CHAPTER 7
NATIONAL PHYSICAL PLAN IMPLEMENTATION

Implementing the National Physical Plan towards a resilient and liveable nation through dynamic and adaptive governance.

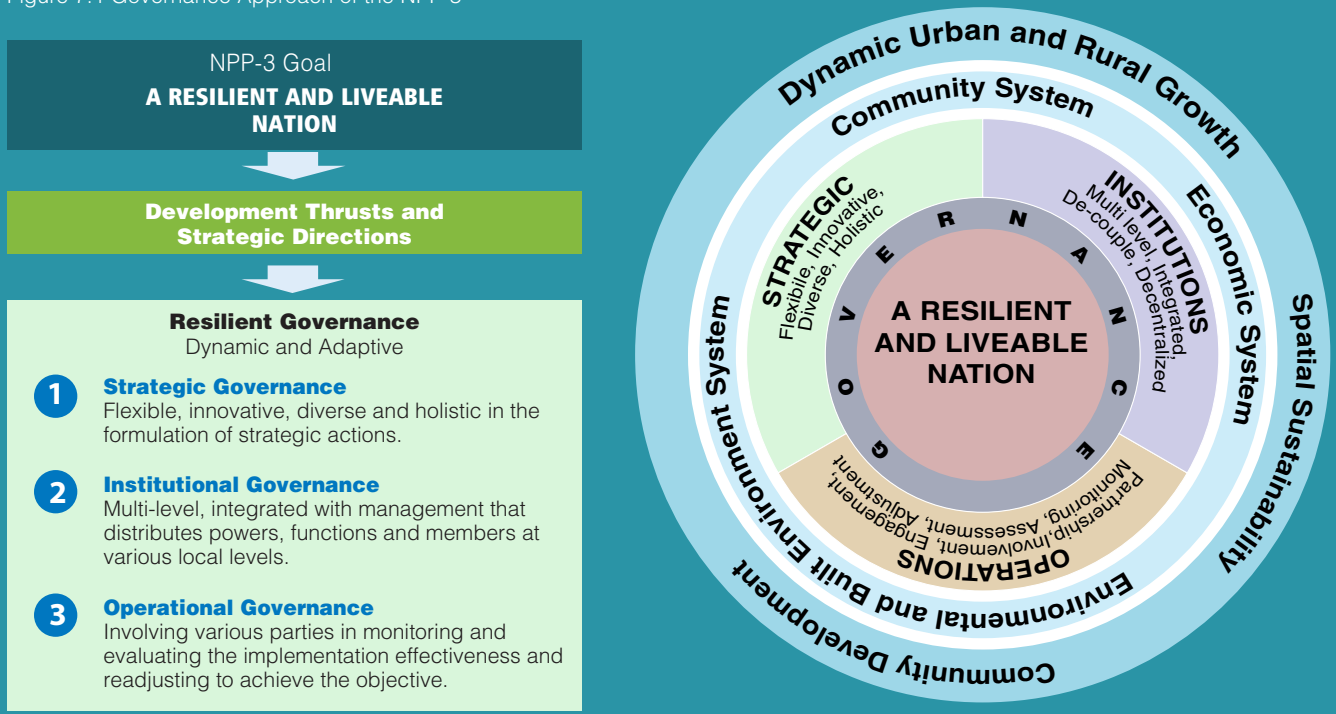
The NPP-3 is formulated in line with the goal of becoming a resilient and liveable nation. This long-term goal has taken into account the various challenges of national resilience such as population growth and migration, income inequality, climate change, natural resource depletion and environmental pollution. These challenges are expected to continue and take an extensive period to overcome. Accordingly, the strategic directions of the NPP-3 take an integrated approach towards short-term and long-term oriented actions in order to overcome challenges and build the resilience of the nation.

Implementation of the NPP-3 requires effective, comprehensive and inclusive governance. The cooperation and engagement of all governance levels in the public and private sectors shall facilitate the implementation of integrated planning in accordance with national requirements. Three governance approaches are emphasised in the NPP-3, namely:

1. Strategic Governance;
2. Institutional Governance; and
3. Operational Governance.

All three approaches are interrelated to form a dynamic and adaptive governance, in line with efforts to govern the country in a sustainable and equitable manner.

Figure 7.1 Governance Approach of the NPP-3

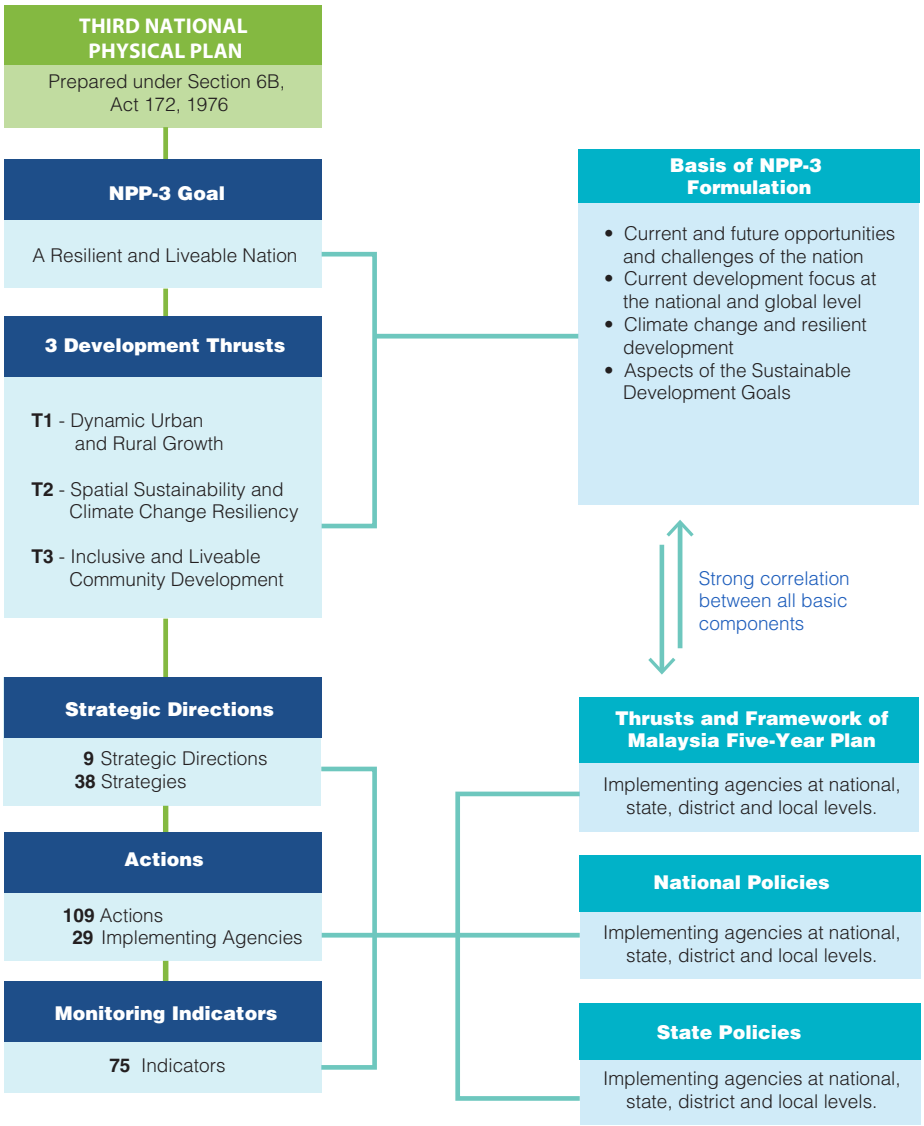


The preparation of the NPP-3 ensures that the national planning is relevant, current and dynamic in tandem with the development and growth of Malaysia. Effective and comprehensive implementation is the main goal in formulating the strategic framework for national physical planning.

The NPP-3 translates various related policies at national and state levels to achieve national goals. The strategic directions and actions established in the NPP-3 have identified the implementing and monitoring agencies whether directly or in a supporting role. This approach is important as sectoral planning and development in Malaysia is the responsibility of various parties. There are policies, strategic directions and targets that are implemented by sector, whether at national, state or district levels. This situation affects the effectiveness of sectoral development in the physical planning of the nation.

Governance is an important aspect in the implementation of the NPP-3 and is guided by three approaches as described in Figure 7.2. To achieve the set targets, several implementation action plans that form an institutional framework of the NPP-3 have been identified.

Figure 7.2 Structure of the Third National Physical Plan Structure



P1: IMPLEMENTATION AND COORDINATION OF STRATEGIC DIRECTIONS FROM THE NATIONAL PHYSICAL PLAN

The NPP-3 should be coordinated at all stages of planning and development, with consistent policies at federal, state and local levels. This situation points to the need for strong governance to ensure planning will be coordinated at these three levels. Implementation of the NPP-3 incorporates strategic directions in the programmes of various departments and agencies, and gives a clear responsibility to agencies to execute the implementation. The involvement of state and regional agencies is also necessary to ensure that the planning and development for an area is coordinated with the planning and development strategies of the NPP-3.

Coordination of the national planning strategic directions shall strengthen the development system based on the plan-led system, resulting in sustainable development at local levels, improving the efficiency of development approval processes and ensuring more efficient financial management in the implementation of the actions in the NPP-3 by the relevant agencies. Accordingly, the NPP-3 should be coordinated in the existing development plans at the state and local levels as well as economic regions that have been specifically established to spur growth of the national development. The development thrusts, strategies and actions in the NPP-3 must be reflected in the State Structure Plan, Local Plan and Special Area Plan in order to achieve the national physical planning goal.

