

MALAYSIAN WATER RESOURCES MANAGEMENT FORUM



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WATER GOVERNANCE: ISSUES AND STRATEGIES

Paper 14: Alignment of Institutional Framework to the Water Resources Policy

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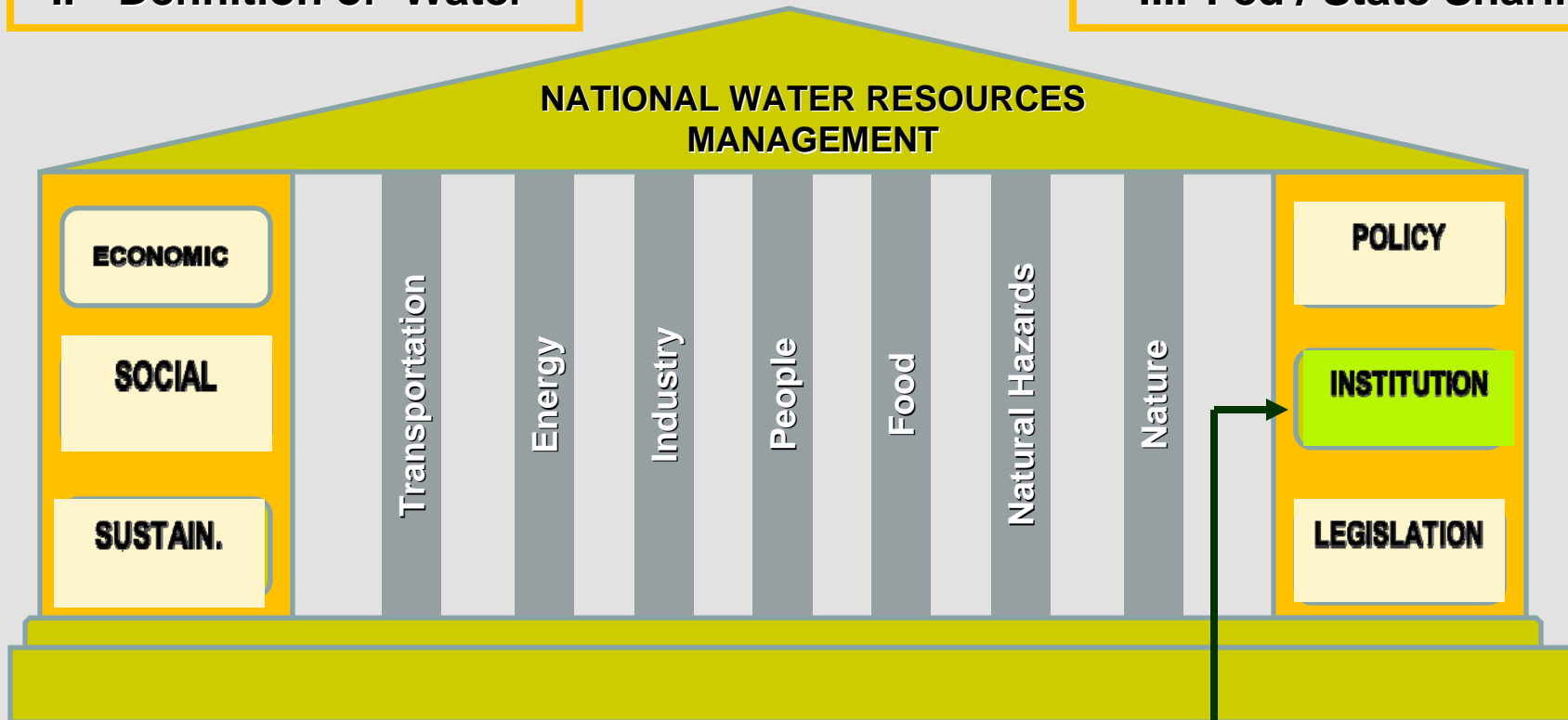
- **Brief on Water Resource Policy and legislation**
- **Alignment framework**
- **Some recommendations**



GENERALIZED WATER RESOURCES MANAGEMENT

I. Definition of 'Water'

III. Fed / State Sharing



development OBJECTIVES

II. Delineation of Roles

IV. Provisions for management

WATER RESOURCES POLICY

“ The security and sustainability of water resources shall be made a national priority to ensure adequate and safe water for all, through sustainable use, conservation and effective management of water resources enabled by a mechanism of shared partnership involving all stakeholders “ (2012)

Has

- 4 Core Areas
- 9 Thrusts
- 18 Targets

Based on the principles of:

1. Water Resources Security
2. Water Resources Sustainability
3. Partnership



DRAFT LEGISLATION

Part 1

- To promote uniformity pursuant to Article 76(1)(a) & (b) of the Federal Constitution
- Full discretion of States to adopt the Model Law

Part II – Administration And Authority

- Establishment of institutional set-up pursuant to the Model Law
- Powers and responsibilities of NWRC
- Powers and responsibilities of the NWRD
- Powers and responsibilities of the States – SWRA will be established in such State for implementation and enforcement roles
- Water Resource Fund
- Protection and development of water resources
- Regulations



