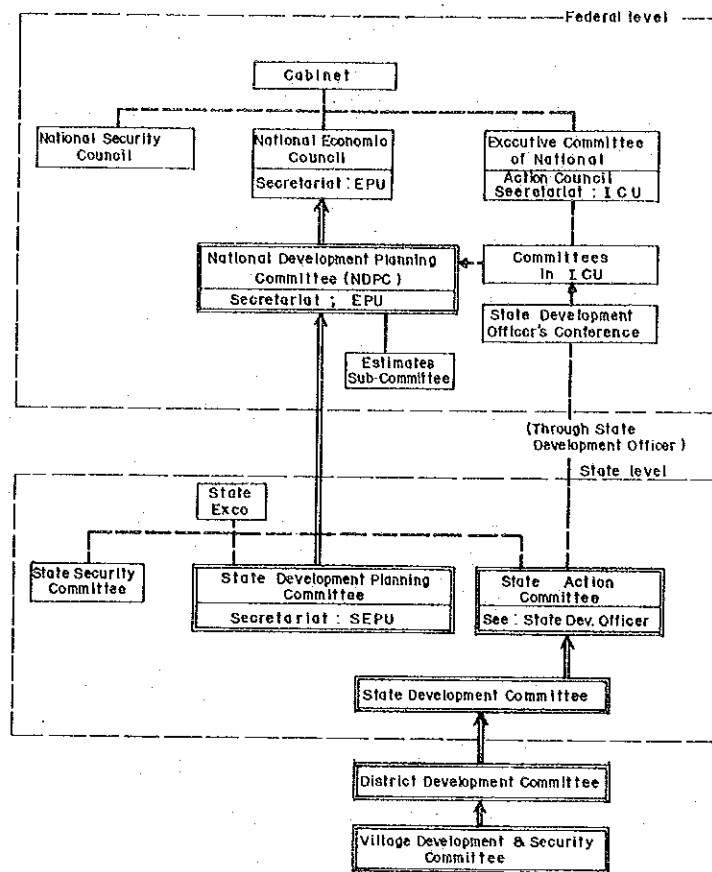


Fig. 2 Procedure of Formation of the National Development Plan (Five Year Plan)

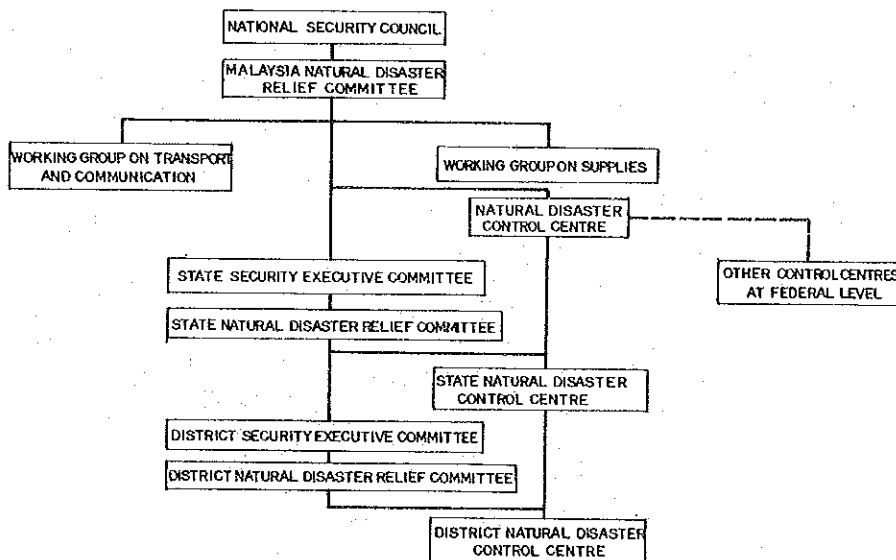


Fig.3 Malaysia's National Disaster Relief Organization

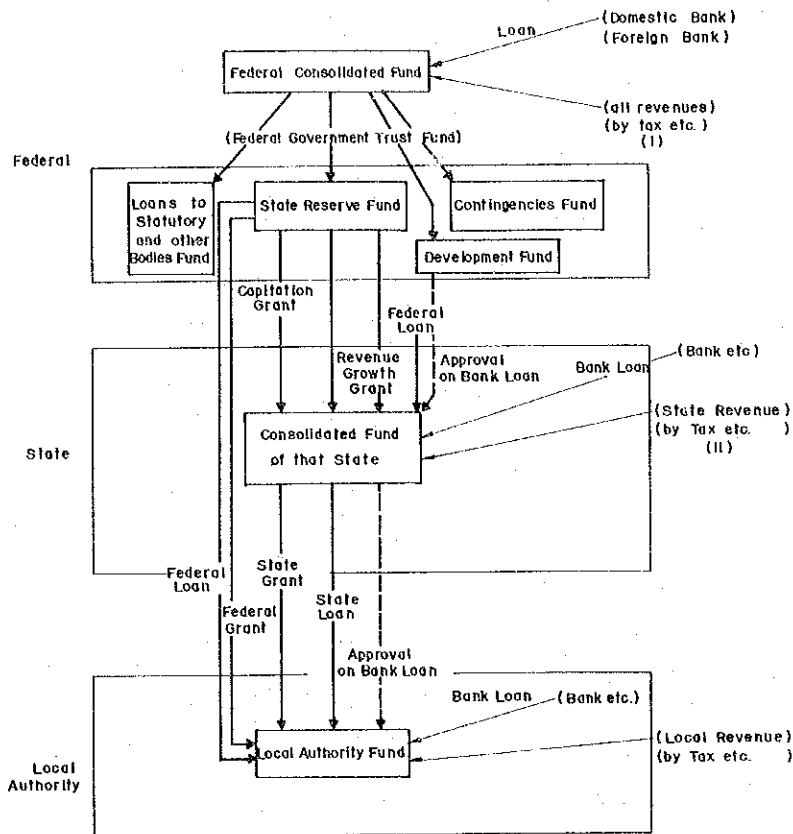


Fig. 4 Basic Financial System

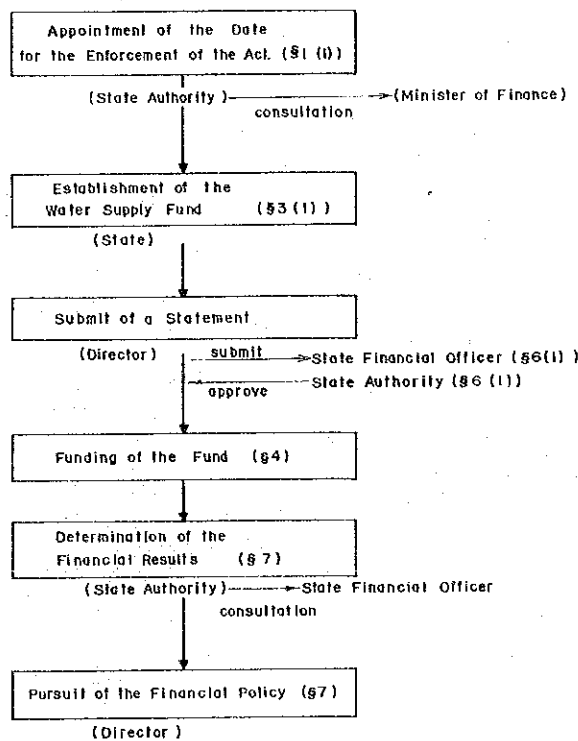


Fig. 5 Financing and Accounting Procedure of the State Water Supply Fund





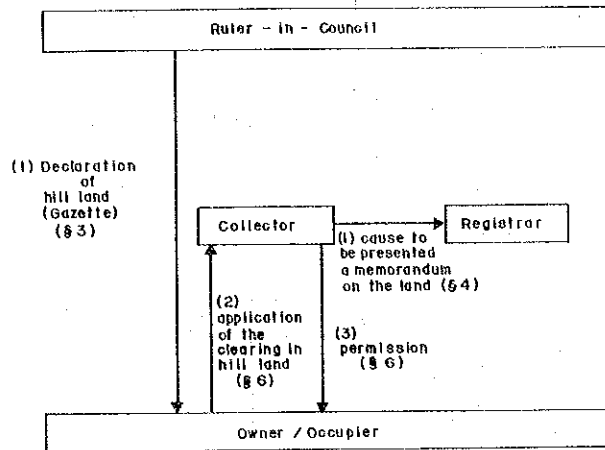


Fig. 10 Watershed Management in Hill Land under the Land Conservation Act

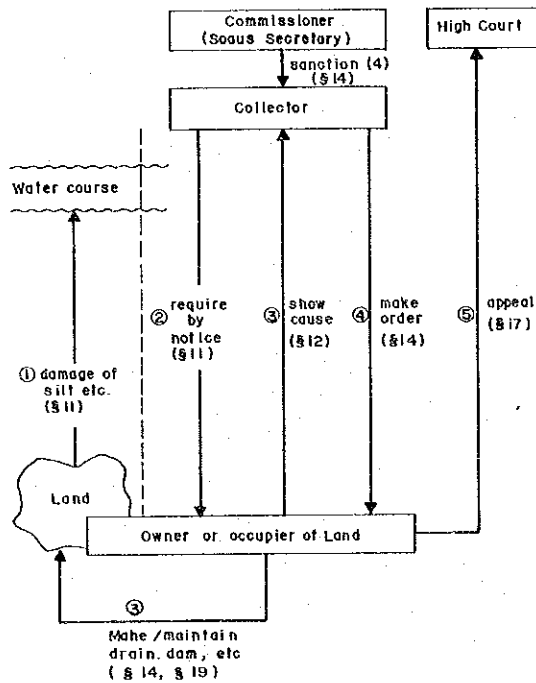


Fig. 11 Control of Silt and Erosion under the Land Conservation Act

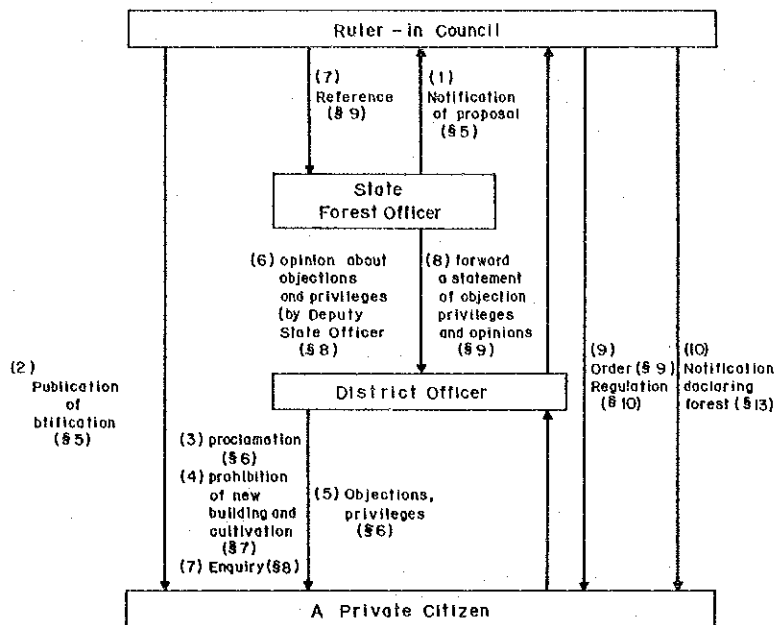


Fig. 12 Procedure of Declaration of a Reserved Forest Provided by the Forest Enactment