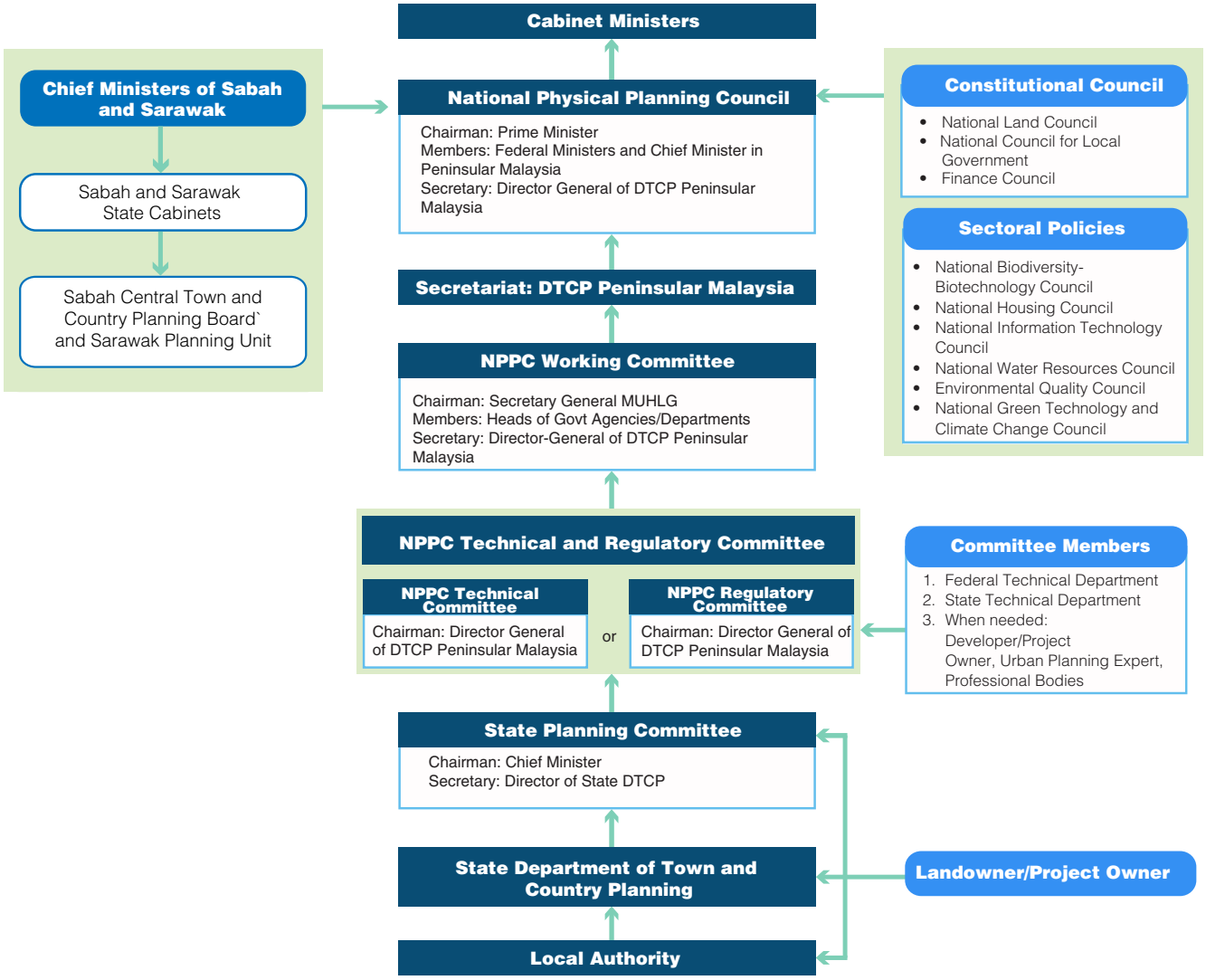
Figure 7.3 Coordination and Incorporation of the NPP-3 and Its Incorporation into the Development Planning System and Regional Economic Plan

LEVEL	DEVELOPMENT PLAN	COVERAGE		
National Level	National Physical Plan	Peninsular Malaysia	Implementation of the NPP-3 requires the incorporation and coordination the strategic directions, strategies and actions into State Structure Plans, Local Plans, Special Area Plans and Development Plans for the Iskandar Malaysia Development Region, Northern Region Economic Corridor and East Coast Economic Region.	Town and Country Planning Act 1976 (Act 172)
Regional Level	Regional Plan	Iskandar Malaysia, Northern Region Economic Corridor and East Coast Economic Region	KORIDOR UTARA ISKANDAR MALAYSIA WILAYAH EKONOMI PANTAI TIMUR	Related Acts
State Level	State Structure Plan	States in Peninsular Malaysia	Preparation of State Structure Plans require consultation with various parties, especially Federal agencies and Regional authorities, in rationalising proposals from Structure Plans with the proposals of Regional Development Plans.	Town and Country Planning Act 1976 (Act 172) and Federal Territory (Planning) Act 1982 (Act 267)
Local Level	Local Plan	Districts / Any areas within a State.	Local Plan shall be updated to reflect the strategic directions, strategies and actions of the NPP-3. The Local Plan is the basic guide in applications for planning permission.	
	Special Area Plan	Special Areas	Special Area Plans implement the actions identified in the NPP-3 as special projects involving special planning, redevelopment, conservation or special management.	
Sabah and Sarawak	Structure Plan / State Planning	State of Sabah and Sarawak	Preparation of Sabah Structure Plan and Sarawak State Planning may take into account the strategies and actions of the NPP-3 to ensure consistency with planning at the national level.	Town and Country Planning Ordinance (Sabah Cap.141)

ROLES OF NATIONAL PHYSICAL PLANNING COUNCIL AND NATIONAL PHYSICAL PLANNING STRUCTURE

The National Physical Planning Council (NPPC) is a council established under Subsection 2A (1) of the Town and Country Planning Act 1976 (Act 172). The function of the NPPC is to ensure sustainable physical development in Malaysia through effective and efficient town and country planning. The Council also plays an important role in advising the Federal Government or the State Government on matters related to urban planning. The NPPC is responsible for the formulation of related policies, coordination of physical development at national and regional levels, as well as giving advice on any applications referred to the Council to ensure sustainable development.

Figure 7.4 Management and Structure of National Physical Planning



Box 7.1 Advice of NPPC on Planning Permission Applications

Under Section 22 (Sub-Sections 2A) of Act 172, all applications for planning permission involving matters of national interest should be referred to the Council for its advice. Applications that need to be referred to the NPPC include:

1. Development of a new township with a population exceeding 10,000 people or covering an area of more than 100 hectares, or both;

2. Construction of significant national infrastructure or major facilities, including:
   - Construction of airports;
   - Construction of railways and urban public transport system;
   - Construction of integrated public transport terminals;
   - Construction of highways and roads;
   - Construction of bridges;
   - Construction of port facilities;
   - Development of landfill sites for solid waste or scheduled waste;
   - Construction of facilities associated with oil storage tanks and gas pipeline routes;
   - Construction of dams;
   - Construction of nuclear plants;
   - Construction of power generation stations, private power plants, alternative energy and power line routes; and
   - Construction of flood mitigation infrastructure.

3. Development affecting areas designated as Environmentally Sensitive Areas (ESAs) in the development plan. In this context, the NPP-3 has identified the following areas as ESAs to be recognised by the State Planning Committee and referred to the NPPC for advice. They include:
   - Existing and proposed new protected areas;
   - Threatened habitats outside protected areas (turtle landing areas, seagrass beds, coral reefs, limestone outcrops, quartz ridges and bird stopover sites);
   - Existing and proposed dam areas;
   - Areas above 1,000m contour;
   - Water intake areas and groundwater recharge zones;
   - Islands and marine parks; and
   - Coastal areas.

4. The NPPC is also recommended to advise on matters that affect ESAs as well as urban and large-scale infrastructure development in Sabah and Sarawak in line with the goal of becoming a sustainable and resilient nation.

5. Act 172, however, is not applied in Sabah and Sarawak due to their different planning systems. However, as part of efforts to ensure holistic planning at the national level, the Chief Ministers of Sabah and Sarawak should be involved in the NPPC to discuss and align planning at state level and the national level.

THE NPP-3 AND REGIONAL ECONOMIC DEVELOPMENT

The NPP-3 aligns the national development planning with the needs of economic regions established in Malaysia. There are five economic regions that play a role a to boost economic growth in the regions which are Iskandar Malaysia Development Region, Northern Corridor Economic Region and East Coast Economic Region for Peninsular Malaysia. While in Sabah there is Sabah Development Corridor (SDC) and Sarawak Corridor of Renewable Energy (SCORE) in Sarawak. Three more economic regions have also been planned which are the Greater KL/Klang Valley, Malaysia Vision Valley and South Perak Development Region. Consultation and cooperation among Federal and State agencies are required to ensure sustainable development of the country.

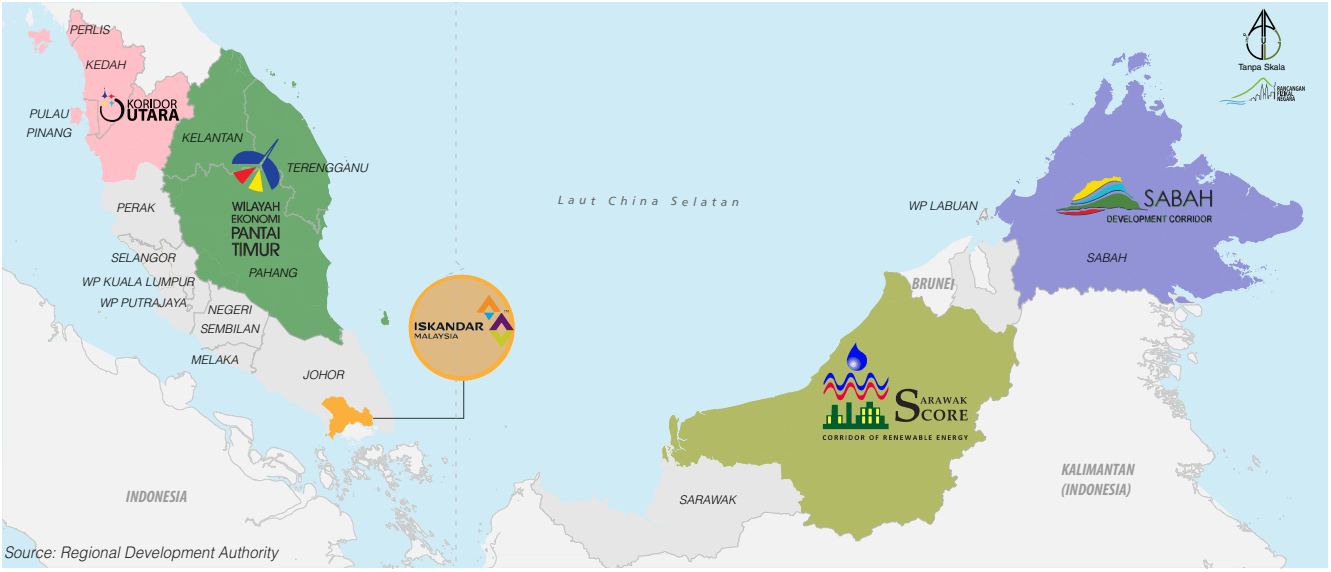
ROLE OF STATE GOVERNMENT AND REGIONAL DEVELOPMENT IMPLEMENTING AGENCIES

The NPP plays an important role in shaping the direction of land use by introducing an effective land planning and management system to facilitate the development process in this country. It is important that State Governments and regional development implementing agencies such as Iskandar Regional Development Authority (IRDA), East Coast Economic Region Development Council (ECERDC) and Northern Corridor Implementing Agency (NCIA) coordinate their respective development planning in line with the objectives, thrusts, strategic directions, strategies and actions outlined in the NPP-3. Consistent and transparent planning will further increase the confidence of investors in the economic regions and states in Malaysia.