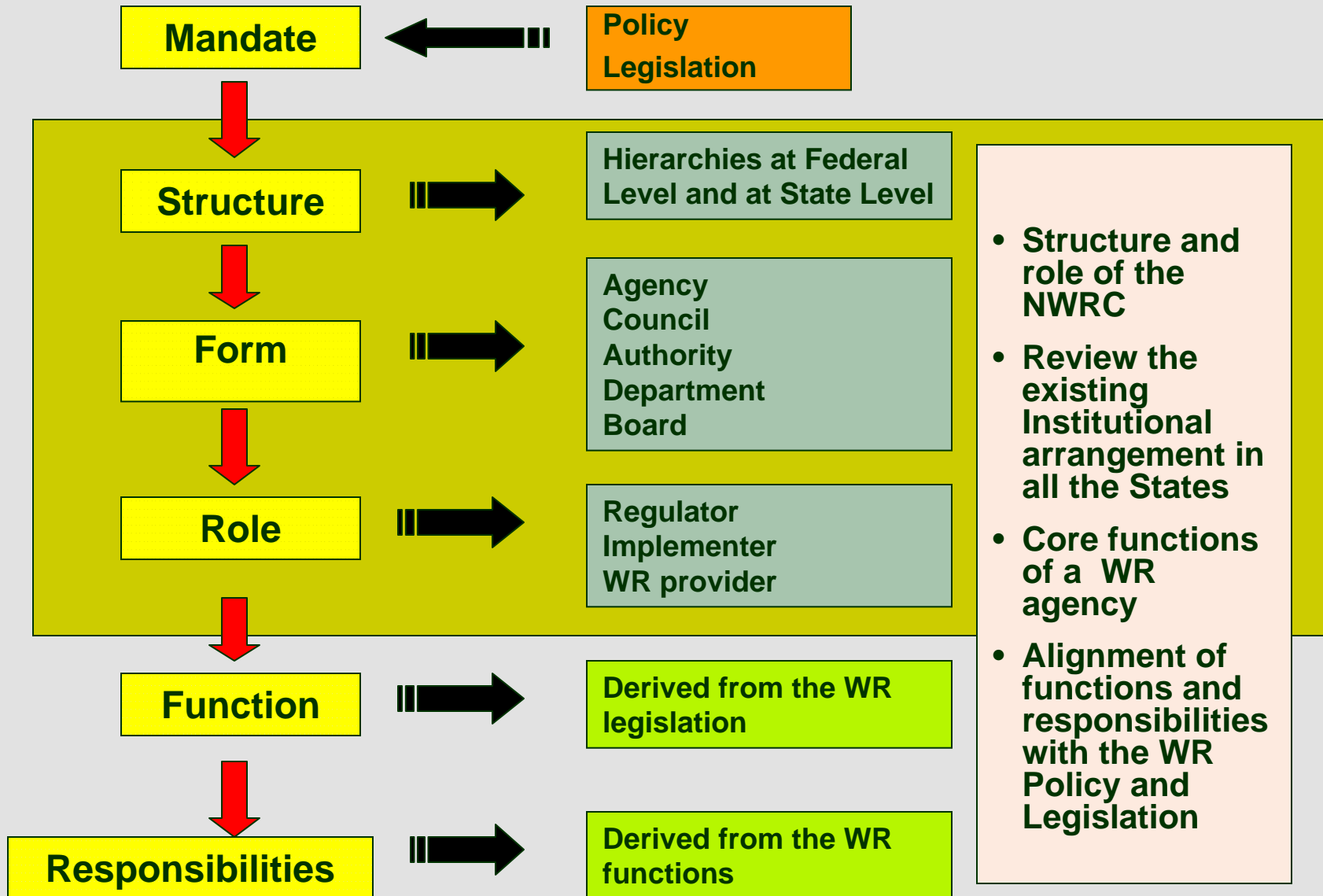
DRAFT LEGISLATION

Part III

States will be the enforcement body via the SWRA or equivalent

- **District and local authorities are empowered to participate in the administration of water resources**
- **Proposed framework also promotes self regulation**

INSTITUTIONAL ALIGNMENT FRAMEWORK



1a. HISTORICAL RECOMMENDATIONS

Formation of a National Water Resources Council (NWRC)

By JICA Study in 1982
By NWR Study 2000

Recognized:

- Institutional arrangements in the water sector - too fragmented
- Agencies - operate independently of one another based on legal provisions
- If persisted - could lead to duplication of functions and resources
- Call for reforms in the water sector to be more integrated

HENCE NWRC STRENGTHENED TO OVERCOME THESE ISSUES.

1b. FUNCTIONS AND ROLES OF THE NWRC

- **Management on a national basis to ensure long-term sustainability of water supply**
- **Resolution of water resource disputes among states including establishment of a mechanism for agreeing terms**
- **Addressing legal and other issues needed to allow increase use of water through inter-basin and inter-state water transfers**
- **Coordinate the implementation of water resources development projects**
- **Advise the State Governments on conservation, control and gazettal of water catchments areas**
- **Water resources data management**