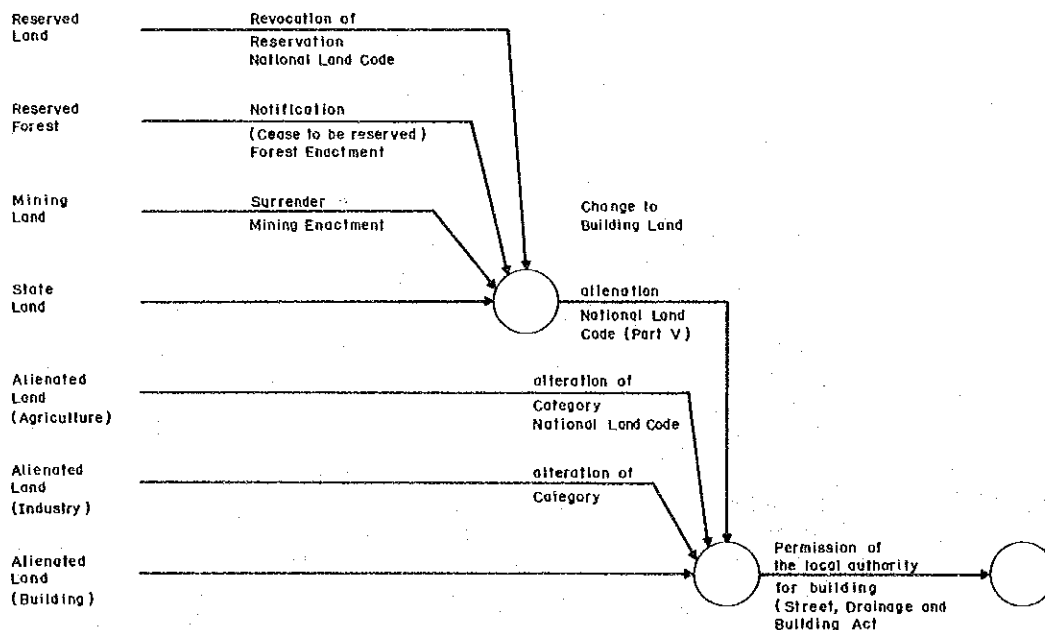


Fig. 13 Framework of Land Administration Under the National Land Code ; Street, Drainage and Building Act ; Mining Enactment and the Forest Enactment

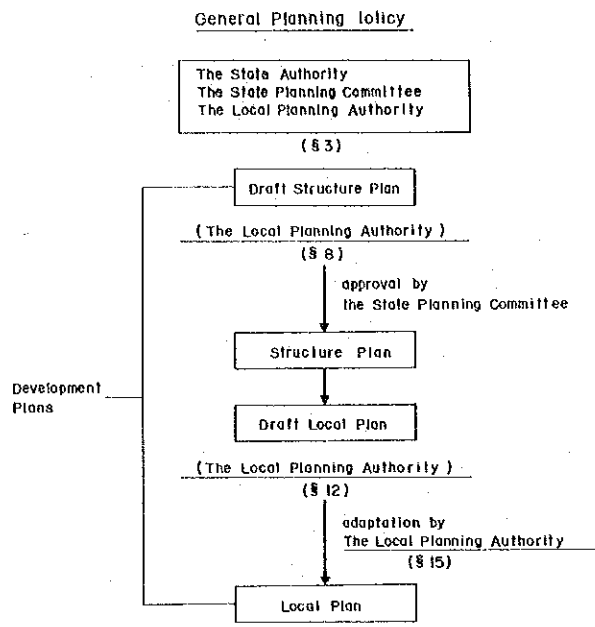


Fig. 14 Structure Plan and Local Plan Provided by the Town and Country Planning Act

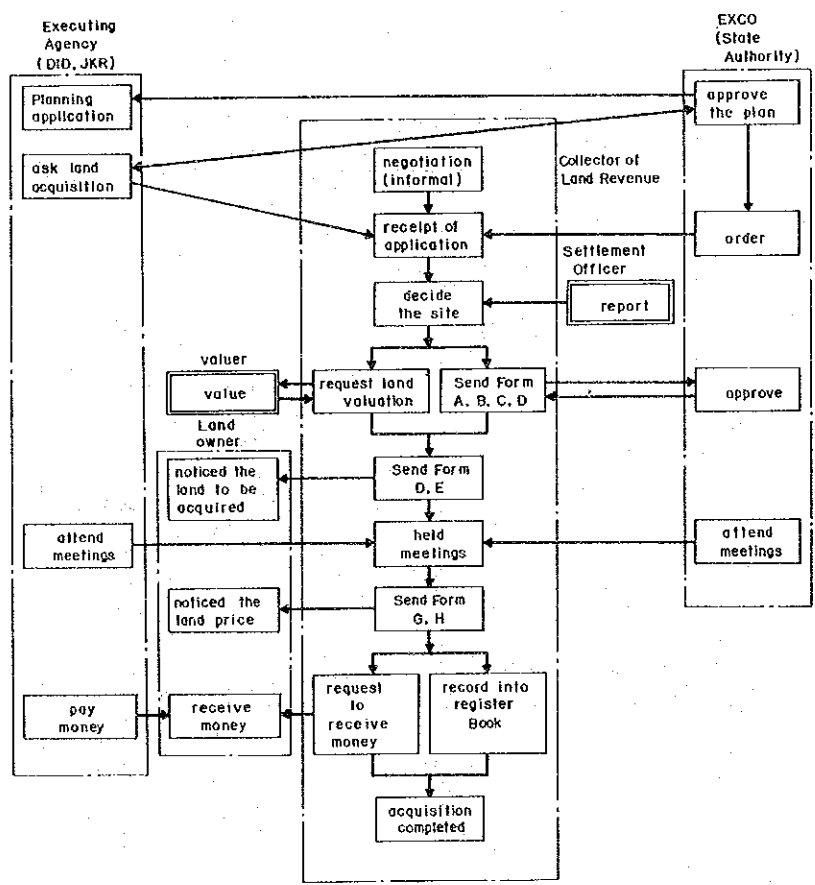


Fig. 15 Administrative Procedure of Land Acquisition Under the Land Acquisition Act.

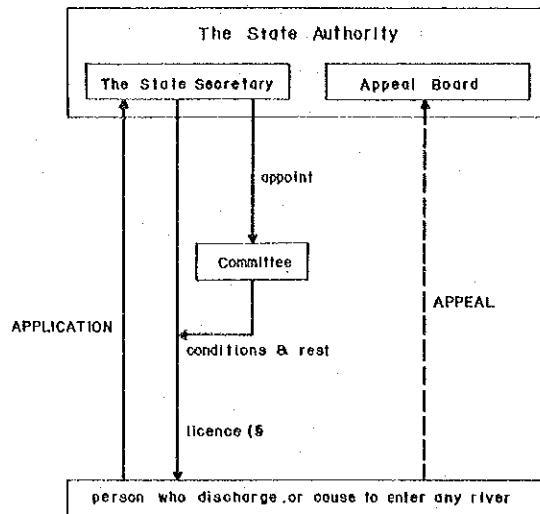


Fig.16 Prohibition of Pollution of Rivers Under the Waters Enactment

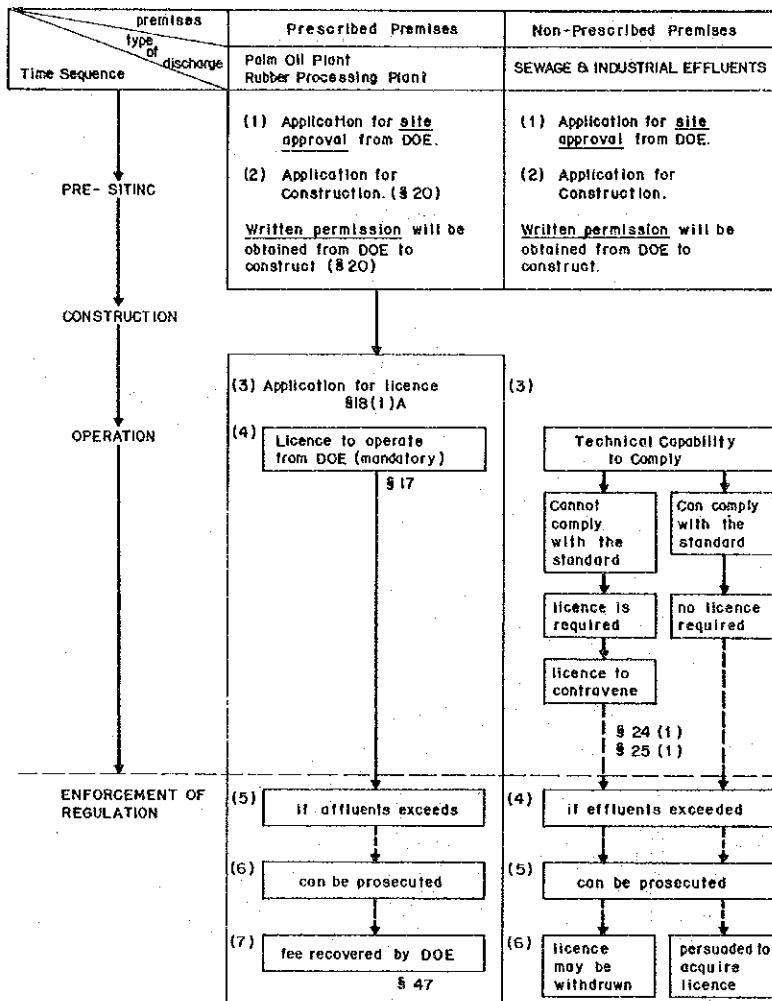


Fig. 17 Procedure of Obtaining Licence Provided by the Environmental Quality Act

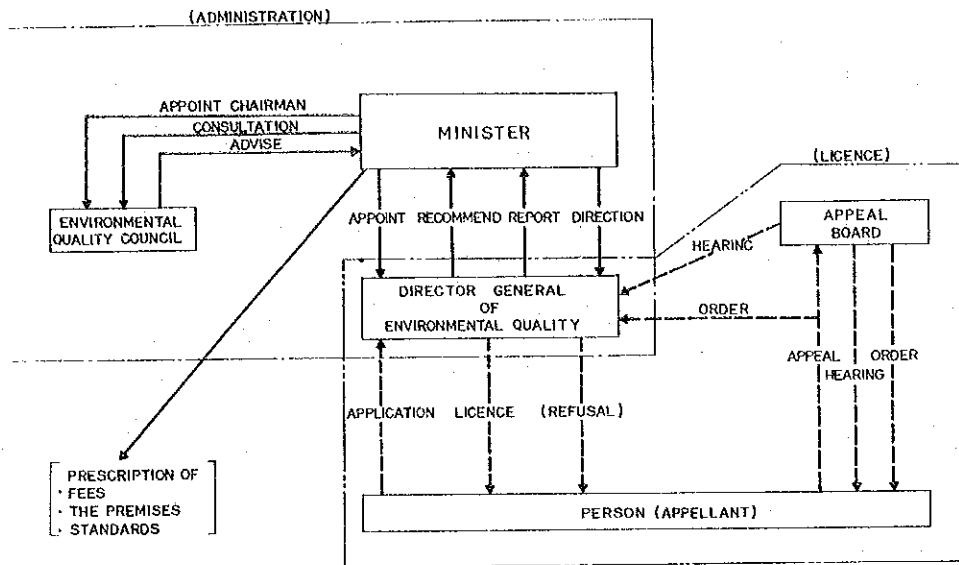
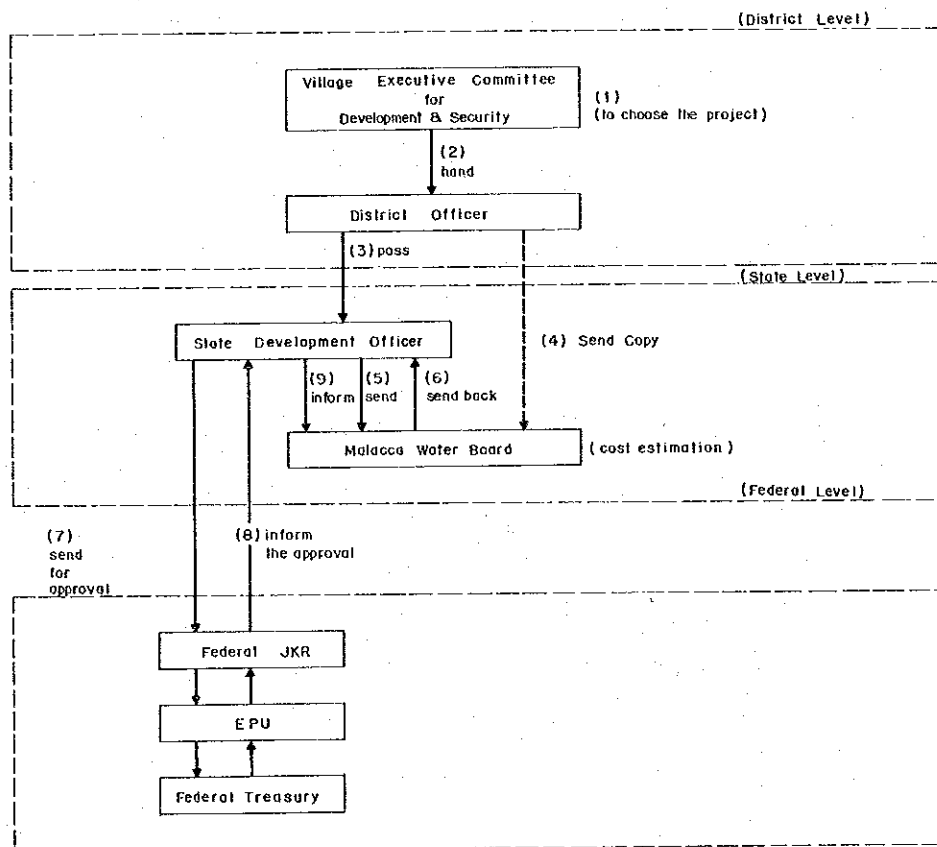
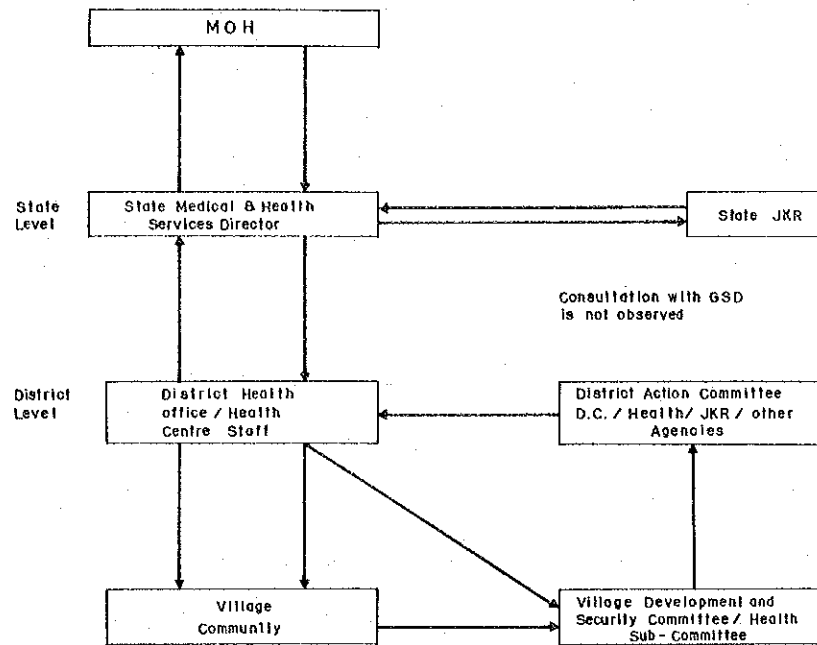