Table 7.1 Regional Economic Development in Malaysia

Regional Planning Zone	Coverage Area	Provisions Under the Act
Iskandar Malaysia (IM)	Southern parts of Johor state, covering five local authority areas	Iskandar Regional Development Authority Act, 2007 (Act 664)
Northern Corridor Economic Region (NCER)	Perlis, Kedah, Penang and northern Perak (Hulu Perak, Kerian, Kuala Kangsar and Larut Matang-Selama districts)	Northern Corridor Implementation Authority Act, 2008 (Act 687)
Eastern Corridor Economic Region (ECER)	Kelantan, Terengganu, Pahang and the district of Mersing, Johor	East Coast Economic Region Development Council Act, 2008 (Act 688)
Sabah Economic Development and Investment Authority (SEDIA)	Entire Sabah state	Sabah Economic Development and Investment Authority Enactment, 2009
Sarawak Corridor of Renewable Energy (SCORE)	Tanjung Manis, Mukah, Samalaju, Baram and Tunoh	Regional Corridor Development Authority Ordinance, 2006

Figure 7.5 Existing Regional Economic Development Corridors in Malaysia



Source: Regional Development Authority

ROLE OF REGIONAL PLANNING COMMITTEES IN PENINSULAR MALAYSIA

The NPP-3 has identified several of strategies and actions that require attention and coordination with State Governments in Peninsular Malaysia. These include the strategies to strengthen national communication and mobility as well as the sustainable land and resource management.

The Regional Planning Committee plays an important role in ensuring the effective coordination of development planning involving several states. The establishment of the Regional Planning Committee is stipulated under Section 6A of Act 172.

The NPP-3 proposes three (3) major aspects that require the establishment of a Regional Planning Committee. This is to ensure the cooperation of all parties in coordinating the related actions and initiatives including:
1. River basin management and the provision of sustainable water supply;
2. Management of ecological corridors and highlands; and
3. Development of comprehensive rail infrastructure and transport systems.

Table 7.2 States Involved in Common Agenda

River Basins	Ecological Corridors and Highlands	Management of Transportation Infrastructure Development	
Common Agenda	**Common Agenda**	**Common Agenda**	
1. Water supply 2. Flood	1. Land status 2. Land use	1. Rail network 2. Road network	
States / Areas Involved			
River Basins and States Involved	**Ecological Corridors, Highlands and States Involved**	**Network**	**State**
1. Sungai Kerian (Kedah, Perak and Penang) 2. Sungai Langat (Negeri Sembilan, Selangor and Putrajaya F.T.) 3. Sungai Muar (Negeri Sembilan, Johor and Melaka) 4. Sungai Kesang (Negeri Sembilan, Johor and Melaka) 5. Sungai Muda (Kedah and Penang) 6. Sungai Perai (Kedah and Penang) 7. Sungai Jawi (Kedah and Penang) 8. Sungai Bernam (Perak and Selangor) 9. Sungai Klang (Selangor and Kuala Lumpur F.T.) 10. Sungai Sepang (Negeri Sembilan and Selangor) 11. Sungai Linggi (Negeri Sembilan and Melaka) 12. Sungai Melaka (Negeri Sembilan and Melaka) 13. Sungai Endau (Johor and Pahang)	1. CFS1-PL2 (Perak and Kelantan) 2. CFS1-PL8 (Kedah and Perak) 3. CFS1-PL5 (Kedah and Perak) 4. CFS1-PL7 (Kelantan and Terengganu) 5. Fraser's Hill (Pahang and Selangor) 6. Cameron Highlands (Pahang and Perak) 7. Genting Highlands (Pahang and Selangor)	Committed HSR	1. Selangor 2. Kuala Lumpur F.T 3. Negeri Sembilan 4. Melaka 5. Johor 6. Putrajaya F.T
		Proposed HSR	1. Penang 2. Perak
		ETS	1. Perlis 2. Kedah 3. Penang 4. Perak 5. Selangor 6. Kuala Lumpur F.T 6. Negeri Sembilan 7. Melaka 8. Johor

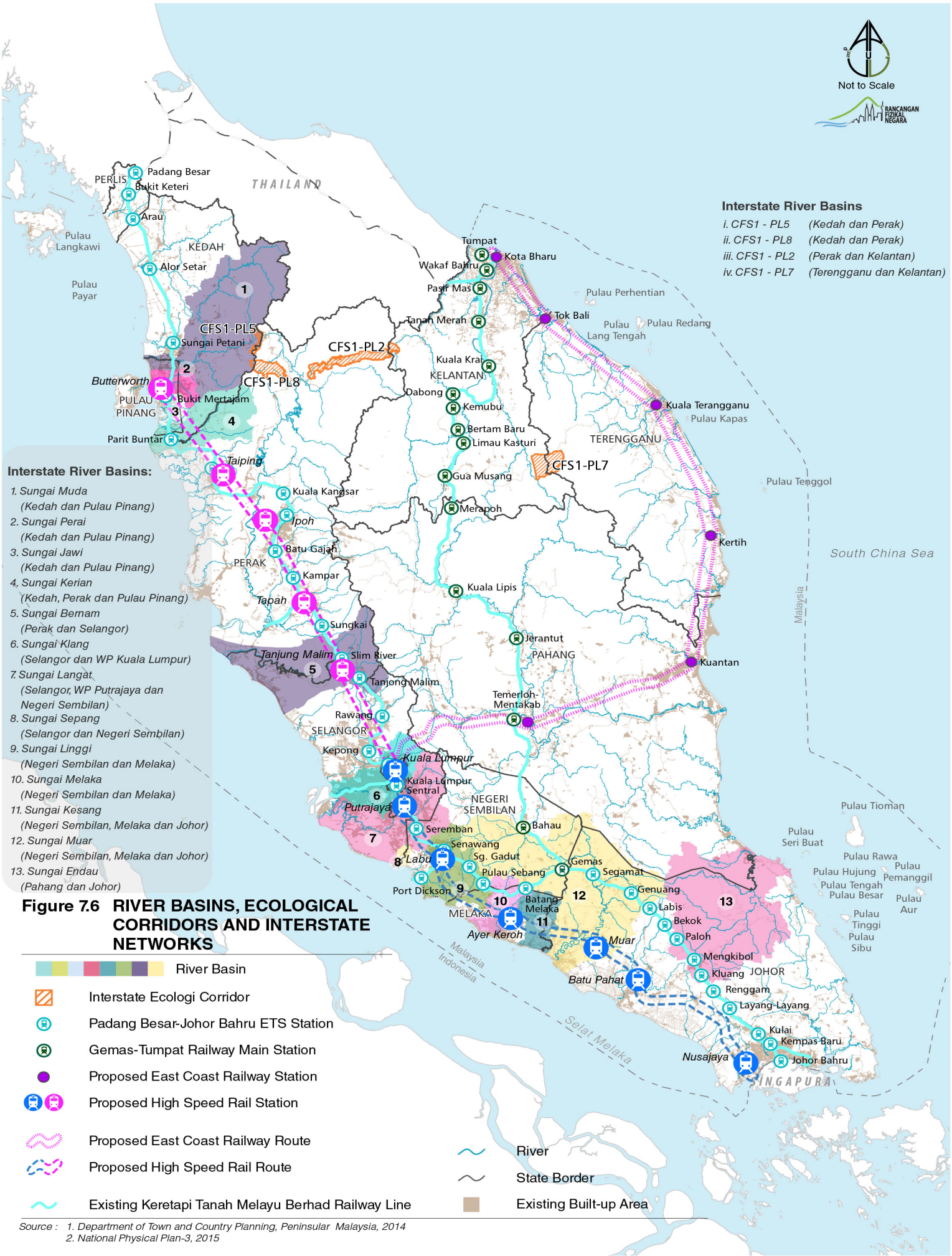
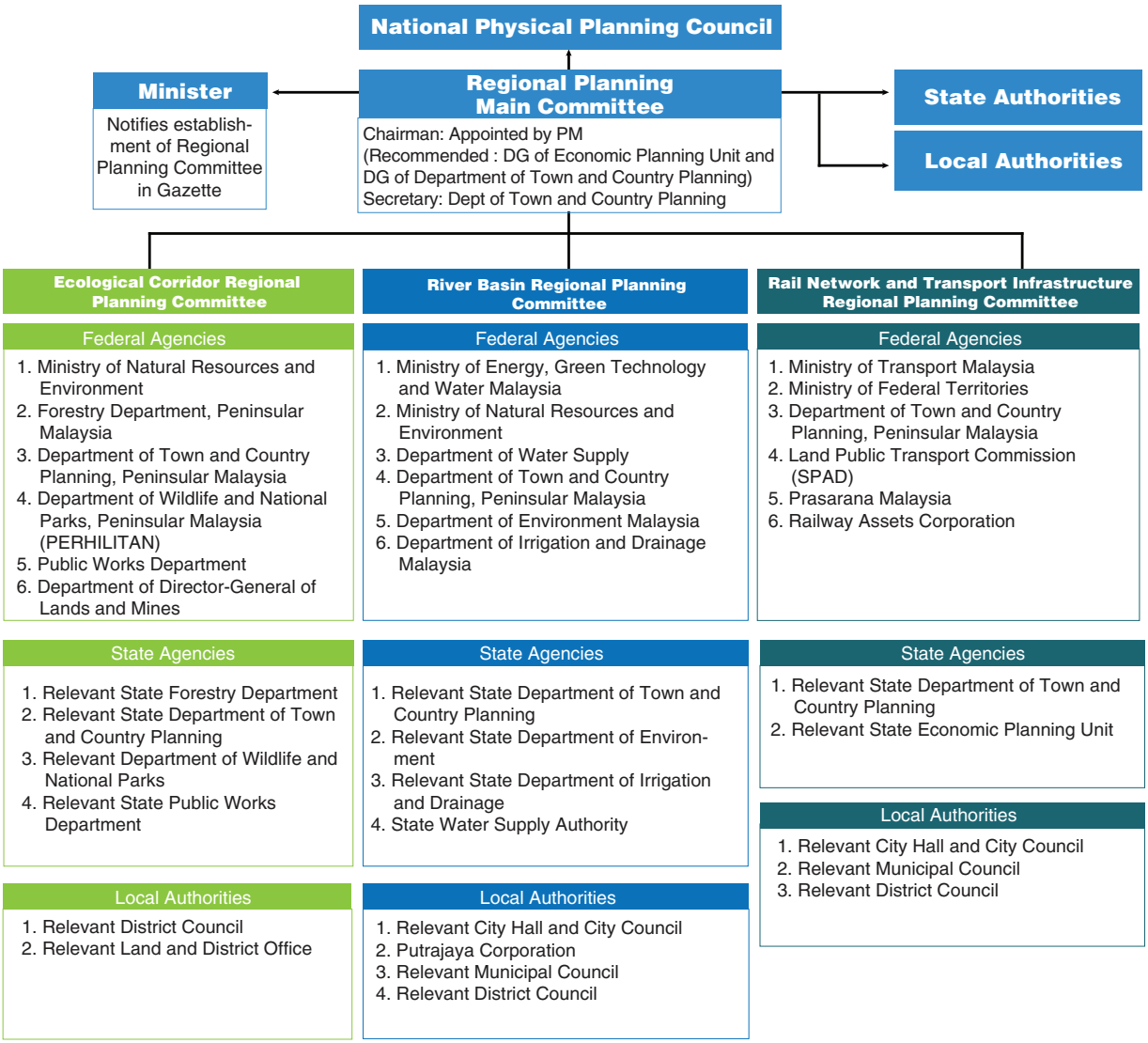


Figure 7.6 RIVER BASINS, ECOLOGICAL CORRIDORS AND INTERSTATE NETWORKS

Source : 1. Department of Town and Country Planning, Peninsular Malaysia, 2014
2. National Physical Plan-3, 2015

Figure 7.7 Structure of Regional Planning Committee in Peninsular Malaysia



* Proposed Committee is adopted according to the respective needs of regions.