REVIEW OF INSTITUTIONAL ARRANGEMENTS IN MALAYSIA

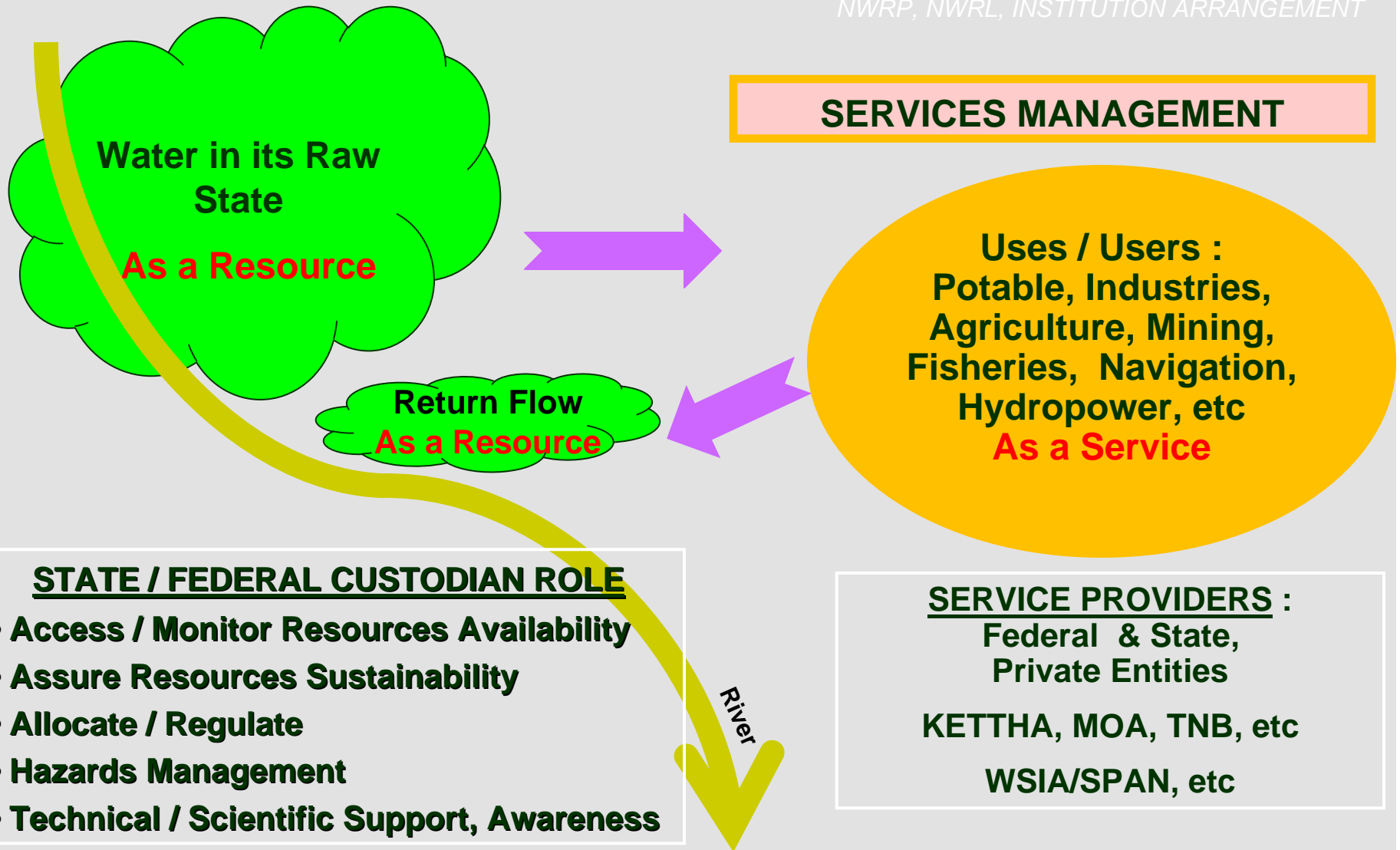
To determine what to align

WATER RESOURCES vis-à-vis WATER SERVICES MANAGEMENT

RESOURCE MANAGEMENT