Fig.18 Administrative Framework Under the Environmental Quality Act



Source ; Information from Malacca State, 1980

Fig.19 Rural Water Supply Projects by the Malacca Water Authority



Source ; Information from MOH, 1980

Fig. 20 Procedure of Rural Water Supply by MOH

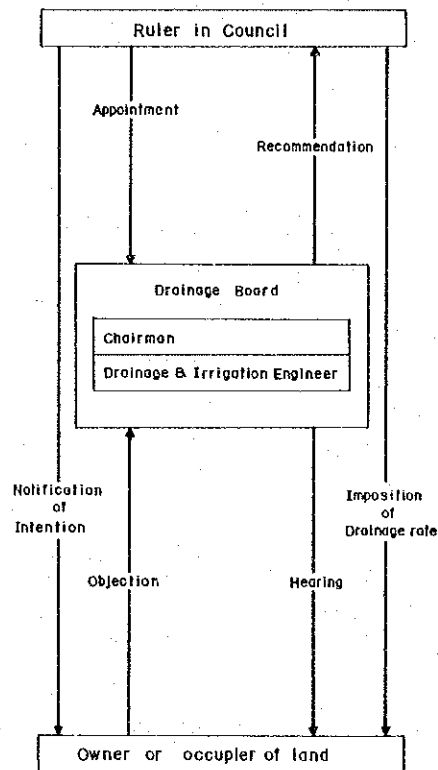


Fig. 21 Provision of Drainage Works under the Drainage Works Ordinance

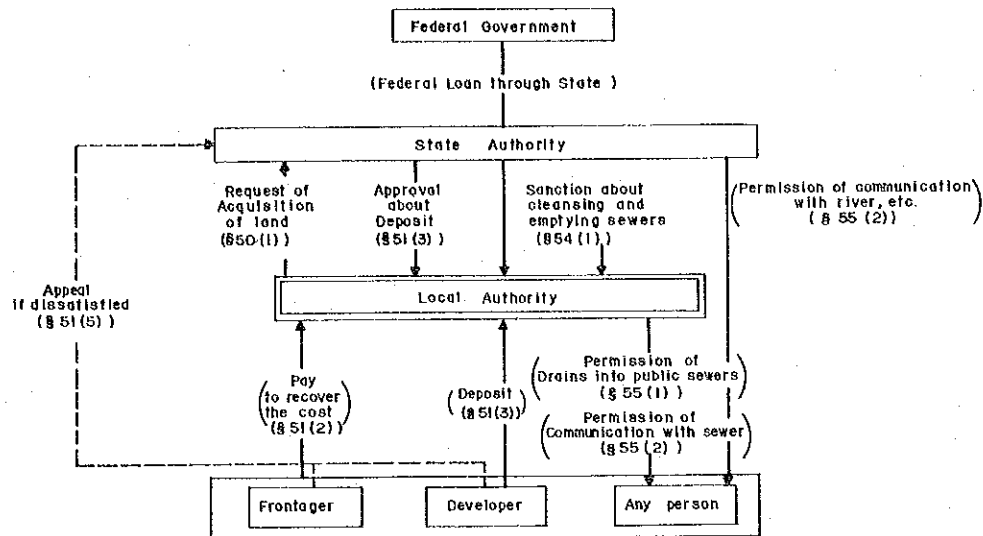
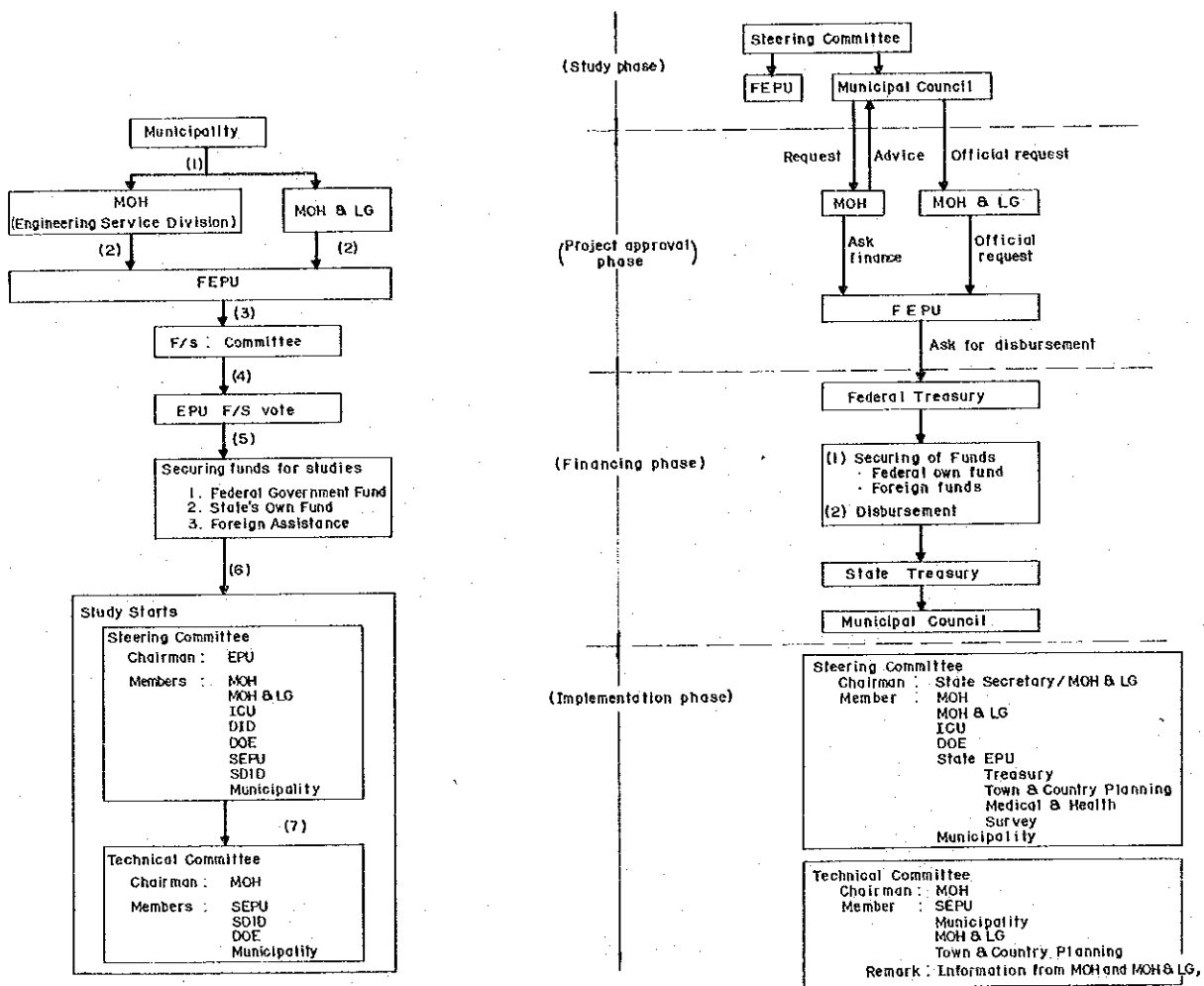


Fig. 22 Provision of Sewers and Drains under the Street, Drainage and Building Act



Source ; Information from MOH and MOH & Local Authorities 1980.

Fig.24 Implementation Phase of Sewerage Projects

Fig. 23 Study Phase of Sewerage Projects





***PART 2***  
***SABAH AND***  
***SARAWAK***



## TABLE OF CONTENTS

	Page
1. INTRODUCTION .....	S-1
2. CONSTITUTIONAL FRAMEWORK .....	S-2
2.1 Background of Special Provisions in the Federal Constitution .....	S-2
2.2 Distribution of Legislative Powers .....	S-2
2.3 Distribution of Executive Powers .....	S-2
2.4 Financial Provisions for Sabah and Sarawak .....	S-3
3. LEGAL SITUATION IN THE STATES OF SABAH AND SARAWAK .....	S-4
3.1 Outline of Legislations .....	S-4
3.2 Major Water-related Laws .....	S-5
4. OUTLINE OF INSTITUTIONS IN THE STATES OF SABAH AND SARAWAK ..	S-8
4.1 Structure of the State Governments .....	S-8
4.2 Administration System Throughout the States .....	S-8
4.3 Major Water-related Agencies .....	S-9
5. PLANNING ASPECTS .....	S-13
5.1 Approval of Malaysia Five Year Development Plan .....	S-13
5.2 Procedure of Project Approval .....	S-13
6. FINANCIAL PROCEDURE .....	S-15
6.1 Financial Features of the State Governments of Sabah and Sarawak .....	S-15
6.2 Framework of the Financing .....	S-15
6.3 Fund Allocation for Projects .....	S-17
6.4 Budgeting Procedure .....	S-18
6.5 Finance of Local Authorities .....	S-19
7. RIVER MANAGEMENT .....	S-20
7.1 Background .....	S-20
7.2 Legal Provisions .....	S-20
7.3 Agencies and Activities .....	S-21