STRUCTURE OF REGIONAL PLANNING COMMITTEE IN PENINSULAR MALAYSIA

Establishing a Regional Planning Committee requires the approval of relevant State Authorities whose roles include:

1. Advising and assisting the State Planning Committee and Local Planning Authority on the appropriate development plan for the region;
2. Formulating policies and a comprehensive regional plan to guide and coordinate regional planning;
3. Planning and coordinating the provision of infrastructure and facilities for the region;
4. Establishing uniformed processes and procedures for the Federal and State Governments as well as the relevant Local Authorities;
5. Monitoring the implementation of standards, guidelines and procedures in facilitating regional planning; and
6. Conducting research according to the regional planning needs.

Implementation of National Physical Plan-3

The implementation of the NPP-3 must be coordinated and implemented in development plans for states, districts or towns.

Table 7.3 Implementing Agencies for Thrust 1

THRUST 1: DYNAMIC URBAN AND RURAL GROWTH														
Action		Implementing Agency										Development Plan Action		
DG 1: Balanced Urban Growth		MITI	MOTAC	MOT	State Govt	Regional Authorities	MUHLG	MFP	MOE	MOHE	MOHR	SSP	LP	SAP
DG1.1 Strengthening Growth Areas														
DG1.1A	Accelerate urban growth in existing growth areas				✓		✓					✓	✓	
DG1.1B	Enhance the role of regional economic corridors on economic development of regions					✓						✓	✓	
DG1.2 Enhancing Urban Competitiveness														
DG1.2A	Strengthen urban competitiveness at a global level						✓					✓	✓	
DG1.2B	Upgrade functions of settlements						✓	✓				✓	✓	
DG1.2C	Strengthen economic agglomerations and improving urban networks				✓							✓	✓	
DG1.3 Strengthening the Services Sector														
DG1.3A	Venture into modern services sector	✓										✓	✓	
DG1.3B	Enhance value-added activities in the tourism sector		✓									✓	✓	✓
DG1.4 Strengthening Industrial Clusters														
DG1.4A	Promote development of major industrial clusters	✓										✓	✓	
DG1.4B	Upgrading surroundings physical infrastructure at existing industrial areas.	✓			✓							✓	✓	✓
DG1.4C	Promote planning for new, integrated industrial areas	✓										✓	✓	✓
DG1.5 Strengthening Ports of Entry and Logistics Industry														
DG1.5A	Enhance the role of airports			✓								✓	✓	
DG1.5B	Enhance the role of seaports			✓								✓	✓	
DG1.5C	Enhance the role of inland ports			✓								✓	✓	
DG1.5D	Improve logistics and the supply chain management			✓								✓	✓	
DG1.6 Boosting Human Capital Development and Knowledge-Intensive Sectors														
DG1.6A	Develop a skilled and knowledgeable society								✓	✓	✓	✓	✓	
DG1.6B	Create research and innovation centres									✓		✓	✓	
DG1.6C	Strengthen vocational and industrial training facilities										✓	✓	✓	

Action		Implementing Agency							Development Plan Action		
DG 2: Integrated Rural Development		MRRD	MPIC	MOA	MEGTW	MCMM	EPU	MOW	SSP	LP	SAP
DG2.1 Utilising Local Resources											
DG2.1A	Develop rural settlements based on economic potential of rural areas	✓		✓					✓	✓	
DG2.1B	Develop agropolitan centres	✓		✓					✓	✓	✓
DG2.2 Improving Value Chain Activities for Agriculture-Based Economy											
DG2.2A	Enhance value-added activities in oil palm industries		✓	✓					✓	✓	
DG2.2B	Increase productivity and role of rubber plantations	✓	✓						✓	✓	
DG2.2C	Enhance fisheries and aquaculture activities			✓					✓	✓	
DG2.2D	Promote modern agriculture to generate higher incomes			✓					✓	✓	
DG2.2E	Strengthen economic linkages between rural and urban regions	✓	✓	✓					✓	✓	
DG2.3 Improving Basic Infrastructure and Rural Facilities											
DG2.3A	Expand rural infrastructure development	✓			✓	✓			✓	✓	
DG2.3B	Improve access to basic amenities and services	✓					✓		✓	✓	
DG2.3C	Improve rural networks and connectivity	✓						✓	✓	✓	

Action		Implementing Agency					Development Plan Action		
DG 3: Enhanced Connectivity and Access		MOW	MLMM	LPT	MOT	MAHB	SSP	LP	SAP
DG3.1 Developing Road Networks and Connections									
DG3.1A	Prioritise regional inter-connectedness	✓					✓	✓	
DG3.2 Developing Comprehensive Railway Network Systems									
DG3.2A	Promote high-speed rail systems as part of integrated transportion system			✓	✓		✓	✓	
DG3.2B	Expand Electric Train Service (ETS) and other train services				✓		✓	✓	
DG3.2C	Improve urban public transportion			✓			✓	✓	✓
DG3.3 Improving Air Transport Services									
DG3.3A	Improve ferry services				✓		✓	✓	
DG3.3B	Develop water taxi services				✓		✓	✓	✓
DG3.4 Enhancing Regional and Local Air Linkages									
DG3.4A	Enhance existing airport facilities and infrastructure				✓		✓	✓	
DG3.4B	Improve rural air services				✓		✓	✓	
DG3.5 Expanding and Improving Digital Infrastructure									
DG3.5A	Strengthen and expand broadband coverage		✓				✓	✓	
DG3.5B	Strengthen smart city infrastructure		✓				✓	✓	

Table 7.4 Implementing Agencies for Thrust 2

THRUST 2: SPATIAL SUSTAINABILITY AND CLIMATE CHANGE RESILIENCY										
Action		Implementing Agency					Development Action Plan		
SR 1: Sustainable Management of Natural, Food and Heritage Resources		NRE	MOTAC	MOA	State Govt	MUHLG	SSP	LP	SAP
SR1.1 Enhancing Conservation and Preservation of National Ecological Assets									
SR1.1A	Gazette threatened habitats as protected areas.	✓			✓		✓	✓	
SR1.1B	Encourage community involvement in conservation efforts	✓						✓	✓
SR1.1C	Establish strengthen implementation of terrestrial and marine ecological corridors	✓					✓	✓	✓
SR1.2 Management and Regulation of Development in Environmentally Sensitive Areas (ESAs)									
SR1.2A	Adopt ESA framework as basis for regulation of development control				✓		✓	✓	✓
SR1.3 Improving Security and Sustainability of Water Resources									
SR1.3A	Strengthen river basin management	✓			✓		✓	✓	
SR1.3B	Develop groundwater resources	✓			✓		✓	✓	
SR1.4 Managing Mineral Resource Exploration									
SR1.4A	Account mineral resources in land use planning	✓			✓		✓	✓	
SR1.4B	Develop sustainable mining of mineral resources	✓			✓		✓	✓	
SR1.4C	Preserve and redevelop former mining sites	✓			✓		✓	✓	
SR1.5 Promoting Food Security									
SR1.5A	Maintain physical areas of the 12 main granary areas				✓		✓	✓	
SR1.5B	Raise self-sufficiency level in food commodities (rice, fruits, vegetables, fisheries and livestock)			✓	✓		✓		
SR1.5C	Establish community gardens			✓			✓	✓	
SR1.6 Strengthening the Protection and Preservation of Nation's Archaeological and Natural Heritage Sites									
SR1.6A	Gazette national archaeological and natural heritage sites		✓		✓		✓	✓	
SR1.6B	Prepare Conservation Management Plan		✓		✓	✓	✓	✓	✓

Action		Implementing Agency						Development Action Plan		
SR 2: Holistic Land Use Planning		NRE	KKLW	SPAD	KPKT	Kerajaan Negeri dan PBT	MOTAC	RSN	RT	RKK
SR2.1 Optimising Land Use and Availability										
SR2.1A	Prioritise development in existing development areas					✓	✓	✓	✓	
SR2.1B	Promote sustainable density development					✓	✓	✓	✓	✓
SR2.1C	Promote mixed land use zones					✓	✓		✓	✓
SR2.1D	Encourage transit-oriented development			✓		✓	✓	✓	✓	✓

Action		Implementing Agency						Development Action Plan		
SR 2: Holistic Land Use Planning		NRE	MRRD	LPT	MUHLG	State Govt and Local Authority	MOTAC	SSP	LP	SAP
SR2.2 Managing Natural Disaster-Prone Areas										
SR2.2A	Strengthen flood management				✓	✓		✓	✓	
SR2.2B	Preserve coastal areas	✓			✓	✓		✓	✓	
SR2.2C	Manage landslide risk areas				✓	✓		✓	✓	
SR2.2D	Control forest and peat soil fires	✓				✓		✓	✓	
SR2.2E	Increase level of earthquake preparedness				✓	✓		✓	✓	✓
SR2.3 Managing Urban Growth and Sprawl										
SR2.3A	Establish urban growth boundary for every city				✓	✓			✓	✓
SR2.4 Integrated Rural Development Management										
SR2.4A	Preserve suitability of rural identity and character with the environment		✓			✓		✓	✓	✓
SR2.4B	Promote and preserve rural areas with potential to be developed as tourist areas		✓			✓	✓	✓	✓	✓