NWRP, NWRL, INSTITUTION ARRANGEMENT

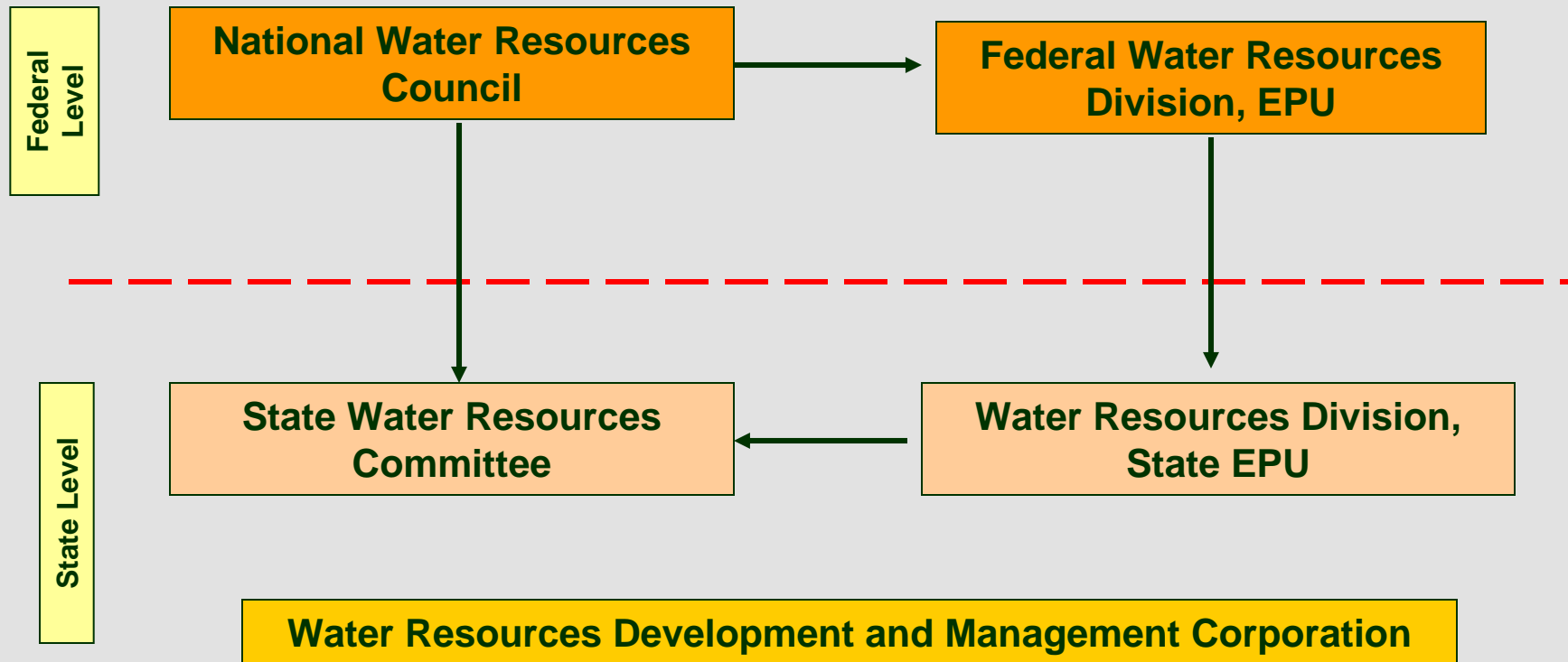
SERVICES MANAGEMENT



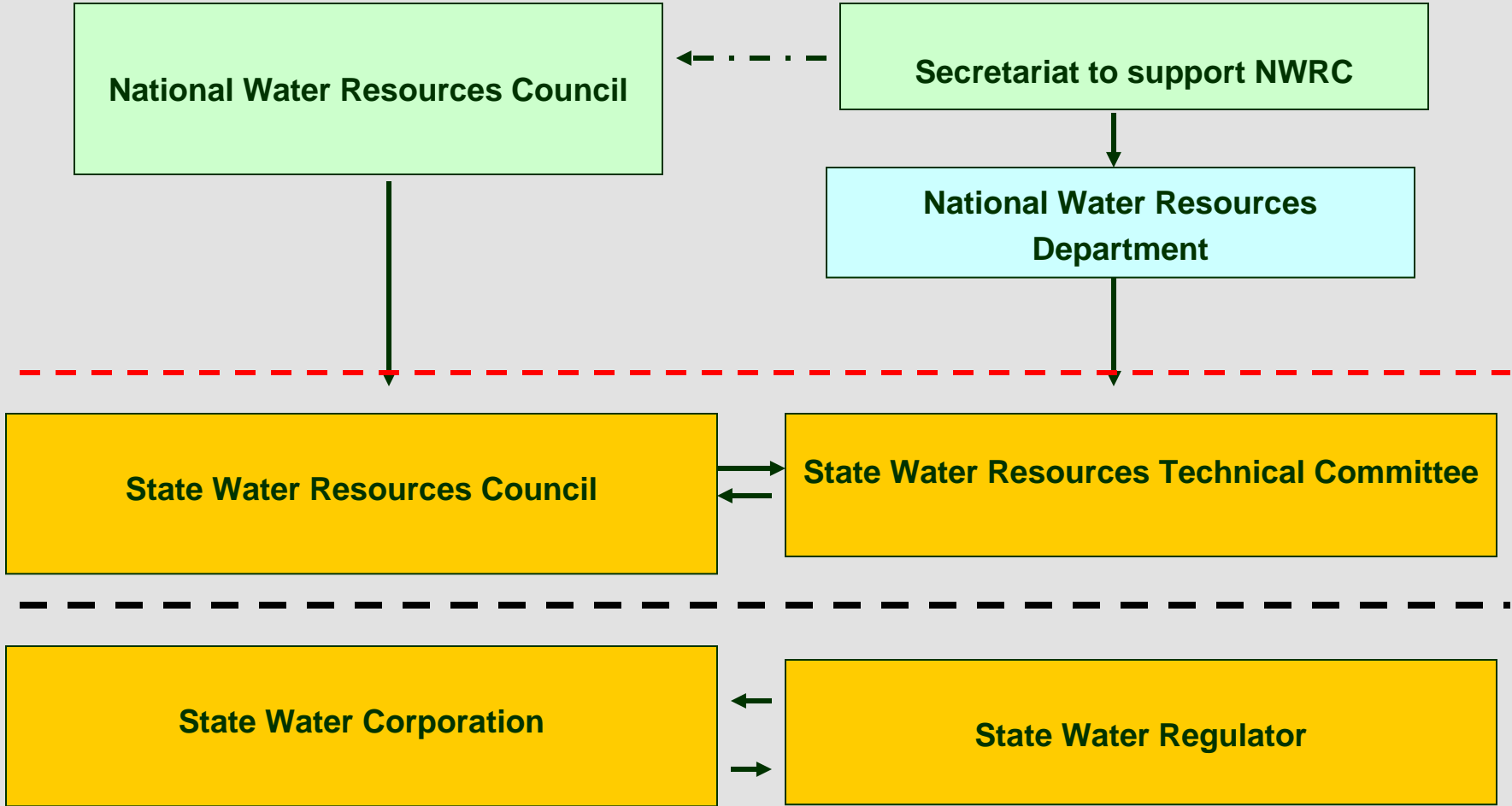
2. REVIEW OF INSTITUTIONAL ARRANGEMENTS IN MALAYSIA (true up to July 2011)