	Page
8. FLOOD MITIGATION .....	S-23
8.1 Background .....	S-23
8.2 Legal Provisions .....	S-23
8.3 Agencies and Activities .....	S-24
9. RIVER WATER USE .....	S-25
9.1 Background .....	S-25
9.2 Legal Provisions .....	S-25
9.3 Administration of River Water Use .....	S-26
10. UTILIZATION OF RIVER AREAS AND LAND USE CONTROL .....	S-28
10.1 Background .....	S-28
10.2 Legal Provisions .....	S-29
10.3 Administration of Utilizing River Areas .....	S-31
10.4 Land Use Control and Regional Planning .....	S-32
11. GROUNDWATER USE .....	S-34
11.1 Background .....	S-34
11.2 Legal Provisions .....	S-34
11.3 Agencies and Activities .....	S-35
12. WATERSHED MANAGEMENT .....	S-36
12.1 Background .....	S-36
12.2 Legal Provisions .....	S-36
12.3 Agencies and Activities .....	S-37
13. WATER QUALITY AND POLLUTION CONTROL .....	S-40
13.1 Background .....	S-40
13.2 Legal Provisions .....	S-40
13.3 Agencies and Activities .....	S-41
14. WATER SUPPLY .....	S-43
14.1 Background .....	S-43
14.2 Legal Provisions .....	S-43
14.3 Agencies and Activities .....	S-44
14.4 Financing and Charging System .....	S-47

	Page
15. IRRIGATION AND AGRICULTURAL DRAINAGE .....	S-49
15.1 Background .....	S-49
15.2 Legal Provisions .....	S-49
15.3 Agencies and Activities .....	S-50
15.4 Financing and Charging System .....	S-52
16. SEWERAGE AND URBAN DRAINAGE .....	S-53
16.1 Background .....	S-53
16.2 Legal Provisions .....	S-53
16.3 Agencies and Activities .....	S-54
16.4 Financing and Charging System .....	S-55
17. HYDROPOWER GENERATION .....	S-57
17.1 Background .....	S-57
17.2 Legal Provisions .....	S-57
17.3 Agencies and Activities .....	S-58
17.4 Financing and Charging System .....	S-59
18. INLAND NAVIGATION .....	S-61
18.1 Background .....	S-61
18.2 Legal Provisions .....	S-61
18.3 Agencies and Activities .....	S-62
19. INLAND FISHERIES .....	S-64
19.1 Background .....	S-64
19.2 Legal Provisions .....	S-64
19.3 Agencies and Activities .....	S-65
REFERENCES .....	S-66

LIST OF TABLES

	Page
1. DIFFERENCES OF THE WATER-RELATED LEGISLATIVE LISTS BETWEEN PENINSULAR MALAYSIA AND SABAH/SARAWAK .....	S-71
2. SPECIAL PROVISIONS OF EXECUTIVE POWERS IN THE FEDERAL CONSTITUTION FOR SABAH AND SARAWAK .....	S-72
3. DIFFERENCES OF THE FINANCIAL PROVISIONS IN THE FEDERAL CONSTITUTION BETWEEN PENINSULAR MALAYSIA AND SABAH/SARAWAK .....	S-73
4. SPECIAL GRANTS TO SABAH AND SARAWAK PROVIDED BY THE FEDERAL CONSTITUTION .....	S-74
5. ADDITIONAL REVENUE SOURCES OF SABAH AND SARAWAK STATES PROVIDED BY THE FEDERAL CONSTITUTION .....	S-75
6. EFFECTIVENESS OF WATER-RELATED FEDERAL LAWS IN SABAH AND SARAWAK .....	S-76
7. COMPARISON OF MAJOR WATER-RELATED STATE LAWS BETWEEN PENINSULAR MALAYSIA AND SABAH/SARAWAK .....	S-77
8. WATER-RELATED STATE LAWS IN SABAH (1/2) .....	S-78
9. WATER-RELATED STATE LAWS IN SABAH (2/2) .....	S-79
10. WATER-RELATED STATE LAWS IN SARAWAK .....	S-80
11. LAWS BY MAJOR CONCERN IN WATER RESOURCES DEVELOPMENT AND MANAGEMENT (1/2) .....	S-81
12. LAWS BY MAJOR CONCERN IN WATER RESOURCES DEVELOPMENT AND MANAGEMENT (2/2) .....	S-82
13. PROVISIONS OF WATER-RELATED LAWS (1/15) (RIVER MANAGEMENT) .....	S-83
14. PROVISIONS OF WATER-RELATED LAWS (2/15) (FLOOD MITIGATION) .....	S-84
15. PROVISIONS OF WATER-RELATED LAWS (3/15) (RIVER WATER USE) .....	S-85
16. PROVISIONS OF WATER-RELATED LAWS (4/15) (UTILIZATION OF RIVER AREAS AND LAND USE CONTROL) .....	S-86
17. PROVISIONS OF WATER-RELATED LAWS (5/15) (GROUNDWATER USE) .....	S-87

	Page
18. PROVISIONS OF WATER-RELATED LAWS (6/15) (WATERSHED MANAGEMENT) .....	S-88
19. PROVISIONS OF WATER-RELATED LAWS (7/15) (WATER QUALITY AND POLLUTION CONTROL) .....	S-89
20. PROVISIONS OF WATER-RELATED LAWS (8/15) (WATER QUALITY AND POLLUTION CONTROL) .....	S-90
21. PROVISIONS OF WATER-RELATED LAWS (9/15) (DAM CONSTRUCTION) .....	S-91
22. PROVISIONS OF WATER-RELATED LAWS (10/15) (WATER SUPPLY) .....	S-92
23. PROVISIONS OF WATER-RELATED LAWS (11/15) (IRRIGATION AND AGRICULTURAL DRAINAGE) .....	S-93
24. PROVISIONS OF WATER-RELATED LAWS (12/15) (SEWERAGE AND URBAN DRAINAGE) .....	S-94
25. PROVISIONS OF WATER-RELATED LAWS (13/15) (HYDROPOWER GENERATION) .....	S-95
26. PROVISIONS OF WATER-RELATED LAWS (14/15) (INLAND NAVIGATION) .....	S-96
27. PROVISIONS OF WATER-RELATED LAWS (15/15) (INLAND FISHERIES) .....	S-97
28. DIVISIONS AND DISTRICTS IN SABAH .....	S-98
29. DIVISIONS AND DISTRICTS IN SARAWAK .....	S-99
30. LOCAL AUTHORITY AREAS IN SABAH AND SARAWAK .....	S-100
31. MANPOWER ALLOCATION AMONG MAJOR WATER-RELATED STATE AGENCIES OF SABAH .....	S-101
32. MANPOWER ALLOCATION AMONG MAJOR WATER-RELATED STATE AGENCIES OF SARAWAK .....	S-102
33. COMPARISON OF BUDGET SCALE BETWEEN THE STATE GOVERNMENTS OF PENINSULAR MALAYSIA AND SABAH/SARAWAK .....	S-103
34. REVENUE OF THE STATE GOVERNMENT OF SABAH, 1976 TO 1981 ....	S-104
35. REVENUE OF THE STATE GOVERNMENT OF SARAWAK, 1976 TO 1981 ...	S-105
36. EXPENDITURE OF THE STATE GOVERNMENT OF SABAH, 1976 TO 1981 .....	S-106

	Page
37. EXPENDITURE OF THE STATE GOVERNMENT OF SARAWAK, 1976 TO 1981 .....	S-106
38. REVENUE SOURCES OF LOCAL AUTHORITY (1/2) .....	S-107
39. REVENUE SOURCES OF LOCAL AUTHORITY (2/2) .....	S-108
40. ESTIMATED REVENUE AND EXPENDITURE OF KMC FOR THE YEAR 1981 .....	S-109
41. DIVISIONAL FUNCTIONS OF LSD HEADQUARTERS IN SABAH AND SARAWAK .....	S-110
42. LEGAL GROUND OF CATCHMENT AREAS .....	S-111
43. FOREST RESERVE PRESCRIBED BY THE FOREST ENACTMENT, SABAH ...	S-112
44. PERMANENT FOREST PRESCRIBED BY THE FORESTS ORDINANCE, SARAWAK (1/2) .....	S-113
45. PERMANENT FOREST PRESCRIBED BY THE FORESTS ORDINANCE, SARAWAK (2/2) .....	S-114
46. AREAS UNDER FORESTS AND OTHER LAND USE PURPOSES IN SABAH, 1978 .....	S-115
47. CLASSIFICATION OF FOREST RESERVES IN SABAH, 1978 .....	S-115
48. AREAS UNDER FORESTS AND OTHER LAND USE PURPOSES IN SARAWAK, 1979 .....	S-116
49. CLASSIFICATION OF PERMANENT FORESTS IN SARAWAK, 1979 .....	S-116
50. FINANCING OF WATER SUPPLY PROJECTS CARRIED OUT BY THE HYDRAULICS BRANCH OF SABAH JKR IN 4MP PERIOD .....	S-117
51. DEVELOPMENT FUNDS PROVIDED BY THE FEDERAL GOVERNMENT FOR JKR'S WATER SUPPLY PROJECTS IN SABAH AND SARAWAK .....	S-118
52. PROPOSED AMOUNT OF FUNDS FOR WATER SUPPLY PROJECTS BY THE WATER SUPPLIES & SEWERAGE BRANCH OF SARAWAK JKR .....	S-119
53. MAJOR WATER SUPPLY PROJECTS OF SARAWAK JKR, FINANCED BY FEDERAL FUNDS OR BY BOTH FEDERAL AND STATE FUNDS .....	S-120
54. FINANCING OF WATER SUPPLY DEVELOPMENT BY THE KUCHING WATER BOARD, SARAWAK .....	S-121
55. LONG-TERM LOANS LENT TO THE KUCHING WATER BOARD .....	S-121



	Page
56. WATER CHARGES IN SARAWAK STATE (1/2) .....	S-122
57. WATER CHARGES IN SARAWAK STATE (2/2) .....	S-123
58. FINANCING OF SEWERAGE AND URBAN DRAINAGE PROJECTS CARRIED OUT BY THE HYDRAULICS BRANCH OF SABAH JKR IN 4MP PERIOD .....	S-124
59. LOANS LENT TO SESCO, 1975 TO 1979 .....	S-125
60. DEVELOPMENT FUNDS OF SESCO, 1975 TO 1979 .....	S-125

## LIST OF FIGURES

1. Government Structure of the State of Sabah
2. Government Structure of the State of Sarawak
3. Administrative Division
4. General Procedure for Project Approval in the Malaysia Five Year Development Plan
5. General Flow of Funds within the State
6. Procedure for Approval of Schemes under the Town and Country Planning Ordinance, Sabah
7. Organization Structure of Sabah Economic Planning Unit
8. Organization Structure of Ministry of Financial Planning and Development
9. Organization Structure of Sabah Drainage and Irrigation Department
10. Organization Structure of Sabah Electricity Board
11. Organization Structure of Sabah Public Works Department
12. Organization Structure of Sabah Land and Survey Department
13. Organization Structure of Sabah Department of Fisheries
14. Organization Structure of Sabah Forests Department
15. Organization Structure of Sabah Medical & Health Services (Medical Dept.)
16. Organization Structure of Sabah Ministry of Resources Development
17. Organization Structure of Sabah Division of Environment
18. Organization Structure of Sabah Mines Department
19. Organization Structure of Sabah Geological Survey Department
20. Organization Structure of Sabah Marine Department
21. Organization Structure of State Planning Unit, Sarawak
22. Organization Structure of State Financial Secretary's Office, Sarawak
23. Organization Structure of Sarawak Department of Forests

24. Organization Structure of Sarawak Electricity Supply Corporation
25. Organization Structure of Sarawak Drainage and Irrigation Department
26. Organization Structure of Sarawak Land and Survey Department
27. Organization Structure of Sarawak Public Works Department
28. Organization Structure of Kuching Municipal Council
29. Organization Structure of Sibu Water Board
30. Organization Structure of Kuching Water Board
31. Organization Structure of Sarawak Medical and Health Services
32. Organization Structure of Sarawak Mines Department
33. Organization Structure of Sarawak Division of Environment
34. Organization Structure of Sarawak Geological Survey Department
35. Organization Structure of Sarawak Marine Department
36. Construction and Management of Government Wharves/Jetties in Sabah and Sarawak
37. Procedure of Formation of Sabah DID's Projects
38. Planning and Implementation of Projects by Hydraulics Branch, Sabah JKR
39. Procedure of Implementation of Water Supply Schemes by Water Supplies and Sewerage Branch, Sarawak JKR
40. Procedure of Provision of Sewerage Systems by Hydraulics Branch, Sabah JKR
41. Procedure of Administration of River Facilities Construction in Sarawak
42. Procedure of Issuing Mining Licences (Including Water Use) in Sarawak
43. Procedure of Rural Water Supply Schemes as a part of the Rural Environmental Sanitation Program

#### SPECIAL ABBREVIATIONS

EQA	:	Environmental Quality Act
(Federal) Treasury:	:	Ministry of Finance, Malaysia
GSA	:	Geological Survey Act
GSD	:	Geological Survey Department
KMC	:	Kuching Municipal Council
LSD	:	Land and Survey Department
Medical Department:	:	Medical and Health Services
MFPD	:	Ministry of Financial Planning and Development, Sabah
SAFODA	:	Sabah Forestry Development Authority
SEPU	:	Sabah Economic Planning Unit
SFS	:	State Financial Secretary's Office, Sarawak
SLDB	:	Sabah Land Development Board Sarawak Land Development Board
SPU	:	State Planning Unit, Sarawak

## 1. INTRODUCTION

The objective of the Study is to clarify water-related laws, their practical enforcement, organizational structure and functions of major enforcing agencies, and administration activities for water resources development and use within the States of Sabah and Sarawak. The results were applied to the revision of the Master Action Plan.