Action		Implementing Agency				Development Action Plan		
SR 3: Low Carbon Cities and Sustainable Infrastructure		NRE	MEGTW	MOT	MUHLG	SSP	LP	SAP
SR3.1 Creating Low Carbon Cities and Development								
SR3.1A	Prepare a Low Carbon City Action Plan				✓	✓	✓	
SR3.1B	Promote sustainable building practices		✓			✓	✓	
SR3.1C	Apply the principle of carbon sequestration through landscape		✓			✓	✓	
SR3.2 Realizing Use of Sustainable Energy Sources								
SR3.2A	Promote development of biogas and biomass in plantations		✓		✓	✓	✓	
SR3.2B	Promote development of environmentally-friendly solar energy		✓		✓	✓	✓	
SR3.2C	Promote use of micro-hydro for secluded and remote areas		✓		✓	✓	✓	
SR3.2D	Increase use of wind and other renewable energy sources		✓			✓	✓	
SR3.3 Implementing Integrated Water Cycle Management								
SR3.3A	Provide sustainable water supply		✓		✓	✓		
SR3.3B	Implement water reuse		✓		✓	✓	✓	✓
SR3.3C	Improve water quality	✓			✓	✓	✓	
SR3.3D	Reduce water demand		✓		✓	✓	✓	
SR3.4 Establishing Low Carbon Mobility								
SR3.4A	Prepare Urban Public Transportation Master Plan			✓	✓	✓	✓	
SR3.4B	Encourage use of low carbon private vehicles in cities			✓		✓	✓	
SR3.4C	Improve pedestrian and cycling facility and accessibility				✓	✓	✓	
SR3.5 Strengthening Integrated and Sustainable Solid Waste Management								
SR3.5A	Establish solid waste management facilities in urban areas to meet societal and low carbon needs				✓	✓	✓	
SR3.5B	Recovery value of urban solid waste				✓	✓	✓	
SR3.5C	Enforce laws related to solid waste management				✓	✓	✓	
SR3.5D	Implement waste separation at source				✓	✓	✓	

Table 7.5 Implementing Agencies for Thrust 3

THRUST 3: INCLUSIVE AND LIVEABLE COMMUNITY DEVELOPMENT												
Action		Implementing Agency							Development Plan Action		
IC 1: Quality and Livable Environment		MUHG	MRRD	MHM	MYS	MOE	MFT	MWFCD	SSP	LP	SAP
IC1.1 Providing Appropriate Housing in Suitable Location											
IC1.1A	Establish Housing Board in each state to formulate housing policies at state level and prepare a housing data base	✓							✓	✓	
IC1.1B	Improve availability of affordable housing for B40 and M40 target households in urban areas	✓							✓	✓	
IC1.1C	Provide affordable public housing around transit nodes in urban and urban fringe areas	✓							✓	✓	✓
IC1.1D	Provide housing of appropriate design with suitable facilities for specific target groups	✓		✓					✓	✓	
IC1.1E	Improve quality of housing and good neighbourliness in urban villages, rural areas and FELCRA and FELDA settlements through better planning	✓	✓	✓	✓	✓			✓	✓	
IC1.2 Improving Access to Quality Community Facilities											
IC1.2A	Provide integrated and easily accessible community facilities that meet the needs of the local community				✓		✓	✓	✓	✓	✓
IC1.2B	Design community facilities that are high quality barrier-free and easy to maintain				✓		✓	✓	✓	✓	✓
IC1.2C	Promote collaboration between agencies and developers to develop community faciliting land reserve that is yet to be developed at existing housing areas						✓		✓	✓	✓
IC1.2D	Improve education facilities and health services in secluded areas		✓						✓	✓	✓
IC1.3 Improving and Facilitating Access to Employment and Economic Opportunities											
IC1.3A	Develop skills training and higher education centres neighbourhood areas to improve access of residents to skills training opportunities	✓				✓			✓	✓	✓
IC1.3B	Encourage public participation in bid to improve quality of life of the poor and vulnerable	✓							✓	✓	✓
IC1.3C	Create employment centres near Public Transport Transit Centres	✓				✓			✓	✓	
IC1.3D	Integrate commercial clusters in affordable housing areas and rural areas as local centres of business and employment		✓						✓	✓	

Action		Implementing Agency		Development Pelan Action		
IC 2: Liveable Community Environment		MUHLG	MFT	SSP	LP	SAP
IC2.1 Transforming Public Spaces into Vibrant Community Places						
KI2.1A	Identify buildings and public spaces that can be enhanced as new focus areas and attractions	✓	✓	✓	✓	✓
KI2.1B	Encourage public participation in generating community activities through physical renewal and activities	✓	✓	✓	✓	✓
KI2.1C	Provide support facilities, public transport systems and access in public areas and new attraction areas	✓	✓	✓	✓	✓
KI2.1D	Expand area and quality of open spaces and recreational parks as the heart of a healthy society	✓		✓	✓	✓

Action		Implementing Agency						Development Plan Action		
IC 2: Liveable Community Environment		MUHLG	MFT	MOTAC	MOHA	NRE	MOH	SSP	LP	SAP
IC2.2 Strengthening the Importance of Culture and Heritage										
IC2.2A	Address unique characteristics that can form an identity for urban, rural or local areas through the Cultural Mapping process			✓				✓	✓	✓
IC2.2B	Provide a public area or zone for the cultural and arts festival purposes	✓	✓	✓				✓	✓	✓
IC2.2C	Inject and enhance diversity of attraction activities in efforts to preserve culture and heritage	✓	✓	✓					✓	✓
IC2.3 Creating a Safe Environment										
IC2.3A	Prevent urban crime by reviving the Safe City Programme and integrated with environmental design that promotes crime prevention	✓			✓			✓	✓	✓
IC2.3B	Enhance the 'Safe Neighbourhood Improvement Area Plan' in decaying housing or inner city areas	✓						✓	✓	✓
IC2.3C	Apply smart technology systems for public safety and resilience in urban and rural areas	✓						✓	✓	
IC2.3D	Establish Urban Emergency Plan and Emergency Operations Centre for natural disasters and security threats in every city and town as well as vulnerable areas	✓						✓	✓	
IC2.4 Mainstreaming Healthy and Clean Lifestyle										
IC2.4A	Enhance efforts to reduce urban air pollution	✓				✓	✓	✓	✓	
IC2.4B	Redevelop dilapidated and abandoned areas	✓						✓	✓	

Action		Implementing Agency		Development Plan Action		
IC 3: Community Involvement and Collaboration		MUHLG	MFT	SSP	LP	SAP
IC3.1 Promoting Community Involvement						
IC3.1A	Enhance public participation in planning processes at local levels	✓	✓	✓	✓	✓
IC3.2 Promoting Collaboration and Smart Partnerships in Community Development						
IC3.2A	Strengthen cooperation between local authorities and communities in community development projects	✓	✓	✓	✓	✓

P2 : ESTABLISHMENT OF MALAYSIA URBAN OBSERVATORY (MUO)

Malaysia is a rapidly growing country with rising urbanisation rate and development rising in most of its major cities. Various policies have been enacted to spur economic growth aided by balanced social and physical development policies. Several development plans have also been implemented in line with efforts to meet identified targets.

The NPP-3 becomes the main document that sets the planning and development direction of the nation. With the goal of making Malaysia a Resilient and Liveable Nation, the plan comprises of three core thrusts that are supported by nine strategic directions, 38 strategies and 109 actions identified to be implemented by various parties and agencies at the national, state and local levels. This implementation requires accurate data and information to verify that decisions made are correct and transparent. To ensure more coordinated management of planning and integrated urban and rural development, accurate data and information becomes a key factor in monitoring and evaluating the impact of development planning. It is also part of efforts to improve the quality of life of Malaysians.

The Malaysia Urban Observatory (MUO) will be introduced as a central database that uses an Integrated Smart Information System to support sustainable growth. The MUO also serves to monitor the implementation of the NPP-3 and its related policies aimed at enhancing urban and regional development in Malaysia.

The MUO is proposed as an independent entity that operates within the governance structure of the Ministry of Urban Wellbeing, Housing and Local Government under the auspices of the Department of Town and Country Planning Peninsular Malaysia (DTCP). The DTCP will be directly linked to the Local Planning Authority, with various agencies and parties identified as key stakeholders. The Department will also collaborate with local and global organisations to establish strategic partnerships for various supporting activities under the MUO.

The MUO will establish multiple sustainable pathways to assess the impact of development on social wellbeing, culture, the economy and environment. This assessment applies a variety of methods, visions, models and tools through network sharing of data and information that is accurate, available and beneficial. This effort will set the future development pattern of the country in line with the global emphasis on the Sustainable Development Goals (SDGs).

Box 7.2 MUO as an Integrated Data Base

MALAYSIA URBAN OBSERVATORY

The MUO is a national data, referral, monitoring and reporting centre that will monitor wellbeing and sustainability level of towns in Malaysia in the social, urban, economic and environmental aspects.

OBJECTIVES OF MALAYSIA URBAN OBSERVATORY (MUO)

Developing mechanisms for monitoring urbanisation and planned development trends in Malaysia in relation to aspects of sustainable development by:

1. Making the MUO a focal point for the collection, updating, analysis, management and dissemination of data and information to improve knowledge in sustainable urban and rural areas;
2. Developing an information exchange and capacity building network;
3. Establishing monitoring systems to support sustainable local urban management and planning process;
4. Strengthening local capacity in the development and use of urban indicators in data collection and monitoring process;
5. Providing technical services that build for policy implementation at local levels;
6. Making the MUO the main reference for stakeholders in policy and decision making; and
7. Reporting on the status of urban sustainability in Malaysia.

STRUCTURE OF MALAYSIAN URBAN OBSERVATORY (MUO)

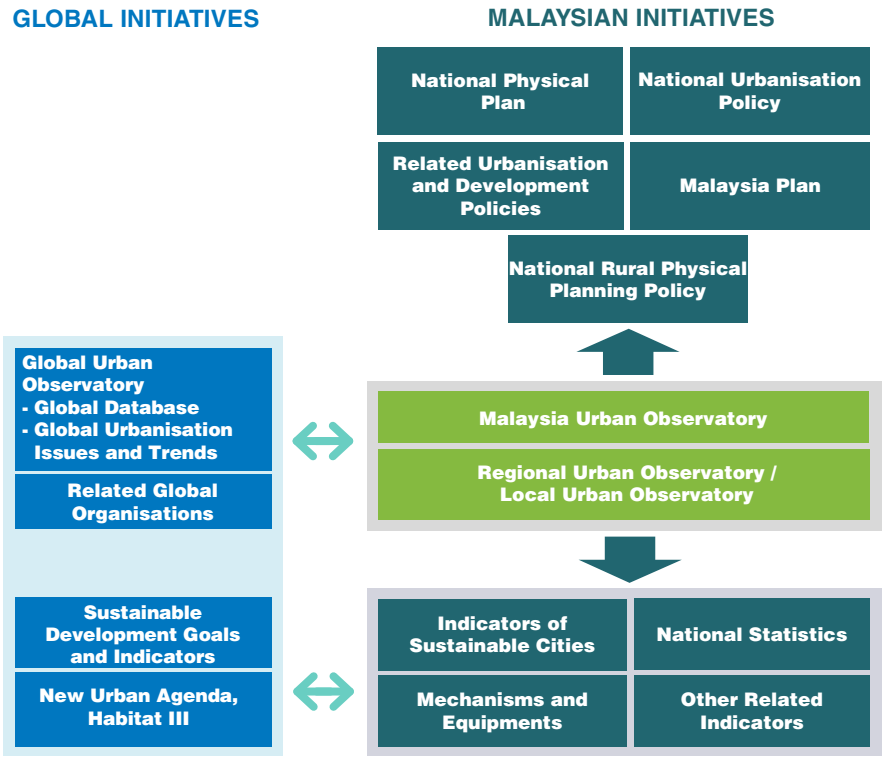
The MUO serves as a central national database and information centre to assist the formation of sustainable urban growth and liveable nation. To effectively implement this function, the MUO will be coordinated with the National Physical Plan, National Urbanisation Policy and National Rural Physical Planning Policy as its main reference document. The indicators identified will be used in the efforts of data and information collection for monitoring purposes, among others.