Category	Institutional Arrangements	States	Comments
1	Fully developed and implemented	Selangor (LUAS), Kedah Sabah, Sarawak	Fully functional with institutional structures addressing most aspects of water resources management
2	Developed and/or need refinement and/or to be implemented	Pahang, Kelantan, Terengganu and Negeri Sembilan	All have been mandated by legislation but some aspects of the institutions have yet to be fully functional.
3	Service oriented and industry-based or distribution-based	Malacca, Johor, Perak, Kelantan, Terengganu, Negeri Sembilan, Penang, Sarawak	Development through COPPRI.
4	None of the above or preparations underway	Perlis, the 3 Federal Territories	No provisions yet except in FT Putrajaya Syarikat Air Perlis has signed an agreement with PAAB regarding water assets (2010)

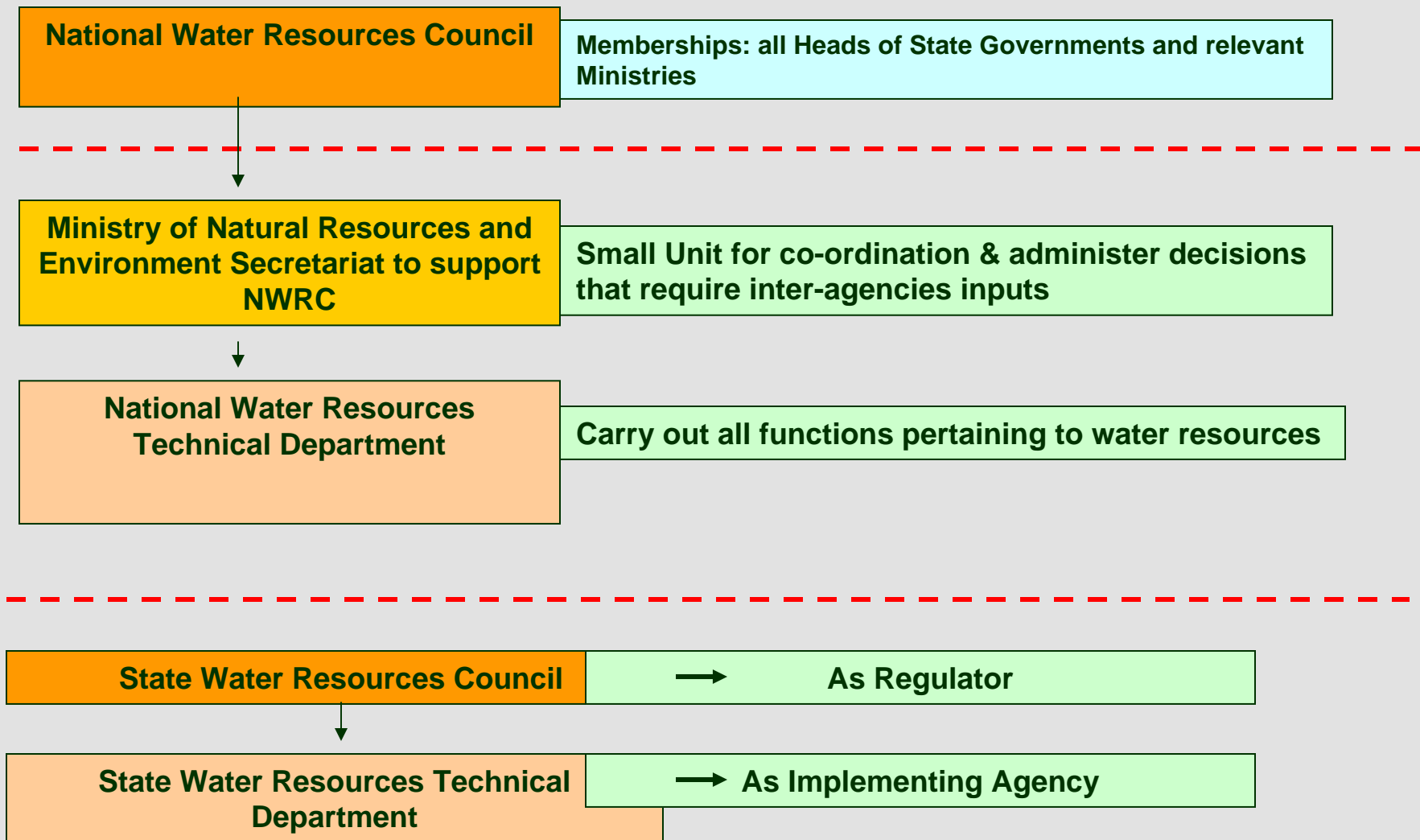
Institutional Arrangements (JICA, 1982)



Institutional Arrangements (NWRS 2000 - 2050)