For this purpose, the special legal and financial status of Sabah and Sarawak will be, first of all, mentioned. Both the States became independent within Malaysia on September 16, 1963, when the 11 states of Peninsular Malaysia had already formed the Federation of Malaya. In consideration of the difference of the history and traditional social systems, some transitional arrangements and special provisions for Sabah and Sarawak were added to the Federal Constitution. In Malaysia, the Federal Constitution is the supreme law. Such constitutional framework is to be discussed in Chapter 2.

Chapters 3 and 4 give the outline of the water-related legislations and institutions existing in the States of Sabah and Sarawak, respectively. The detailed description of general procedures and systems for planning and financing are presented in Chapters 5 and 6.

In Chapters from 7 to 19, the overall legal and institutional situations in the States of Sabah and Sarawak are stated by concern for water resources development and management. One chapter is allotted to each concern.

## 2. CONSTITUTIONAL FRAMEWORK

### 2.1 Background of Special Provisions in the Federal Constitution

Sabah and Sarawak gained their independence and joined the Federation of Malaysia on September 16, 1963. The day when Malaysia was established at the same time, is called Malaysia Day. Before this, an Inter-Governmental Committee, consisting of the representatives of Malaya, Britain, North Borneo and Sarawak, was formed in order to work out necessary arrangements for Sabah (then, still known by the name of British North Borneo) and Sarawak. The recommendations of the Committee were published in a report.

The report set out detailed amendments to the Constitution of the Federation of Malaya, in terms of distribution of legislative and executive powers and financial procedures. In line with these recommendations, the Malaysia Act was promulgated in 1963, providing for the amendments to the Constitution as well as some transitional arrangements for Sabah and Sarawak.

The Inter-Governmental Committee, which has transformed into the committee comprising the Federal, Sabah and Sarawak Governments, still holds meetings every year for work review.

### 2.2 Distribution of Legislative Powers

The States of Sabah and Sarawak have additional legislative powers, compared with their counterpart states in Peninsular Malaysia. These are enumerated in the Ninth Schedule to the Federal Constitution.

The Ninth Schedule provides for the general distribution of legislative powers between the Federal and state governments; namely, List I (Federal List), List II (State List) and List III (Concurrent List). The Government, Federal or states, has legislative powers corresponding to the items in the respective Lists (refer to Sectoral Report PS).

In addition, the Ninth Schedule includes List IIA (Supplement to State List of Sabah and Sarawak) and List IIIA (Supplement to Concurrent List for States of Sabah and Sarawak).

From the viewpoint of water resources, "hydropower", "fisheries" and "navigation" show the most notable differences between Sabah/Sarawak and Peninsular Malaysia. Table 1 outlines the distribution of such water-related legislative powers.

### 2.3 Distribution of Executive Powers

According to the provisions of the Federal Constitution, Federal Government and state governments in Malaysia have the executive powers on the matters with which Federal and state governments may make laws, respectively.

Besides these, the States of Sabah and Sarawak have special provisions in the Constitution with respect to the distribution of executive powers. They are summarized in Table 2. The national land policy may not reach both the States. Other matters worthy of note are the national policy for local government and the national development plan.

Based on these additional executive powers, the State Governments of Sabah and Sarawak are able to establish their own policy in such fields as listed up in Table 2. This might influence largely water resources development and management within the respective States.

#### 2.4 Financial Provisions for Sabah and Sarawak

The Constitution also provides for the distribution of revenue, loans and grants between Federal Government and state governments. Similarly to legislative and executive powers, the State Governments of Sabah and Sarawak have special financial arrangements as shown in Table 3.

The Tenth Schedule to the Constitution prescribes special grants (in Part IV) and additionally assigned sources of revenue (in Part V) towards both the States as shown in Tables 4 and 5.

Having provided such special financial arrangements, the State Governments of Sabah and Sarawak may secure a larger budget scale than the other states in Peninsular Malaysia. Financial strength or stability may lead to the tendency that both the State Governments have legal and institutional systems rather independent of the Federal Government.

### 3. LEGAL SITUATION IN THE STATES OF SABAH AND SARAWAK

#### 3.1 Outline of Legislations

Laws applicable to Sabah and Sarawak are composed of Federal laws and State laws. The demarcation between the Federal and State laws is, however, slightly different from that in Peninsular Malaysia.

Federal laws enacted before Malaysia Day, that is, September 16, 1963, may be extended to Sabah and Sarawak by law. This type of Federal laws enforced in both the States may be seen in the Penal Code and the Central Bank of Malaysia Ordinance. Another type is found in the Federal laws extended to both the States by order. The Financial Procedure Act and the Land Development Ordinance have been enforced in line with this procedure.

Even out of the water-related Federal laws which were framed by Parliament after Malaysia Day, only a few have come into force in Sabah and Sarawak. This is because:

- (1) Sabah and Sarawak have already established a law whose content covered the same matters as that of the Federal law; or
- (2) The matters pertaining to such Federal law are found in the State or the Concurrent List in the Federal Constitution, in case of both the States.

Examples are the Drainage Works Ordinance and Irrigation Areas Ordinance, both of which have not been extended to either Sabah or Sarawak. Sabah has already possessed the Drainage and Irrigation Ordinance, while no corresponding law was promulgated in the State of Sarawak.

The effectiveness of water-related Federal laws are as shown in Table 6, with the above-mentioned characteristics for a background. As understood from Table 6, water-related laws effective in both the States comprise mainly State laws. Almost all Federal laws in force in Peninsular Malaysia have not taken practical effect, with the exception of the Environmental Quality Act (EQA), Geological Survey Act (GSA). The Fisheries Act and the Merchant Shipping Ordinance are partially extended to both the States. Instead of Federal laws, specific State laws have been in force with some amendments, most of which were established before Malaysia Day.

The Malaysia Act prescribes that the Yang di-Pertuan Agong may declare any present law of the States of Sabah and Sarawak which relates wholly or partly to the matters in the Federal List, to be a Federal law with the concurrence of the Governor. The Electricity Ordinances of both the States, in line with this procedure, were declared as Federal laws in 1965.



The State laws, covering the items of water-related State matters, are nearly identical with those of the states in Peninsular Malaysia as shown in Table 7. However, no law has been promulgated in Sabah and Sarawak, which contains the similar provisions with regard to general licensing of river water use as in the Waters Enactment. Only the Mining Ordinances have the provisions for licence systems to divert river water in mining activities.

Water-related State laws are summarized in Tables 8 to 10, for both the States. A State law bears a title of "Ordinance", if it was enacted before Malaysia Day. The laws framed in Sabah after Malaysia Day have the names of "Enactments", while those of Sarawak still remain bearing "Ordinances".

### 3.2 Major Water-related Laws

As regards water resources development and management, legal systems in Sabah and Sarawak are passably different from those in Peninsular Malaysia. It is the characteristics for both the States that the greater part of water-related legislations are to be found in the State laws. As mentioned above, practical Federal laws in force are merely found in the case of four laws; EQA, GSA, the Fisheries Act and Merchant Shipping Ordinance.

In both the States, some State laws have the same names; for example, the Merchant Shipping Ordinance, Mining Ordinance, Public Health Ordinance, Town and Country Planning Ordinance and the Water Supply Ordinance. The involved provisions are, however, somewhat different between both the States.

Federal and State laws by major concern in water resources development and management are as shown in Tables 11 and 12. Provisions of each law by concern will be found in Tables 13 to 27. Major water-related laws are characterized hereunder.

#### (1) Land Ordinance (Sabah) and Land Code (Sarawak)

The Land Ordinance and Land Code stipulate the management of land in terms of land alienation, registration, collection of land revenue, and land demarcation and survey. These provisions are roughly similar to those found in the National Land Code (a Federal law) in Peninsular Malaysia. Nevertheless, more detailed provisions are found in both the laws. The Land Code of Sarawak provides for the formalities of land acquisition. In Sabah, the Land Acquisition Ordinance has been promulgated for this purpose. However, in the respective States, the procedures of compulsory land acquisition are approximately the same as those regulated by the Land Acquisition Act in Peninsular Malaysia.

(2) Public Health Ordinance (Sabah and Sarawak)

Diseases, food, drugs and sanitation are placed under the integrated control of the Public Health Ordinance. No single law in Peninsular Malaysia provides for all of these listed items. The Public Health Ordinance also has provisions for the functions of Local Authorities.

(3) Water Supply Ordinance (Sabah and Sarawak) and Sabah Water Authority Enactment

Water supply by governmental agencies falls under the provisions of the Water Supply Ordinances in the respective States. The provisions do not differ much between Sabah and Sarawak. In Sabah, the Ordinance provides for the areas where PWD undertakes water supply, powers of PWD and inside services. Water charges and technical standard are also included. In Sarawak, the Ordinance has additional provisions for the establishment of the Water Board. Except for this point, the basic structure of the Ordinance is almost the same as that of Sabah.

The Ordinance of Sabah is to be repealed by the Sabah Water Authority Enactment which was scheduled to come into force in 1981. This Enactment itself has a close similarity with the Water Authority Enactments of Pulau Pinang and Melaka.

(4) Mining Ordinance (Sabah and Sarawak)

The Mining ordinance controls mining activities in each State. The Ordinance of Sabah is similar to the Mining Enactment in Peninsular Malaysia, except for matters pertaining to duties and powers of officers in charge. Basic provisions of the Mining Ordinance of Sarawak may also be found in the corresponding Enactment in Peninsular Malaysia.

(5) Forest Enactment (Sabah) and Forests Ordinance (Sarawak)

Control of forests and forest produce come under the Forest Enactment of Sabah and Forests Ordinance of Sarawak. The provisions of these laws include the notification system of forest reserves and permanent forests, control of activities within these areas, and the control of trading of timber or forest produce. These laws are similar to the Forest Enactment in Peninsular Malaysia, in basic construction. The Forests Ordinance of Sarawak has more detailed provisions for the communal forests, while the further division of forest reserves is given by the Forest Enactment of Sabah.

(6) Local Government Ordinance (Sabah), Local Authority Ordinance (Sarawak) and Kuching Municipal Ordinance

These Ordinances provide for the establishment and functions of Local Authorities. Where construction is concerned, they are basically the same as the Local Government Act in Peninsular Malaysia. However, only simple provisions are found in the first two Ordinances.

The Kuching Municipal Ordinance prevails in Kuching, the capital of Sarawak. Provisions for the functions of the Kuching Municipal Council (KMC) under this law are more detailed than those of the Local Authority Ordinance.

(7) Merchant Shipping Ordinance (Federal law and the respective State laws)

Provisions for ship registration, navigation control and sustenance of seamen's safety are placed under the Merchant Shipping Ordinance of each State. The Merchant Shipping (Ports and Rivers) Regulations has been established only in Sarawak, in order to control activities carried out by ships or vessels in rivers and ports.

The Federal Merchant Shipping Ordinance also extends partially to Sabah and Sarawak. A new law is under the preparation by Ministry of Transport, Malaysia, aiming at integration of these three laws. It will be promulgated in 1982.