In general, there are two levels of MUO Structures, the structure of the MUO is at two levels:

1. Global Initiative; and
2. Malaysia Initiative.

These levels play an important roles in establishing a comprehensive and integrated observatory centre. Linkages with the Global Urban Observatory and related organisations that support the sustainability agenda at the global level are important in order to understand the current urbanisation trends. This understanding will help in the formation of innovation and creating solutions to any issues affecting Malaysia.

Figure 7.8 MUO Structure at the Global and Malaysian Initiative Levels



FUNCTIONS OF MALAYSIA URBAN OBSERVATORY

The MUO has five main functions to help make Malaysia a sustainable nation. Amongst them are:

1 Monitoring and Evaluation Centre

- Monitor the implementation of strategic directions and actions of the NPP-3 through indicators;
- Evaluate effectiveness of the actions that have been identified;
- Monitor development progress and compliance with existing development plans; and
- Assess impact of development and monitor progress and level of implementation as well as compliance with existing development plans.

2 Sustainable Data Centre

- Collect, update, standardise and manage spatial data and information needed to assess urbanisation trends;
- Establish an information system that can be used by the public, government agencies, private sectors and non-governmental organisations;
- Manage database for urban and rural areas; and
- Update existing i-Plan system in the context of establishment of MUO context.

3 Urban Wellbeing Centre of Excellence (URBANICE MALAYSIA)

- Establish a National Knowledge Centre with a focus on achieving urban wellbeing;
- Research resolution stategies for current municipal issues;
- Publish research findings; and
- Hold training programmes to develop local capacity.

4 Technical Service Centre

- Assist in analysis and data evaluation for various parties;
- Provide advice to agencies and stakeholders on multiple sustainable pathways;
- Provide information and data on urbanisation in Malaysia; and
- Assist in developing and standardising operations of Local Urban Observatory and Regional Urban Observatory.

Sustainable Urbanisation Reporting Centre

- Report achievements in urban sustainability;
- Coordinate indicators and data needed to evaluate urban sustainability;
- Evaluate, produce and disseminate information on sustainability of urban areas in Malaysia through the Sustainable City Indicators (MURNInets);
- Evaluate and report on sustainability level of the nation in line with the New Urban Agenda and Sustainable Development Goals (SDGs) indicators; and
- Update and coordinate MURNInets with SDGs and appropriate sustainability indicators for the establishment of basic data in compliance with

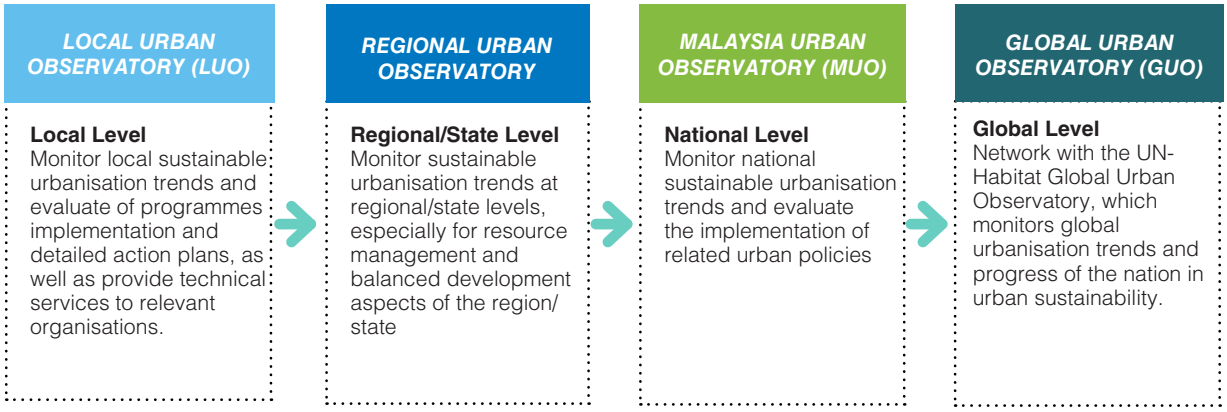
Figure 7.9: Five Main Functions of MUO

IMPLEMENTATION LEVELS OF MALAYSIA URBAN OBSERVATORY

The MUO will be more effective if the implementation took place at Regional and State levels and established by the State Government or Economic Development Regions such as IRDA, ECERDC and NCIA. However at the local level, the MUO should ideally be established by the Local Planning Authority for major cities in Malaysia such as Kuala Lumpur, Johor Bahru, George Town, Melaka City, Ipoh, Kuantan, Kota Kinabalu, Kuching and any city that experiences rapid urbanisation and has the capacity to build an observatory at a local level.

Each observatory will have different establishment categories, significant roles and implementation levels according to its scale and respective interests as below:

Figure 7.10 Implementation Levels of MUO



Note: Observatories at national and local levels are a priority in efforts to establish a comprehensive data centre

Table 7.6 Establishment, Key Roles and Implementation of Observatories

	Malaysia Urban Observatory (National Urban Observatory)	Regional Urban Observatory	Local Urban Observatory (Cities Urban Observatory)
Establishment	Established by the Ministry of Urban Wellbeing, Housing and Local Government under the management of the Department of Town and Country Planning, Peninsular Malaysia	Established by State Government or Regional Economic Development agencies such as IRDA, ECER, NCER and others.	Established by Local Planning Authority (LPA). May be located under LPA or at universities that are strategic partner of the LPA.
Main roles	• Monitor trends and state of nation's urbanisation, and help policy and decision makers; and • Coordinate data at the national level, conduct research, provide technical services and report on the nation's sustainability and wellbeing.	• Provide technical services to MUO and LUO by enhancing local capacity and uniformity of indicators, data and information for towns in the RUO areas; and • Monitor compliance with policy planning at local levels and ensuring regional balance.	• Manage, evaluate data/policies to produce analysis and information on urban sustainability performance; and • Monitor urban issues that would assist the decision-making process relating to urban planning and development.
Implementation	• Provide a framework for the establishment and management of observatories at local levels; • Determine procedures for collecting and managing data at national and local levels, as well as setting and set measurement indicators of urbanisation; • Provide data, data analysis and technical services to relevant parties; and • Establish indicator programmes and reporting at a national level.	• Coordinate trans-boundary issues and issues of shared ecosystems, administration and culture; and • Help MUO and LUO collect data and information or do this itself for its own use/purpose.	• Manage information system, and conduct evaluation and impact analysis; • Collaborate with partners in developing an urban indicator and evaluation mechanisms; • Build capacity to manage, generate, evaluate and disseminate urbanisation information in a consistent manner; and • Identify trends major issues, and sharing of information.

STRATEGIC PARTNERSHIPS FOR MALAYSIA URBAN OBSERVATORY

For the implementation of the MUO, strategic partnerships with local and international institutions are vital to ensure the effective operation of the MUO. This would provide opportunity to access extensive resources and expertise in a short period of time, and ensure the availability of more comprehensive data and information. Accordingly, all information, data and resources produced by the MUO will be shared with strategic partners. This cooperation can be divided into three main groups, which are:

1 Government with International Institutions

United Nations Human Settlements (UN-Habitat), the Global Urban Observatory, United Nations Environmental Programme (UNEP), the Global Research Institute (GRI), nations and global cities with their own observatory.

Cooperation with the National Key Data Providers

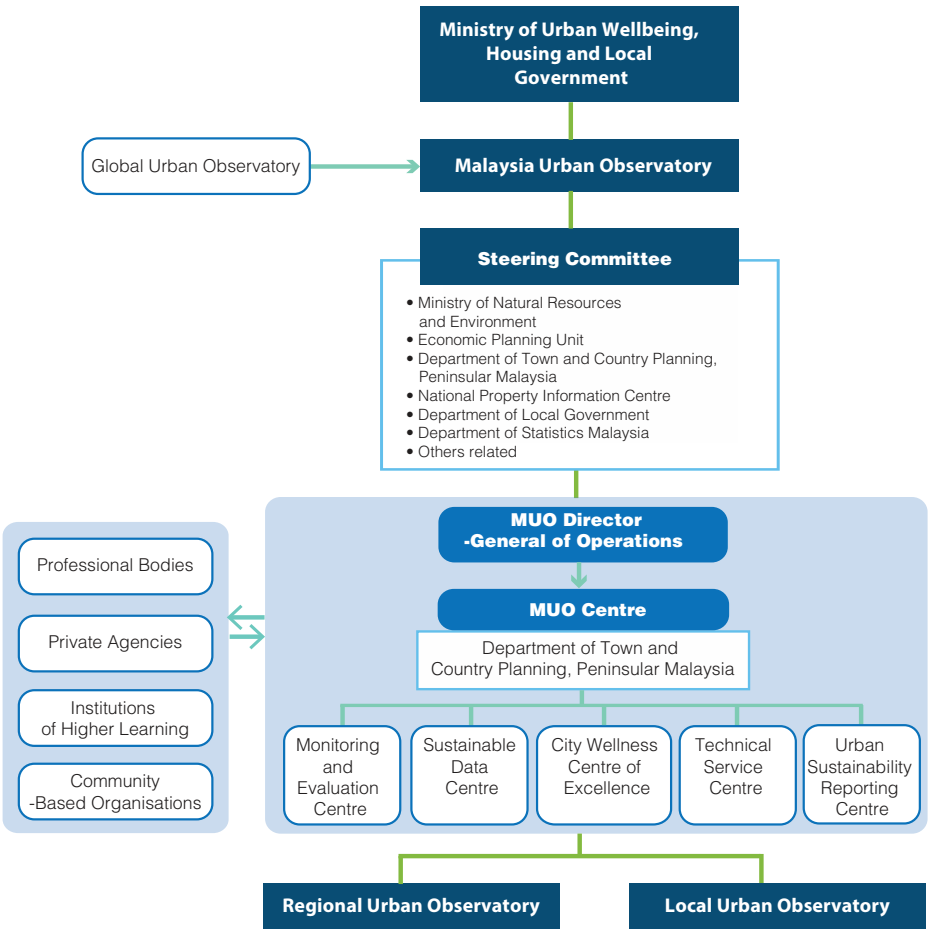
Cooperation with the National Key Data Providers

National Statistics Department, Economic Planning Unit, State DTCP, State Economic Planning Unit (EPU), local universities and colleges, Local Planning Authorities and technical agencies.