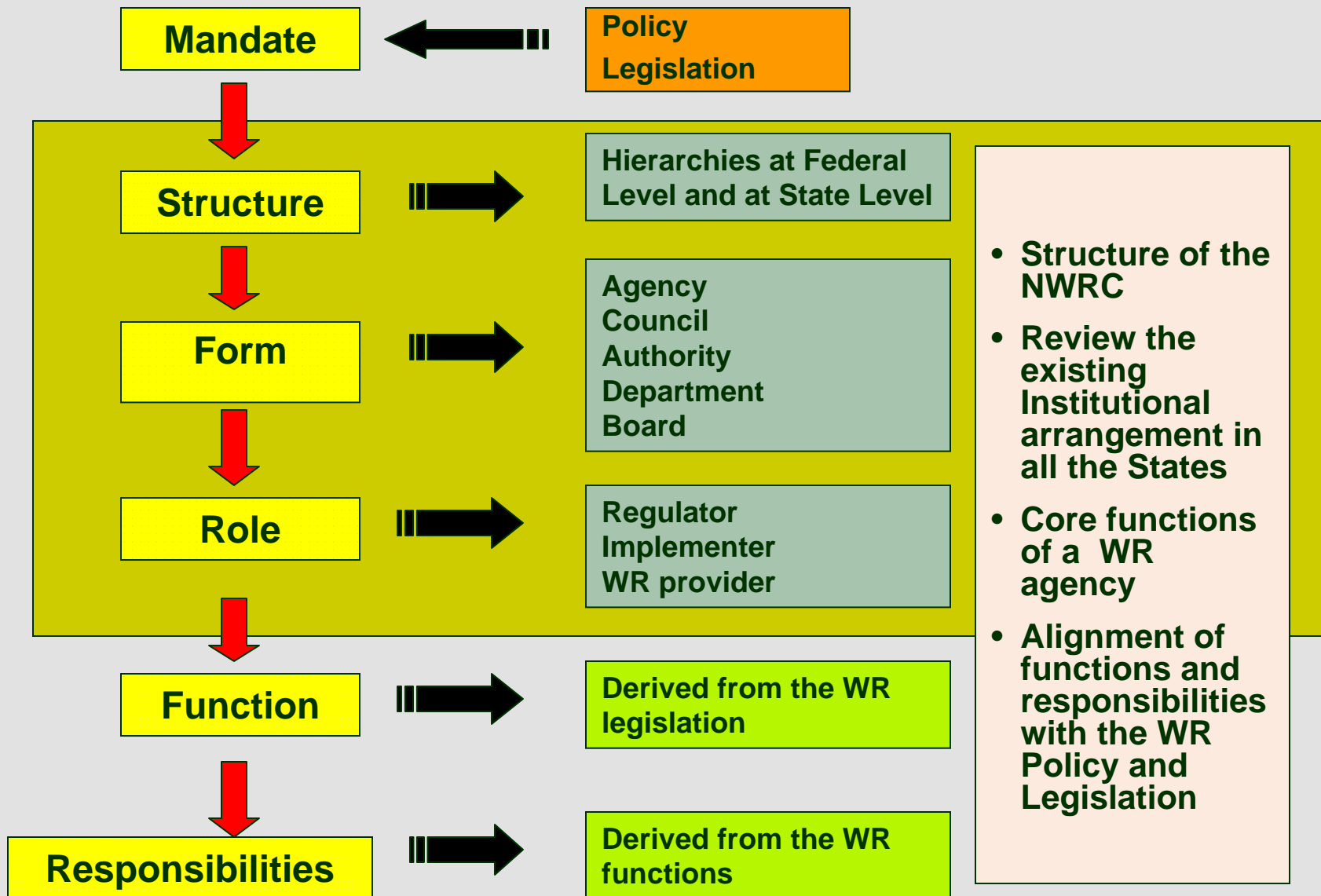
Institutional Arrangements (NWR Study, 2010)





FUNCTIONS OF WATER RESOURCES INSTITUTIONS

INSTITUTIONAL ALIGNMENT FRAMEWORK





FUNCTIONS OF A WATER RESOURCES INSTITUTION

(Following the WR Policy and the Draft WR Legislation)

Water Resources Core Functions

- **Water resources assessment**
- **Water resources sustainable management**
- **Water resources allocation and regulation**
- **Water hazards management**
- **Water resources technical and scientific support**
- **Inter, inter and international technical water resources services**

FUNCTIONS OF A WATER RESOURCES INSTITUTION

(Following from the WR Policy and Draft WR Legislation)

Item	Main Functions	Types/Locations /Comments	Sub-set Functions
1	Water Resources Assessment (as in planning, development, implementation, monitoring enforcement)	<u>Water quantity</u> <ul style="list-style-type: none"> • Surface water • Groundwater • Coastal waters <u>Water quality</u> <ul style="list-style-type: none"> • In all rivers • Lakes • Wetlands • Groundwater • Coastal waters 	National Water Resources Census
			Water resources availability and audits
			Water requirements and demands:
			<ul style="list-style-type: none"> • Tie-in with pollution prevention to maximize WR for various uses, and areas where water can be abstracted without causing stress to the river system.
			Pollution prevention and control: <ul style="list-style-type: none"> • Point source pollution from industries discharging less than 60 m³ per day - presently is not under the jurisdiction of any department.
			<ul style="list-style-type: none"> • Non-point source pollution or ambient pollution in the rivers, lakes, wetlands and coastal waters not under the jurisdiction of any department.
			<ul style="list-style-type: none"> • Water quality maintenance in all the rivers, lakes, wetlands and groundwater.
			<ul style="list-style-type: none"> • Sand mining impacts on water resources.
			<ul style="list-style-type: none"> • River health services • River riparian and biological functions
			<ul style="list-style-type: none"> • Shore and coastal stability and functions