(8) Town and Country Planning Ordinance (Sabah and Sarawak)

Provided by these Ordinances are the notification of planning areas, establishment of land use plan within these areas and planned land use control. Both the laws of Sabah and Sarawak differ slightly from the Town and Country Planning Act in Peninsular Malaysia. To illustrate, the provisions for the establishment of development plan in the Act are not presented in the Ordinances.

#### 4. OUTLINE OF INSTITUTIONS IN THE STATES OF SABAH AND SARAWAK

##### 4.1 Structure of the State Governments

The State of Sabah or Sarawak is governed by two Constitutions; i.e., the State and Federal Constitutions. Under the Federal Constitution, the head of each State is specified as the Yang di-Pertua Negeri (Governor). The State Constitution stipulates that the chief executive of the State Government shall be the Chief Minister who is assisted in the State Cabinet by several Ministers. The State Legislative Assembly carries out legislative jurisdiction over State matters, while the State Cabinet has executive powers.

The State Governments of Sabah and Sarawak function under the various Ministries. In Peninsular Malaysia, the state governments consist of departments. This is the notable difference between Peninsular Malaysia and Sabah/Sarawak. Furthermore, each Minister is a member of the State Legislative Assembly, while the heads of the departments in Peninsular Malaysia are civil servants. The structure of the State Governments of Sabah and Sarawak is, therefore, similar to that of the Federal Government.

Figs. 1 and 2 present the overall organizational structure of the State Governments of Sabah and Sarawak, respectively.

##### 4.2 Administration System Throughout the States

The administration within the State is carried out basically at Division and District levels. The District Officer, who is the head of a District, is in charge of coordination of all the matters pertaining to the District. Coordinating the activities with all the State and Federal agencies are undertaken by the District Officer. The District Officer holds an additional post which is the Assistant Collector of Land Revenue, in Sabah. In case of Sarawak, the District Officer is known by the name of the Administrative Officer.

The existence of the larger or smaller divisions other than Districts for the purpose of administration can be pointed out as the characteristics of either Sabah or Sarawak. The larger administrative divisions consist of Divisions in both the States. This larger division for administration includes some districts inside it. Sabah has five Divisions; i.e., West Coast, Interior, Kudat, Sandakan and Tawau. Sarawak has seven Divisions; i.e., 1st, 2nd, 3rd, 4th, 5th, 6th and 7th. Divisions and included Districts in both the States are as shown in Tables 28 and 29 and Fig. 3. The Resident in Sarawak, who is known as the Sarawak Administrative Officer, is the head of the Division with the responsibility of administration. The smaller division, the Sub-district, is found under the District only in Sarawak because of its vast area.

In addition to these administrative divisions, there exist several types of Local Authority Areas which have been established under the Local Government Ordinance of Sabah and Local Authority Ordinance of Sarawak. The affairs of each Local Authority Area such as public amenities and town cleanliness must be controlled by the Local Authority. This situation is closely similar to that in Peninsular Malaysia. Table 30 sums up the types of Local Authorities, as well as numbers and names of Local Authority Areas which are now existing in Sabah and Sarawak. Out of these, KMC is established under a specific law, the Kuching Municipal Ordinance.

#### 4.3 Major Water-related Agencies

In both the States, water-related matters are administered mainly by State agencies. This is because the Federal Constitution provides Sabah and Sarawak with the special executive powers as mentioned in Chapter 2. State matters are undertaken by the State agencies. As regards water resources development and management, almost all are enumerated in the State or Concurrent List, in case of both the States. Thus, the implementing Federal agencies are counted a few.

The existing typical State agencies are Land and Survey Department (LSD), Public Works Department (PWD), Drainage and Irrigation Department (DID), Water Boards, Sabah Electricity Board (SEB) and Sarawak Electricity Supply Corporation (SESCO). In addition to these, Local Authorities and branch offices of Federal agencies take part in water resources administration. Local Authorities may provide living conveniences which include water supply, sewerage system and urban drainage works, within the limited extensions declared as Local Authority Areas, according to the provisions of the related laws. The Division of Environment (DOE), Geological Survey Department (GSD), Mines Department, Marine Department and the Medical & Health Services are the major Federal agencies active in Sabah and Sarawak.

LSD, which executes overall land policy in each State, is an almost similar body to the Lands and Mines Department in the states of Peninsular Malaysia. However, especially in Sarawak, LSD has wider functions including regional planning for urban areas.

PWD and DID perform almost parallel functions and responsibilities as those of State PWDs and State DIDs in Peninsular Malaysia. PWDs in both the States, Sabah PWD in particular, enjoy the more independent position of the Federal PWD, and cover wider fields in charge. DIDs of both the States were separated from the respective PWDs in 1967.

The agency which supplies D&I water is PWD in each State. The Kuching Water Board and Sibu Water Board have been established in Sarawak, besides PWD, as State statutory bodies to supply D&I water. In Sabah, a new law, the Sabah Water Authority Enactment, was passed by the State Legislative Assembly and approved by the Yang di-Pertua Negeri (Governor) in April, 1981. When it becomes effective, water supply throughout the State of Sabah will be managed by this single body, not by PWD.

For the purpose of electricity generation, each State has the State statutory body instituted by a specific laws. Sabah Electricity Board (SEB) and Sarawak Electricity Supply Corporation (SESCO) have been established and supplied electrical energy throughout the respective States.

Many other agencies exist in each State to manage water-related matters. Detailed descriptions of these agencies' functions and activities will be given in Chapters 7 to 19. Organizational structures of all the agencies are illustrated in Figs. 7 to 35. Tables 31 and 32 show the manpower allocation among the majority of water-related State agencies in the respective States.

It is worthy to note that major agencies in charge of water-related matters have nearly the same names between both the States. It can be said that any difference between the two States is lesser than the difference from the states of Peninsular Malaysia, as to implementing agencies.

The basic functions of major water-related agencies are briefly described hereunder.

- (1) Sabah Economic Planning Unit (SEPU) and State Planning Unit, Sarawak (SPU)

The basic function is to prepare the state-wide development plans and to coordinate the implementing agencies with regard to development planning, in order to promote the socio-economic growth of the respective States in line with NEP.

SEPU or SPU prepares the 5-year State Development Plan following the Malaysia 5-year Development Plan. It guides development agencies in making preparation for proposals of development projects. Wherever finance is concerned, SEPU or SPU has to prepare the State 5-year development budget plan (only in State part) in consultation with the Ministry of Financial Planning and Development (MFPD) in Sabah or the State Financial Secretary's Office (SFS) in Sarawak.

It also coordinates and liaises closely with Federal EPU to ensure effectiveness of implementing development projects in order to fulfill the socio-economic targets of the Malaysia 5-year Plan.

- (2) Ministry of Financial Planning and Development and State Financial Secretary's Office

The agency in charge of the administration of the State development budget is the Budget Division of MFPD in Sabah or SFS in Sarawak. MFPD or SFS plays a significant role in the review of annual development plans for the respective States. Another function is the preparation of the annual budget estimate. The Federal Government consults MFPD or SFS with respect to the allocation of Federal funds to Sabah or Sarawak.

(3) Public Works Department

PWDs in both the States are a manifold agency responsible for the planning, investigation, design, construction and maintenance of overall public works. Public works include buildings, roads and bridges, air-fields, water supplies and sewerage systems.

(4) Drainage and Irrigation Department

The functions of DIDs in both the States include irrigation, agricultural drainage and flood control as well as collection of hydrological data.

(5) Land and Survey Department

Sabah LSD deals with valuation and alienation of land, issuing of titles of land, collection of land revenue, and conducting trigonometrical survey, topographical survey, and compulsory land acquisition, along the State's land policy. In addition to the above-mentioned matters Sarawak LSD carries out regional planning and its control.

(6) Department of Agriculture

The main activities of the Departments of Agriculture in both the States cover agricultural research, extension of subsidy schemes, training and collection of agricultural information. In Sarawak, the Division in charge of inland fisheries administration has been set up inside the Department.

(7) Department of Fisheries

The Department of Fisheries in Sabah is concerned with the control and licensing of fishing, management and supervision of fisheries development, and conducting of research works.

(8) Marine Department

The functions of the Marine Departments in both the States relate to the registration and licensing of ships, and management and supervision of maritime and inland navigation.

(9) Medical and Health Services (Medical Department)

The Medical Department attends to the improvement of public health, control of diseases, provision of medical facilities, conducting of medical research, and training of personnel concerned.

(10) Mines Department

The administration of mines, collection of data on mining industries, giving technical advice and promotion of the mining industry lie with the Mines Department.

(11) Geological Survey Department

The activities undertaken by GSDs in both the States are regional mapping, examination of the country's mineral resources, and the supply of information and advice on geological matters.

(12) Sabah Electricity Board and Sarawak Electricity Supply Corporation

The functions of SEB and SESCO are to establish, manage and work electrical installations, as well as to promote and encourage the generation of energy and its supply at reasonable prices.

(13) Sabah and Sarawak Land Development Board (SLDBs)

SLDBs are responsible for the opening up of land for growing rubber, oil palm, coconut and cocoa, assisting in the processing of such crops and management and administration of settlers in all the schemes.

(14) Kuching Water Board and Sibul Water Board

The Boards autonomously control the supply of water, fix meters and collect water charges within their water supply areas around Kuching and Sibul, which are outside the bounds of PWD's water supply areas in Sarawak.

(15) Federal Land Development Authority

The Federal Land Development Authority (FELDA) develops land for agriculture, provides retail, marketing and processing facilities for agricultural produce, and undertakes settlement schemes and settler development.



## 5. PLANNING ASPECTS

### 5.1 Approval of Malaysia Five Year Development Plan

The most common procedure of development planning throughout Malaysia is that of the Malaysia Five Year Development Plan. All development projects are required to be planned altogether in the procedure of the Five Year Plan. As a matter of fact, the requirements are not exceptional even in Sabah and Sarawak.

All development projects are approved along the procedure of the Malaysia Five Year Development Plan. "Approval of a plan" has the two meanings. One is the approval of the project implementation. Another is the approval of the allocation of funds necessary for such a project. It is a characteristic of the procedure that both are carried out simultaneously. These two aspects, however, do not always correspond with each other. In some cases, allocation of the annual budget for approved projects may only be nominal.

### 5.2 Procedure of Project Approval

The procedure of project approval in the Malaysia Five Year Development Plan is formulated at two levels, State and Federal. Fig. 4 illustrates the outline.

At State level, two stages of the procedure are carried out. The outcomes are called Phase 1 and Phase 2, where reports are finally prepared for submission. Phase 1 contains all the programs planned within the State. Phase 2 Report has all the development projects within the State.

When the plans involving many projects are submitted, screening of the projects is at the first stage. Through this process, funds are firstly allocated for the higher-priority projects. The amount of funds is allotted as it is in the original plan, in case of important projects. Projects of lower priority will be classified into postponed projects or nominal projects.

New urgent projects and previously-omitted projects may be added into the Phase 1 Report in the Mid-term Review. If the project is to be financed by Federal funds, the approval of the Federal Government is necessary.

Project findings and project planning are carried out by implementing agencies. The deliberations between divisional offices and headquarters of the implementing agencies alter according to the characteristics of the project. The District Action Committee usually coordinates the implementing agencies with regard to the development projects.

Whether prepared by State or Federal agencies, all project plans should be reviewed by SEPU in Sabah or SPU in Sarawak, with the consultation of MFPD or SFS. Other related agencies also participate in the

review. Maintaining such coordination for all the plans is the responsibility of the Task Forces which is the sub-committee of the State Development Planning Committee in Sabah, or the Task Force for Development Planning which comprises representatives of SPU and related agencies in Sarawak. The approval by the State Legislative Assembly is the final stage of the procedure with State financed projects.

If the project is a Federal financed one, the project plan should be sent, after approval at State level, to the headquarters of Federal agencies. Project plans sent to the Federal agencies will be further screened by the Federal EPU and Treasury, and then by the National Development Planning Committee. The final approval of the plan depends on the decision of Parliament.