Cooperation with Private Sectors, Public Sectors and Non-Governmental Organisations

Professional bodies such as the Malaysian Institute of Planners, public bodies and non-governmental organisations, organizationpublic and private sectors, relevant data centres in Malaysia, and

Figure 7.11 MUO Organisational Structure



The MUO shall be established under the Ministry of Urban Wellbeing, Housing and Local Government (MUHLG). The Steering Committee, established under the ministry's supervision of the ministry, shall comprise of organisations and agencies involved in data acquisition and urban development.

The MUO which shall operate in the PlanMalaysia, Peninsular Malaysia shall be headed by an appointed Director General of Operations and spearheaded by experts in their respective issues and fields.

In order to ensure the continuity of operations, collaboration among professional bodies, private agencies, higher learning institutions and community-based organizations is vital towards obtaining and dissemination of more ecomprehensive

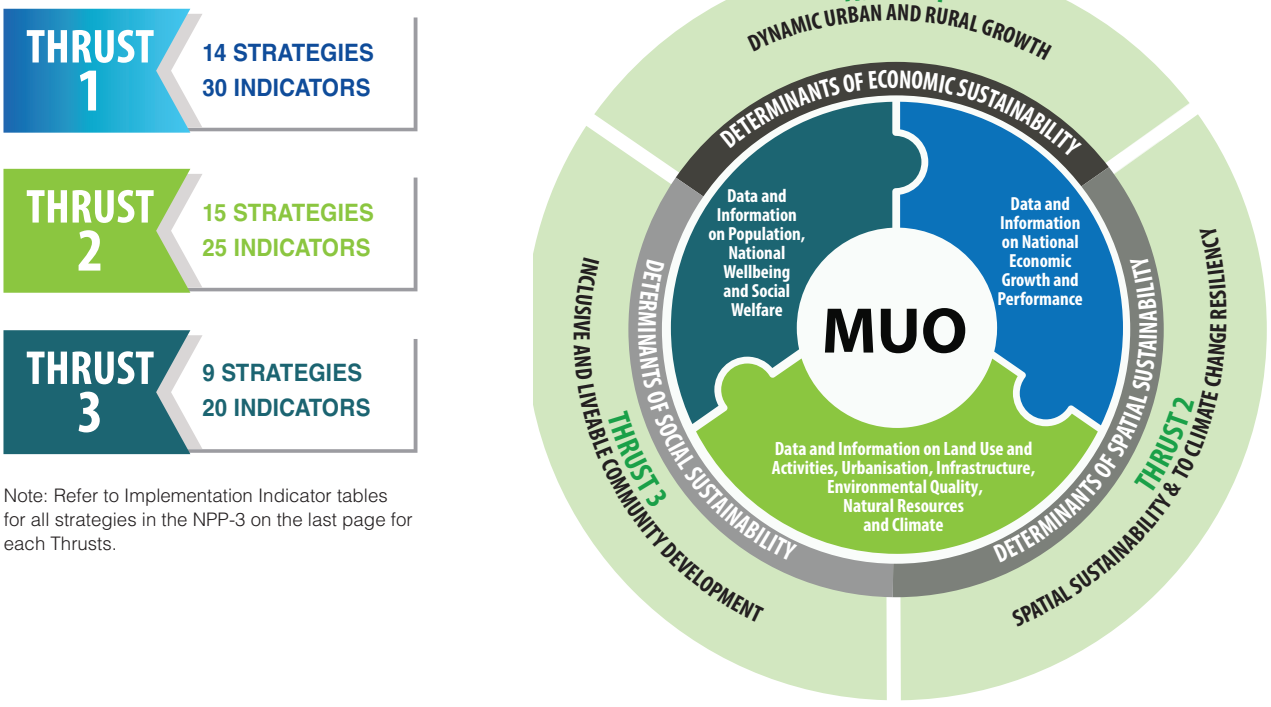
MALAYSIA URBAN OBSERVATORY AND IMPLEMENTATION OF NPP-3

The MUO plays an important role in the implementation of the NPP-3, with 75 indicators identified to achieve their targets in line with the goal of becoming a Resilient and Liveable Nation by year 2040. The main task of the MUO is to ensure that the collected data and information fulfils the needs of the NPP-3.

Coordination efforts shall be conducted with agencies that are also responsible for the implementation of the NPP-3 in order to facilitate the analysis and assessment. This is to avoid a recurrence of the issues affecting the NPP-2, where most of the indicators identified could not be assessed due to the lack of appropriate and accurate information. The presence of the MUO as well as local and regional observatories would ensure the data and information collected are more orderly and uniform.

The MUO needs to ensure that data and information required by the NPP-3 will be coordinated to fulfil needs of indicator requirement that measure the well-being and sustainability of the city and country. Measurements for the Urban Sustainability Indicators (MURNInet), Malaysian Quality of Life Index and indicators of Sustainable Development Goals by UN-Habitat are among the few indicators that require and use the same data and information. The indicators identified for each thrust in the NPP-3 require a wide range of data encompassing social, economic and spatial aspects that will be stored in the MUO database.

Figure 7.12 Indicator Correlation within NPP-3 Thrust and the MUO



Note: Refer to Implementation Indicator tables for all strategies in the NPP-3 on the last page for each Thrusts.

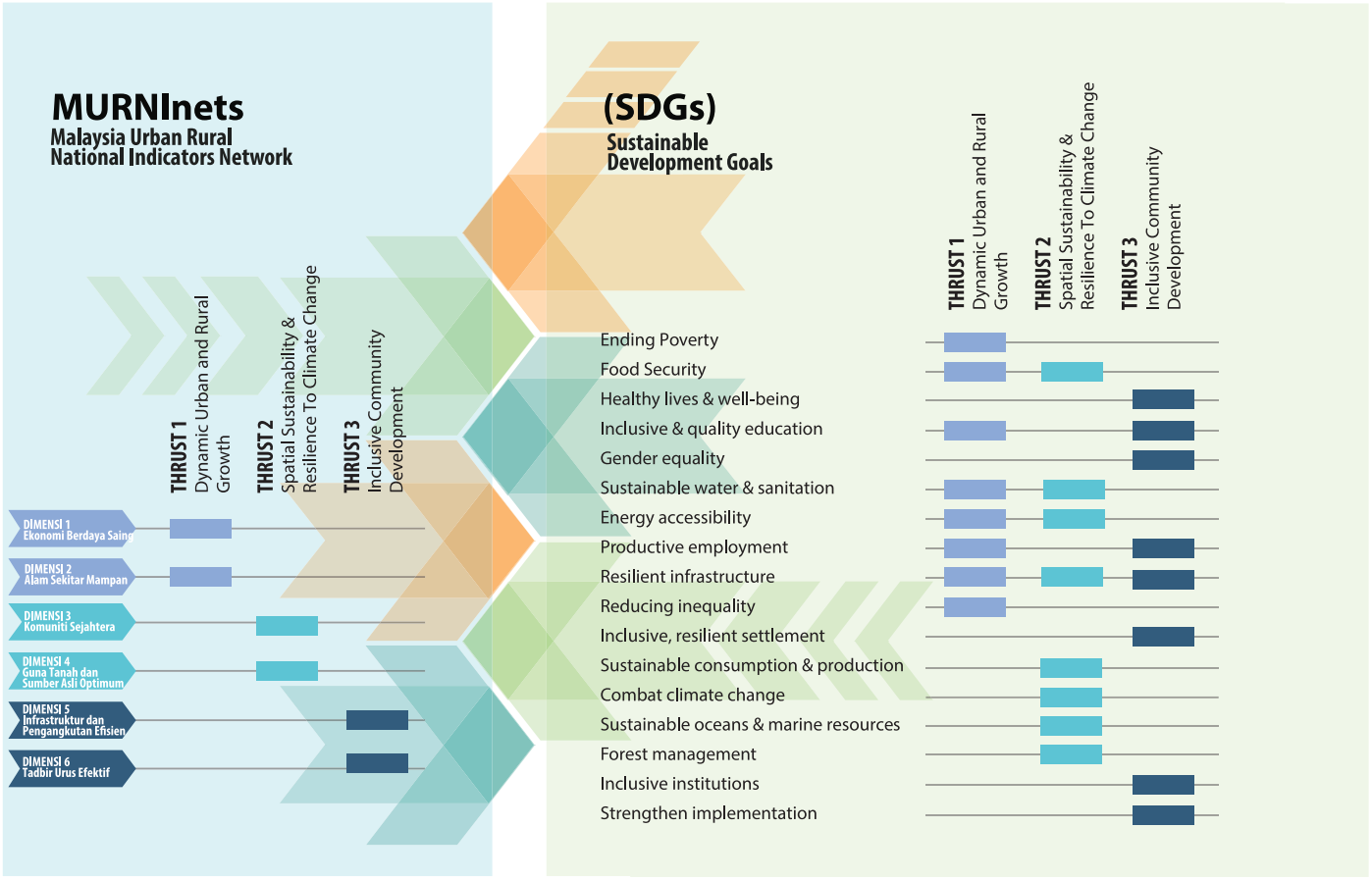
COORDINATION OF INDICATORS

Effective coordination of indicators through comprehensive information system and systematic data management is required. This is to ensure that data and information collected by the MUO are accurate, uniform and will be used at the national level, as well as the Local Urban Observatory and the Regional Urban Observatory at local levels. Main thrusts in the NPP-3 have taken into account dimensions identified in MURNInets and coordinate with SDGs to ease the achievement reporting process of Malaysia at a global level.

MURNinets is the approach used to measure and evaluate the sustainability of cities area its surrounding areas in Malaysia, by using a set of indicators under six (6) dimensions and 21 themes. The MURNInets approach is designed to facilitate the Local Authorities, towards creating sustainable development and to ensure the provision of better quality of housing and services.

SDGs on the other hand is a long term development agenda until year 2030 that identifies 17 goals and 169 targets realizing basic human rights, protecting global needs and strengthening universal peace and justice. This integrated approach involves action of all countries and stakeholders in balancing the three (3) dimensions of sustainable development in the economic, social and environmental aspects. The indicators measuring achievement of the MURNInets, NPP-3, LUO and RUO levels serve as inputs to the national reporting at international levels specifically for SDGs reporting.

Figure 7.13: Relationship Between NPP-3 Thrusts and MURNInet Dimensions with SDGs



P3: ESTABLISHMENT OF NATIONAL CLIMATE CHANGE TRUST FUND

The National Climate Change Trust Fund is a trust fund that seeks to develop a range of initiatives and programmes to assist in strengthening the fiscal system of the country to finance efforts to address climate change. The establishment of this fund shall strengthen institutions in Malaysia and enhance the effectiveness of their sustainable development activites.