FUNCTIONS OF A WATER RESOURCES INSTITUTION (Following the WR Policy and the Draft WR Legislation)

Item	Main Functions	Types/Locations /Comments	Sub-set Functions
2	Water Resources Sustainable Management	<ul style="list-style-type: none"> • All water-related areas such as rivers, lakes, wetlands, hill cloud forests as water source areas etc. • All WR conservation areas 	<ul style="list-style-type: none"> • WR conservation/planning in rivers and river basins, lakes and wetlands. • Maintenance of water source areas including cloud forest areas as water sources. • Rehabilitation and restoration of river systems, lakes, wetlands and all water bodies • River reserve or river corridor management • Management of environmental flows • Non-consumptive use of water services • Water-based tourism services • Hydropower production • Coastal waters • River beautification • Saline intrusion control • Inland water navigation and river pollution • All impoundment of water

FUNCTIONS OF A WATER RESOURCES INSTITUTION

(Following the WR Policy and the Draft WR Legislation)

Item	Main Functions	Types/Locations /Comments	Sub-set Functions
3	Water Resources Allocations and Regulations	<ul style="list-style-type: none"> • For water service providers only who are taking the water resources. • Fair tariffs to reflect the real cost of raw water from the water body and return flows. 	<ul style="list-style-type: none"> • After WR assessments, follow-up functions will be in governing and determining how much the service provider can abstract water from the water body, and secondly where to abstract.
			<ul style="list-style-type: none"> • Water allocations will have to be based on the water assessments. • Locations of abstraction to be provided, with functions to inspect and oversee the abstraction. • How the water is abstracted, treated and distributed to the various users is excluded.
			<ul style="list-style-type: none"> • After WR is allocated, specific regulations to regulate the locations of their return flows. • The return flows have to meet the standards of specified water and river water classification. Inspections and monitoring will be required.
			<ul style="list-style-type: none"> • Tariff structure can be based on market forces, socio-economy and polluter pays principle.
			<ul style="list-style-type: none"> • Guidelines on raw water abstraction and discharge of return flows.

FUNCTIONS OF A WATER RESOURCES INSTITUTION (Following the WR Policy and the Draft WR Legislation)

Item	Main Functions	Types/Locations /Comments	Sub-set Functions
4	Water Hazard Management	<ul style="list-style-type: none"> • Risk assessment and planning for short and long term for all river systems, including wetlands, lakes, floodplains and all landuse types. • Drainage master plans and river basin master plans 	<ul style="list-style-type: none"> • Risk assessments and management • Urban and rural drainage • Flood and flood plain management • River health management • River and coastal management • Technical solutions to all aspects of flood proofing, flood control and drainage. • All technical aspects of coastal management. • All aspects to control saline instruction.
		<ul style="list-style-type: none"> • Implementation of MASMA 	<ul style="list-style-type: none"> • Flood management including floodplain management • Technical solutions and inputs for rainfall maximization such as harvesting procedures, dams etc
		<ul style="list-style-type: none"> • Use of hydrological procedures 	<ul style="list-style-type: none"> • Provisions of guidelines and best management of flood and flood proofing.
		<ul style="list-style-type: none"> • Use of ESCP 	<ul style="list-style-type: none"> • Control of erosion and sedimentation in rivers and all other water bodies
		<ul style="list-style-type: none"> • Best management practices 	<ul style="list-style-type: none"> • Drought management
		<ul style="list-style-type: none"> • Coastal Zone Management Plans 	<ul style="list-style-type: none"> • Control of coastal erosion and sedimentation of coastal areas

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FUNCTIONS OF A WATER RESOURCES INSTITUTION (Following the WR Policy and the Draft WR Legislation)

Item	Main Functions	Types/Locations /Comments	Sub-set Functions
5	<p>Water Resources Technical and Scientific Support</p> <p>(research, development, pilot studies, testing, project management, awareness creation, capacity building, educational services in water resources management)</p>	<ul style="list-style-type: none"> • All aspects of water resources and water – related services and management 	<ul style="list-style-type: none"> • In-house formal and informal training and capacity building • Specialist training • Non-specialist training • Provision of specialist services to all water resources related services • Testing and development of new technologies in water resources and water related industries. • Project management of large water resources projects