## 6. FINANCIAL PROCEDURE

### 6.1 Financial Features of the State Governments of Sabah and Sarawak

If compared with the state governments in Peninsular Malaysia, the State Governments of Sabah and Sarawak have fairly large budgets. Of the two, Sabah has the largest amount of budget among the 13 state governments in the whole Malaysia. The State revenue of Sabah alone exceeds the total revenue of the 11 states in Peninsular Malaysia. The sum of expenditures in both the States also rises above that in Peninsular Malaysia. These are as shown in Table 33.

As mentioned in Section 2.4, the Federal Constitution prescribes special financial arrangements to Sabah and Sarawak. Special grants and additional sources of State revenue are assigned. Additional revenue sources include import duty on oil and export duty on forest produce. These constitutional provisions in terms of finance contribute to the stability of the budget of the respective State Governments.

However, besides these arrangements, both the States have traditionally rich financial resources. The huge-scale budget of the State Government of Sabah is derived from the revenue from forest royalties, for the most part. Forestry resources have formed the economic backbone of the State of Sabah. The revenue from land is also large in both the States. This situation is indicated in Tables 34 and 35. The contribution of special assigned revenue sources, which the Constitution provides for, is rather small except for import duty and excise duty on petroleum.

The expenditures of both the State Governments from 1976 to 1981 are as shown in Tables 36 and 37.

### 6.2 Framework of the Financing

The framework of financial systems within the State Governments of Sabah and Sarawak is almost the same as those of the states in Peninsular Malaysia, as illustrated in Fig. 5.

The revenue of each State Government consists of State revenue and the transfers from the Federal Government. As regards water-related undertakings, the following characteristics may be pointed out, in view of State revenues of Sabah and Sarawak:

- (1) The revenue derived from the electricity generation by SEB or SESCO does not constitute a State revenue;
- (2) In Sabah, revenue from PWD's water supply goes directly to the "Water Supply Fund". This Fund does not form a part of the normal State budget; and

- (3) In Sarawak, Kuching and Sibuan Water Boards have adopted automatic charging systems for water supply. The revenue of the State Government is derived only from the water charges of PWD's water supply schemes.

The Revenue Growth Grant of the Federal Government is allocated to each state according to the population size and the amount of average per capita income. Both the States also receive Special Grants from the Federal Government, as prescribed in the Constitution. In case of the State Government of Sabah, the amount of this Grant is fixed every year at M\$26.7 x 10<sup>6</sup> as shown in Table 34. Other transfers from the Federal Government may take the form of Federal loans.

The revenue of a State is otherwise classified into two categories; i.e., normal revenue and revenue for Development Fund. Development Fund is the allotment only for Development Expenditure which will be mentioned below. The normal revenue and Development Fund are completely separate in terms of the utilization purposes. The Ministry of Finance (Treasury) has instructed state governments to appropriate Revenue Growth Grant only for Development Fund.

The expenditure of the State Government is composed of Operating Expenditure (Ordinary Expenditure) and Development Expenditure. The former Expenditure includes:

- (1) Recurrent Expenditure

This includes the charged expenditure, expenditure for emoluments and other miscellaneous expenditures, which is rather fixed year by year. The charged expenditure is repaid as provided by law in the form of principal repayments or interest payments, such as for the Federal and foreign loans. The expenditure for emoluments consists of salaries and allowances for governmental staff.

- (2) Special Expenditure

This involves the expenditures for bargaining of furnitures, stationeries and other necessary goods for offices. Expenditures for study/research are also included.

Operating Expenditure must be financed by State revenue or Federal grants which exclude Revenue Growth Grant. Only the Federal grants whose purpose of utilization are not specified, can be used for Operating Expenditure.

Development Expenditure covers expenditures for all projects planned within the State. It must be paid from the State Development Fund. With regard to the State Development Fund, major part comes from the State own funds in Sabah and Sarawak, while two-thirds are federal funds in Peninsular Malaysia, as shown in Table 33.

### 6.3 Fund Allocation for Projects

The major part of projects for water resources development and management are financed by public funds in the Federal and state coffers in the whole Malaysia. In the financing process of development projects, the role of the State Governments of Sabah and Sarawak is greater than that in Peninsular Malaysia. This is because:

- (1) Both the State Governments have bigger State revenue; and
- (2) Behind the historical background, they have consultations with the Federal Government regarding direct Federal development expenditure.

From the financial viewpoint, development projects may be categorized into five groups; i.e., State financed projects, Federal reimbursable projects, Federal loan projects, Federal grant projects and Federal direct projects.

#### (1) State financed project

Of these, three types are identified; namely, State direct project, State loan project, and State grant project. Each State Government may make free financing of any project of this category. Federal grants, if the purpose of utilization is not specified, may be applied to the projects. The Federal Treasury does not direct the specific use with regard to such kind of grants.

#### (2) Federal reimbursable project

"Reimbursable" means that expenditure of projects is first met by the State Government and later reimbursed by the Federal Government. Tenders and contracts for the construction are awarded by the MFPD in Sabah or SFS in Sarawak, while planning, detail design, implementation and supervision are undertaken by the State agencies in charge. This kind of projects requires an approval at Federal level. The amount of money paid to contractors must be summed up and reported in a bill every month. After the internal auditing by the State Government, the bill is sent to the Federal Treasury.

#### (3) Federal loan project

If the State Development Fund is insufficient in amount, some of the State projects are financed by Federal loans. Provisions of the Federal Constitution restrict any state government in Peninsular Malaysia from applying for long-term (more than five years) commercial loans. However, it is not applied to Sabah and Sarawak. Federal loans act an alternative resort for financing of the state development projects in any state government including Sabah and Sarawak. In general, the conditions attached to Federal loans are softer than those to commercial loans.

Another category of loans from the Federal Government is found in the case of foreign loans. The state governments cannot borrow directly any overseas loan, according to the provisions of the Federal Constitution.

Foreign loans are inevitably received through the channel of the Federal Government.

State statutory bodies such as SEB and Kuching Water Board are not restricted to borrow directly from foreign sources within the Constitutional framework. However, due to the policy of foreign sources, every loan comes through the Federal Government. For any foreign loan, the Federal Treasury only gives the guarantee, bearing the borrowing agencies to repay the principals and the interests. No subsidies would be given for such repayments.

(4) Federal grant project

The projects are undertaken by the State agencies. The financing procedure is nearly the same as that of the Federal reimbursable projects. Nevertheless, the funds necessary for the projects are offered by the Federal Government, as a grant. The State Government need not repay the amount of the received funds.

(5) Federal direct project

Funds for projects directly come from the Federal Government. Tenders are awarded by the Federal Government, while those for the above-mentioned four categories of projects are awarded by the State Government.

In Peninsular Malaysia, Federal PWD designs and supervises these projects such as construction schemes of schools, hospitals and military facilities. However, in Sabah and Sarawak, State PWD performs such tasks. The State Governments receive 5% of the construction costs of such facilities from the Federal Government, as design and supervision charges.

#### 6.4 Budgeting Procedure

The procedure for drawing up an annual budget of the State Government begins with the estimation of revenue for the coming fiscal year. This Revenue Estimate must be approved by the State Cabinet. Almost simultaneously, MFPD in Sabah or SFS in Sarawak issues a circular requesting each agency to submit its Supply Estimate and Development Estimate. If necessary, the requested State agencies will consult with the Federal agencies and the other State agencies before submitting their Draft Estimates. At the final stage, either MFPD or SFS examines and checks all details of the Budget Estimate. It must be approved by both the State Cabinet and the State Legislative Assembly.

With reference to Operating Expenditure, all increases in emoluments following enlargement of the State personnel must be approved by the State Establishment Department. In case of the Federal personnel, the approval of the Federal Government is indispensable.

In the case of development projects, each agency concerned must submit the Development Expenditure Estimate. SEPU in Sabah or SPU in Sarawak plays an important role in this process. MFPD or SFS consults

with SEPU or SPU regarding overall development planning. PWD in each State also has to be asked its opinions regarding implementing agency's ability to undertake development projects. As shown in Section 6.3, Federal and State funds are applied to development projects in diversified ways. Accordingly, close relation between the Federal and State Governments should be maintained in the budgeting of Federal financed projects. Implementing State agencies and counterpart Federal agencies also should have close contact with each other.

#### 6.5 Finance of Local Authorities

Local Authorities have their own budgeting systems within their jurisdiction in both the States, just as in Peninsular Malaysia. Revenue sources of Local Authorities are stipulated by laws which provide for the legal ground of their establishment. Tables 38 and 39 present the revenue items of Local Authorities in both the States, under the Local Government Ordinance of Sabah, Kuching Municipal Ordinance and Local Authority Ordinance of Sarawak.

In practice, the revenue of the Local Authority is mainly derived from the house assessment rate which is collected from each property owner based on the valuation of his premises. Ordinary Expenditure concentrates on public service sector, for the most part. An example of budget estimate is as shown in Table 40 for KMC in Sarawak.

As regards Development Expenditure of Local Authorities, the amount is rather small, compared to Ordinary Expenditure. Projects implemented by Local Authorities are not so many, mainly due to the lack of necessary funds. When Local Authorities lack funds or expertise, such projects may be undertaken by State agencies on behalf of them. Otherwise, State funds will be supplied. These projects are to be included in the items of the State financed projects, in the State Budget Estimate.

In case of Federal loan projects, the situation is even more different. In Peninsular Malaysia, local authorities can take out Federal loans. However, this type of financing of development projects is scarcely seen in the case of Local Authorities in Sabah and Sarawak. During the 4MP period, Federal funds for the survey of sewerage projects are allocated to some major Local Authorities in Sabah and Sarawak via the Ministry of Housing and Local Government, Malaysia. The Local Authorities probably receive Federal and State funds through the Ministry of Town and Country Development in Sabah, and through the Ministry of Local Government in Sarawak.

## 7. RIVER MANAGEMENT

### 7.1 Background

The rivers in the States of Sabah and Sarawak flow wholly within one State with several exceptions. An example is the Pensiangan river in Sabah which is the international river running down to Indonesia beyond the border. Most of the rivers are still in their original state. Not much artificial works such as embankments have been built along the water-courses.

As regards river conditions, bank erosion is common in both the States. Erosion problems are caused not only by floods but also by the meandering action of rivers. Anti-erosion measures, however, have not been undertaken sufficiently for almost all rivers. Silting and the succeeding sedimentation in the river flows are extensive in Sabah and northern part of Sarawak. In these areas, estuarine cloggings also frequently occur. Sea water intrusion by tidal movement is significant in almost all rivers in Sarawak.

### 7.2 Legal Provisions

The Land Ordinance of Sabah and Land Code of Sarawak have similar provisions as follows:

"The entire property in and control of the waters of all rivers, creeks, streams watercourses and seashore above the high water mark is vested solely in the Government (Sabah, §26)," and

"The entire property in and control of State land and of all rivers, streams, canals, creeks and watercourses and bed thereof is and shall be vested solely in the Government (Sarawak, §12)."

Thus, the property and control of rivers fall under the respective State Governments. However, in these two laws, no further detailed provision for river management cannot be found.

The Mining Ordinances of both the States also prescribe:

"The entire property in and control of all rivers, creeks, streams, watercourses and the seashore above high water mark is reserved to the State and no person shall in the course of mining operations interfere with the bank of any river, creek, stream, watercourse or seashore or divert, contaminate or diminish or otherwise interfere with the flow of any rivers, creeks, stream, watercourse or seashore without the consent in writing of the Director and upon such terms and conditions as the Director may impose (Sabah, §23)," and



"The entire property in and control of all minerals in, under or upon any lands in Sarawak, and of all rivers, streams and watercourses throughout Sarawak, is and shall be vested in the Crown (Sarawak, §4)."

In other provisions, these Ordinances stipulate the licence system with regard to mining operations. Alteration of river course shall require a licence. However, this is only applicable to mining activities.

In the State of Sarawak, the Natural Resources Ordinance prescribes that the Director of Agriculture may carry out river improvement works.

The power of the Local Authority to control waterways within their jurisdiction is provided by the Local Government Ordinance of Sabah. The Kuching Municipal Ordinance in Sarawak has similar provisions, in which KMC is empowered to execute river improvement works within KMC Area. These provisions may be found in Table 13.

As mentioned above, only simple provisions are found in the laws of both the States, in relation to river management. The minute provisions such as those found in the Waters Enactment in Peninsular Malaysia are not existent either in Sabah or Sarawak.