FUNCTIONS OF A WATER RESOURCES INSTITUTION

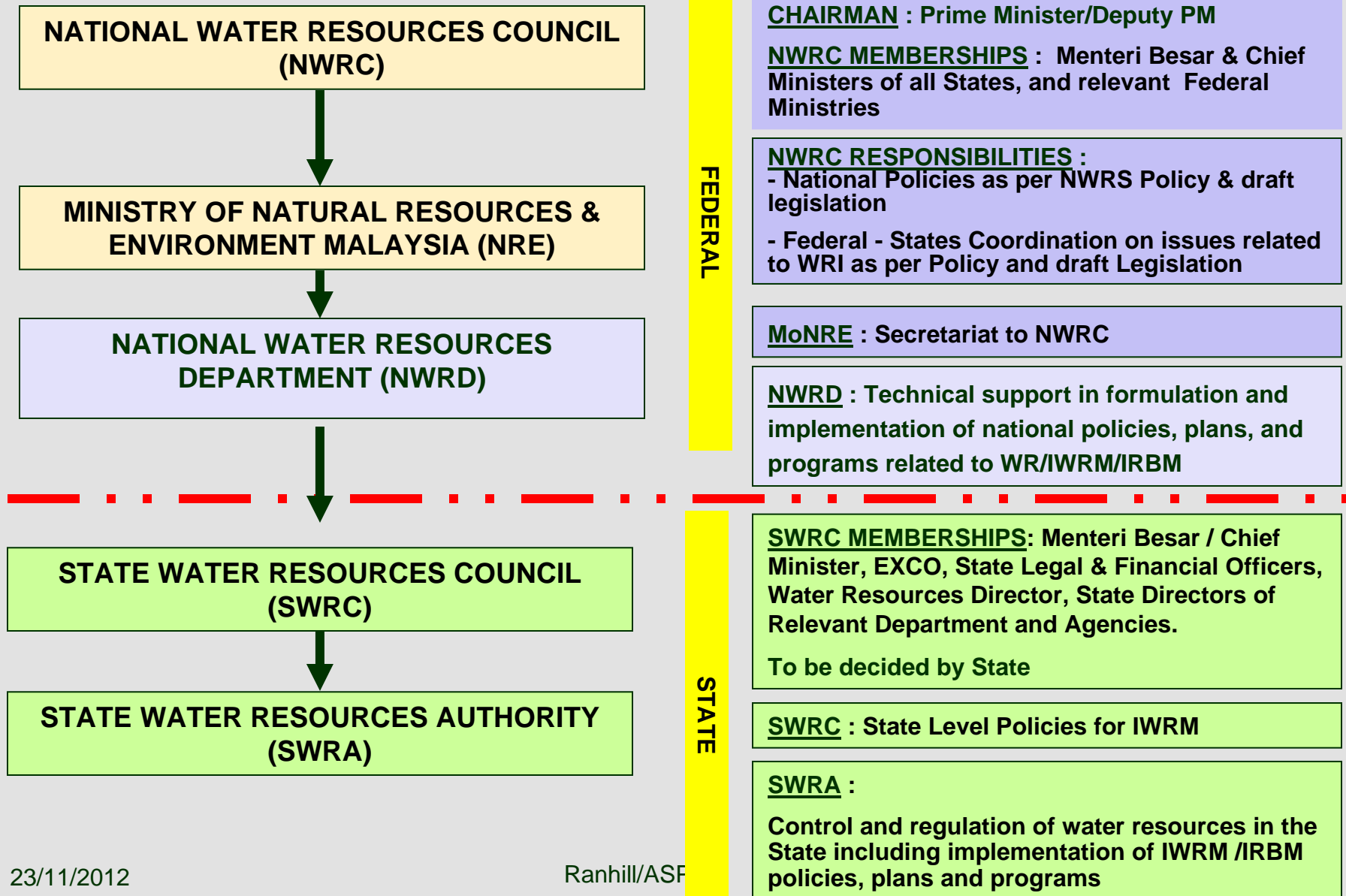
(Following the WR Policy and the Draft WR Legislation)

Item	Main Functions	Types/Locations /Comments	Sub-set Functions
6	Intra-, inter- and international technical water resources services	Be the technical agency and one-stop centre in charge of all national and international commitments, obligations and treaties on all aspects of water resources entered into by the Federal Government.	<p>Act as the technical entity and specialist resource centre for:</p> <ul style="list-style-type: none"> • Inter-basin transfer of water. • Provide advice and technical solutions on any trans-boundary WR issues within and between countries. • Control, monitor, inspect and license services on all abstraction by international countries. • Provide technical specialist support on any sale of water to international countries. • Provide technical and specialist services to all international treatise, obligations, programmes and projects, entered into by the Fed. Government on all aspects of water resources (eg MDG, climate change, WSSD, Agenda 21 etc).

3. FUNCTIONS OF A WATER RESOURCES INSTITUTION (Following the WR Policy and the Draft WR Legislation)

Core Functions	Major Sub-sector functions	Roles
Water resources assessment	<ul style="list-style-type: none"> ■ Water census - quantity & quality of surface and groundwater ■ Water audits. 	<ul style="list-style-type: none"> ■ NWRD to co-ordinate all state inputs ■ Implement through SWRA/SWRD
Water resources sustainable management	<ul style="list-style-type: none"> ■ National & state planning on water resources conservation - source to sea, lakes, wetlands. ■ All guidelines, standards and operation procedures on carrying capacities of rivers and coastal areas at national level. 	<ul style="list-style-type: none"> ■ NWRD to co-ordinate all state inputs ■ States implement through SWRD/equivalent
Water hazards management	<ul style="list-style-type: none"> ■ All risk assessments (eg floods, droughts, erosion) risk zones in all rivers for country. ■ Hydrological planning: all drainage master planning, and flood & drought assessments. 	<ul style="list-style-type: none"> ■ NWRD to co-ordinate all state inputs ■ States implement through SWRD/equivalent
Water resources allocation and regulation	National fair tariff framework and guidelines.	National level but States implement
Water resources technical and scientific support	<ul style="list-style-type: none"> ■ All national & technical water resources planning and water- related programmes, piloting, training, capacity building, educational & info services in water resources management & all other national matters 	NWRD
International technical water resources services	National level technical one-stop agency in charge of all national and international commitments and protocols entered into by the Federal Government.	NWRD
Inter and intra-state matters	Inter-state matters on shared river basins, conflict resolutions etc.	NWRD State to implement

MODEL FOR NATIONAL INSTITUTIONAL ARRANGEMENTS



Terima Kasih