### 7.3 Agencies and Activities

Generally, integrated river management has not been implemented by any agency, in either Sabah or Sarawak. In Sabah, PWD and DID only show the activities indirectly related to river improvement, with their own aims. On the other hand, in Sarawak, LSD controls the activities around rivers in view of land use, with the aid of the other agencies. Sarawak DID, after the consultation with LSD, undertakes the construction works for river improvement. Therefore, more consistent river control activities may be found in Sarawak than Sabah. Though given the legal ground, KMC or the Department of Agriculture seldom engages in river control activities, in Sarawak. Furthermore, the Mining Ordinances have no relation to practical river control, in both the States.

In the State of Sabah, major activities relating to river management are undertaken by DID and PWD. DID has carried out training projects in some rivers and river clearing for all the rivers. The river training projects of DID include dredging of river beds. River clearing is usually performed, at the request of the District Office concerned or the DID's own purpose for agriculture. DID also constructs retaining walls for the protection of its own facilities such as intakes and pumping stations. PWD constructs retaining walls as well, aiming at protection of the works in charge such as roads, or at the request of the other agencies. Governmental agencies sometimes construct their facilities around rivers without notifying to LSD, though previous consultations with LSD are necessary.

In case of Sarawak State, the roles of LSD and the Marine Department are significant in the administration activities around rivers. Any kind of land use activities with regard to rivers must be approved by LSD.

Such activities include the construction of bridges, jetties, wharves, intake facilities for water supply and retaining walls, either private or public. River training, dredging, extraction of gravel from the rivers also have to be approved by LSD. When a public agency or a private person makes an application concerning the said activities, LSD consults the Marine Department. The Marine Department reviews the plan in view of river navigation and decides its appropriateness. LSD approves or rejects the application in accordance with the decision of the Marine Department. In these procedures, LSD acts as an coordinator, while the final decision depends upon the Marine Department as illustrated in Figs. 36 and 41. Consequently, river use is completely controlled by LSD together with the Marine Department in terms of navigation. In other words, the Marine Department substantially controls river use in view of navigation as it is consulted by LSD.

In Sarawak, the provision of anti-erosion works such as retaining walls in urban areas is the charge of Local Authorities. However, State funds for such projects are usually allocated by way of LSD and actual construction is carried out by PWD. River clearings all over Sarawak follows the same procedure but the implementing agency is DID. In case of river training, DID implements on its own funds. Besides these undertakings, DID and PWD construct river facilities for the purpose of agriculture and water supply, respectively. Dredging is carried out by the Marine Department for river navigation and by DID for agricultural drainage and river improvement. All these activities are implemented after the approval of LSD in line with the above-mentioned procedures.

In Sarawak, another administrative activity relating to river use may be found in the restriction of vessels' speed and limiting the maximum horsepower of vessels for the protection of river bank. These are regulated by the Marine Department in the control of navigation. This is one of the anti-erosion measures undertaken in Sarawak, where the navigational use of rivers is of great importance for communication throughout the State.

With regard to soil erosion in watershed areas, the consultation between the Department of Forests and Sarawak LSD have been frequently held. LSD further consults with DID, as time requires.

## 8. FLOOD MITIGATION

### 8.1 Background

Most of the rivers in Sabah and Sarawak are vulnerable to the occurrence of flooding, since almost no flood mitigation facility has ever been provided. Major areas affected by frequent inundation are distributed along the west coast of Sabah and surrounding areas of Kuching, Sibu and Miri in Sarawak. Floods also have been recorded in the Kinabatangan river basin in Sabah.

In 1963, heavy floods occurred in the State of Sabah. Sarawak experienced it also in 1981. These floods caused severe and large-scale damages for both the States. However, the damage caused by the habitually occurring floods have not been estimated in monetary terms as these have taken place in less developed areas.

In urbanized areas, occasional heavy showers have sometimes resulted in floods. This is mainly due to the poor capacity of urban drainage.

### 8.2 Legal Provisions

The provisions directly related to flood control are found in the Natural Resources Ordinance of Sarawak. Section 10 stipulates that if the Natural Resources Board "considers that measures are necessary for the conservation of natural resources on any land, and that such measures should be undertaken by the occupier or owner of such land, it may order, in writing, the owner or occupier to do the same". Such order may relate to the control of water, including storm water.

The Drainage and Irrigation Ordinance of Sabah has indirectly related provisions, since the major purposes of it are in the agricultural drainage. Section 14 of this Ordinance states:

"The Executive Officer may enter upon any land and fill up, construct, widen or drain any canal, watercourse, drain, ditch, pond or swamp whether within or without a drainage and irrigation area."

Besides these, Local Authorities are empowered by the provisions in the Local Government Ordinance of Sabah and the Kuching Municipal Ordinance of Sarawak. Table 14 shows these provisions.

Nevertheless, legal provisions are not found relating to flood channels like those found in the Waters Enactment in Peninsular Malaysia. Only for flood channel control on reserved land, the Land Ordinance and the Land Code give such provisions in the respective States.

### 8.3 Agencies and Activities

In both the States, DID plays an important role in rural areas. Flood mitigation projects of DID take the form of the construction of flood waterways, bunds and gates. These projects have been carried out to protect agricultural land, especially paddy fields, from floods or inundation.

For urban drainage, PWD has implemented its projects on behalf of Local Authorities in the State of Sabah. In case of Sarawak, DID undertakes large-scale drainage works until the trunk drains. For secondary or tertiary drains in urban areas, Sarawak LSD provides on behalf of Local Authorities.

Legally, Local Authorities are responsible for urban drainage works within their responsible areas. However, specific projects have rarely been carried out by these Authorities. A similar case may be seen in the enforcement of the Natural Resources Ordinance of Sarawak. The Natural Resources Board as prescribed in the Ordinance has not been established practically, in the State of Sarawak.

The Flood Relief Committees have been formed in both the States, at the State, Division, and District levels. These Committees undertake relief and rescue operations during times of flood. However, DID does not always participate in these Committees.

## 9. RIVER WATER USE

### 9.1 Background

Undertakings of river water intake mainly consist of water supply schemes and irrigation schemes in the States of Sabah and Sarawak. Except for these two types of schemes, extraction of river water by the governmental agencies is scarce. Hydropower projects are still under construction in both the States.

For the purpose of water supply, PWD of each State largely undertakes river water extraction through its waterworks. The water extracted by PWD is supplied chiefly within urban areas. In the State of Sarawak, two Water Boards, in addition to PWD, also carry out water supply which is dependent on river water. In rural areas, the Medical Department supplies no-treated river water to Kampongs.

Irrigation schemes are implemented by DID in the respective States. Water intake facilities are constructed along the rivers by DID for irrigation of paddy fields. SLDB or other agencies, undertaking land development schemes, extract little water from rivers for their individual purposes.

As regards mining operations, one exceptional mine is found in Sabah. It is the Mamut Copper Mine which takes water at a rate of 20 m<sup>3</sup> per minute for operations. As a rule, mining operations in both the States do not require large quantities of water due to the absence of tin mines. Most of the mines have adopted open-air mining or tunnel mining. This is different from the mining in Peninsular Malaysia.

The use of river water by private factories is also reported in both the States.

### 9.2 Legal Provisions

No law has been promulgated that is equivalent to the Waters Enactment in Peninsular Malaysia. Water licence system is stated by each water use purpose under the related laws of Sabah and Sarawak.

Section 57 of the Mining Ordinance of Sarawak requires any person who is mining to obtain a licence to make use of the river water. This provision relates to the licence system of water use. However, it is applicable only to mining activities.

The Sabah Water Authority Enactment provides for the source of water, in Section 32, that is:

"The minister may declare any lake, river or waterway or any part thereof to be a prescribed source of water. No person shall dam up or otherwise interfere with any prescribed source of water."

This provision is similar to that in the Electricity Act in Peninsular Malaysia. However, it does not relate to licence systems.

Under Section 116 of the Electricity Ordinance of Sabah,

"Although any shore, bed of a lake, river, channel, creek, bay or estuary is included in the area of supply, nothing in the licence shall authorize the licensee to take, use or in any manner interfere with any portion of that shore or bed of a lake, or of the river, channel, creek, bay or estuary, or any right in respect thereof, or of the water thereof, without the previous consent in writing of the Governor."

a licence is necessary for the use of river water in hydropower generation in Sabah, but it does not mean the water licence system.

The prescription relating to water licence system is only found in the water use purpose for mining. For irrigation and water supply purposes, nothing is found in the legislations of both the States.

### 9.3 Administration of River Water Use

Hitherto, no practical control has been carried out with regard to river water use. This is because the water intake for irrigation and water supply cannot be regulated legally. Agriculture and D&I water supply are the major activities which actually require large volumes of water intake. These two purposes are, in reality, competitors with each other. If compared to these purposes, mining operations and hydropower generation have been of less importance with regard to river water intake at present.

Water intake from the rivers for irrigation schemes of DID and that for water supply schemes of PWD have been under no control in both the States. These agencies have to gain the approval from LSD before constructing of water intake facilities such as weirs, barrages and pumping stations. Indirect control of river water use may be carried out through this procedure.

Actual regulation of river water use for mining purposes has been carried out with licence systems. Permission of water use and usage volume are specified in the mining licence at the time it is issued. In both the States, issuing of mining licences is the charge of LSD. While no coordination between Sabah LSD and the Mines Department is maintained, that in Sarawak is very close. Sarawak LSD issues mining licences in accordance with the decision of the Mines Department after consultation. As such, the Mines Department substantially controls mining activities in the State of Sarawak. Water intake volume is also specified by the Mines Department. These procedure is as shown in Fig. 42.

The control of river water use for hydropower generation has not carried out up to now, since the generation itself has not implemented.

Use of river water by private persons does not require licensing or administrative procedures. It is reported that some industrial estates use river water without any application.

## 10. UTILIZATION OF RIVER AREAS AND LAND USE CONTROL

### 10.1 Background

In comparison with Peninsular Malaysia, the land area of Sabah is almost half, while that of Sarawak is approximately of the same size. The population of Sabah or Sarawak makes up only around one-tenth of that in Peninsular Malaysia. Land development in both the States has not been so significant as that in Peninsular Malaysia. Nevertheless, urbanization is in progress, leading to the ever increasing need for regional planning.

Within the framework of the Federal Constitution, land is a state matter throughout Malaysia. Land, except for the Federal Territory, is enumerated in the State List of the Ninth Schedule. However, the Federal Constitution otherwise prescribes that "Parliament may, for the purpose only of ensuing uniformity of law and policy, make laws with respect to land tenure, the relations of landlord and tenant, registration of titles and deeds relating to land, transfer of land, mortgages, leases and charges in respect of land, compulsory acquisition of land, rating and valuation of land". The National Land Code and Land Acquisition Act were thus framed. The Federal Constitution also stipulates the establishment of the National Land Council, the duty of which is to formulate a national policy for the promotion and control of the utilization of land throughout Malaysia. The Federal Government and state governments shall follow the policy that the National Land Council has prepared. Furthermore, in the other provisions, the Federal Constitution requires the execution of national development plans and the proclamation of development areas within any state.

In case of the States of Sabah and Sarawak, the aforesaid Federal laws or the national land policy is, in actuality, not enforced or followed by the respective State Governments. The Federal Constitution itself lays down the exception as to the land legislation and policy for the States of Sabah and Sarawak. According to Article 95D, the provisions concerning Parliament's powers to pass uniform laws on land shall not be applied to both the States, so that neither the National Land Code, Land Conservation Act nor the Land Acquisition Act takes effect in both the States. These laws are only valid within Peninsular Malaysia. In the same manner, Article 95E stipulates the exclusion for the States of Sabah and Sarawak from the national land policy and the national development plans as described in Section 2.3. Consequently, the State Governments of Sabah and Sarawak may put their own policy or plans into operation, with regard to land administration.

The principal laws for land administration are the Land Ordinance in Sabah and the Land Code in Sarawak. Both are State Laws. As mentioned earlier, due to the absence of the Waters Enactment, administration activities of rivers or river areas must be carried out by application of these two laws. As an enforcing agency of land administration, LSD has shown full activity in each State. LSD resembles the Lands and Mines Department in Peninsular Malaysia. However, especially in the State of Sarawak, LSD covers a wider scope than the Lands and Mines Department.