The funding is proposed from various sources including international and domestic sources as well as funding from private and public sectors. The fund shall also support the policies related to climate change and efforts to shift to a low-carbon economy in Malaysia.

This special fund shall be used to finance mitigation and adaptation efforts on climate change impacts including innovative efforts to solve issues related to climate change in the aspects of protecting areas under threats of natural disaster raising national carbon stock and preventing threats to communities. The NPP-3 has identified several areas in need of this special fund, and a detailed study should be conducted on the establishment and maintenance of this fund.

The fund could support rehabilitation projects, boost efforts to assess and monitor environmental quality, promote environmental education especially for the public, and finance the acquisition of land under threat. It could also finance resource recovery and waste management (including enforcement) projects, environmental rehabilitation programmes by local governments and community groups, and restoration of rivers, forests and wetlands, among others.

Figure 7.14 Proposed Structure of Trust Fund

National Climate Change Trust Fund

Main Objectives of Trust Fund

- Achieve goal of Malaysia to reduce its carbon emissions and enhance resilience to climate change;
- Improve the effectiveness of efforts by leaders and management to address climate change;
- Strengthen the commitment to reducing carbon emissions of Malaysia to reduce; and
- Support the shift towards a low-carbon economy.

Functions of Trust Fund

- Finance mitigation efforts to reduce carbon emissions;
- Finance adaptation efforts to climate change impacts/effects; and
- Finance innovative efforts to address climate change

Areas in Need of Trust Fund

- Protection of National Ecological Assets
- Protection of National Granary Areas
- National Water Resources Management
- National Natural Resources Management
- Risk Areas Management
- Coastal Zone Management
- Infrastructure and Technology to Address Climate Change Issues

Trust Fund Owner

- Government of Malaysia

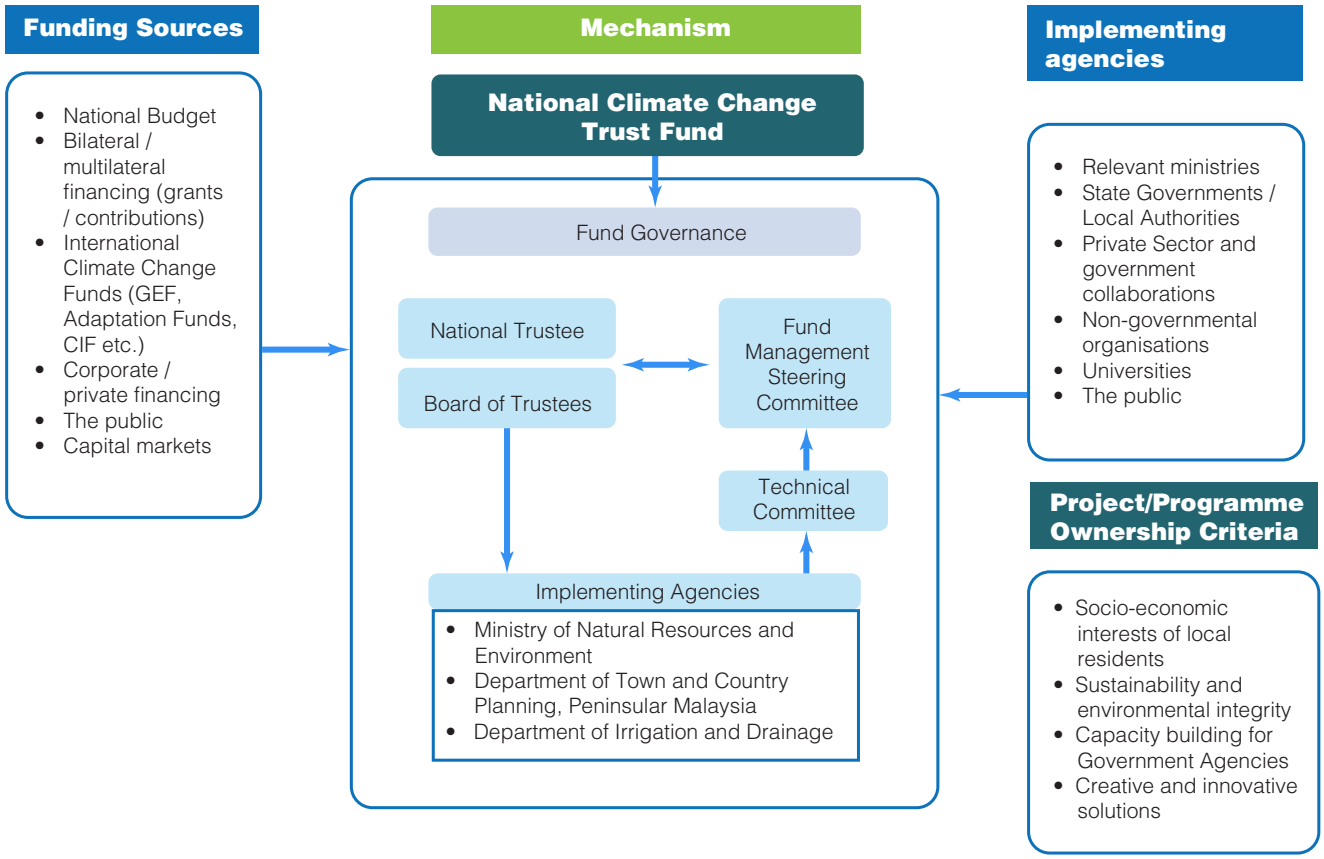
Trust Fund Administrator

- Establishment of National Trustee

Fund Management

- Ministry of Finance Malaysia

Figure 7.15 Structure of Total Deposits (Trust) National Climate Change



Box 7.3 Climate Change Effects

1. **Granary Areas**
   Studies have shown that out of 40 planting seasons at the MUDA Agriculture Development Authority (MADA) area, 10 planting seasons will experence water shortage due to drought.

2. **Water Supply**
   A 2009 study by the National Hydraulic Reserach Institute of Malaysia (NAHRIM) projects that in the existing facilities (Klang Gates Dam, Batu Dam, Sungai Selangor Dam, Tinggi Dam and downstream catchment from Sg. Selangor Dam up to the Batang Berjuntai water intake, excluding the Pahang-Selangor water transfer project), approximately 28 months (almost 12%) of the 240-month survey period will face water supply disruptions.

3. **Mangrove Forests**
   The mangrove forests along the coastline are exposed to sea level rise due to the increase in temperature and changes in rainfall patterns.

4. **Mountain Forest Areas**
   The increase in the average local temperature between 1 to 2 ° C is equivalent to an upward shift of climatic conditions of approximately 150m-300m in a montane forest environment.

Source:
1. *Report on the Second National Communication to the Framework Convention on Climate Change (UNFCCC), 2011*
2. *Ministry of Natural Resources and Environment, 2011*

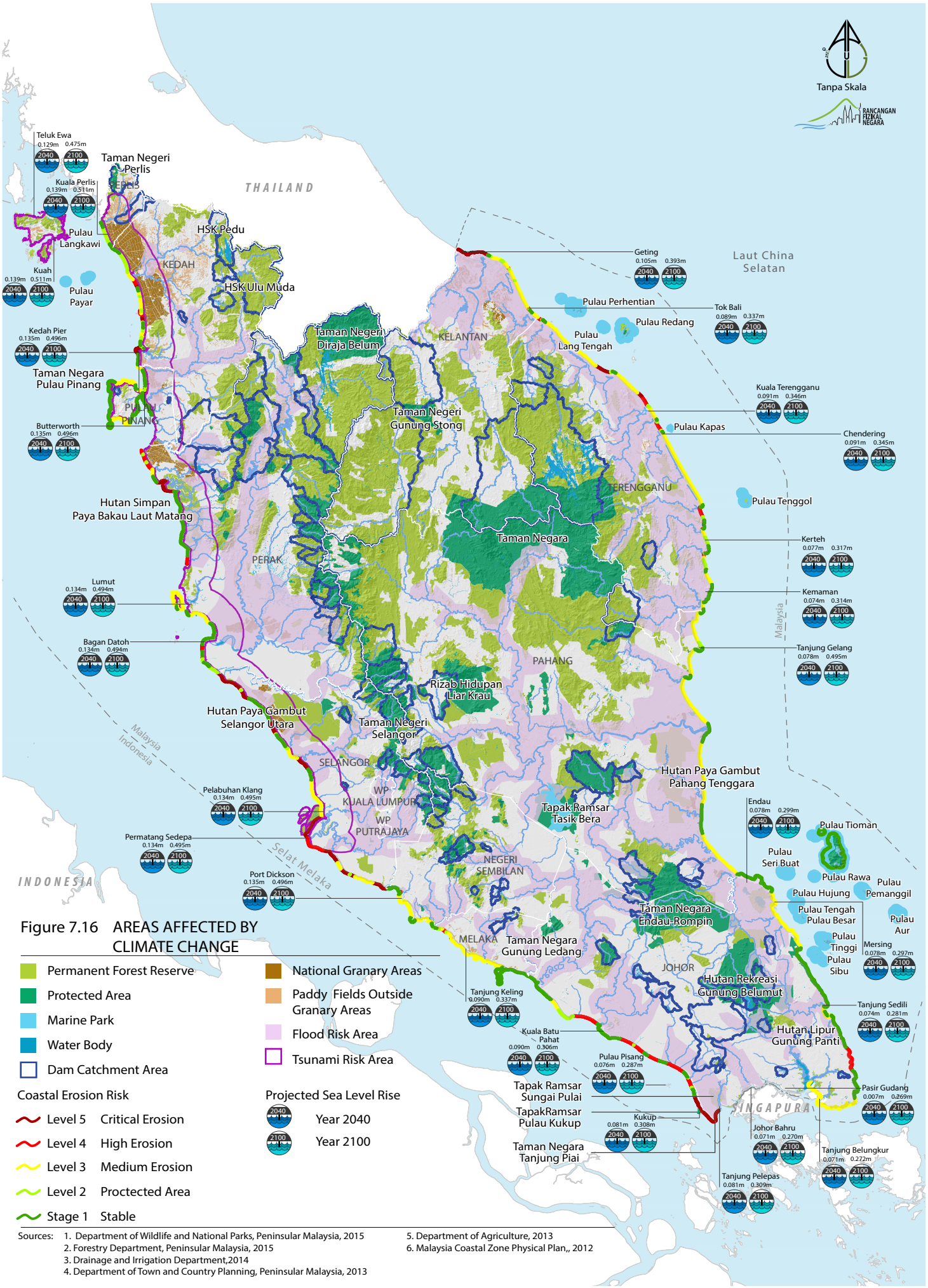


Figure 7.16 AREAS AFFECTED BY CLIMATE CHANGE

- Permanent Forest Reserve
- Protected Area
- Marine Park
- Water Body
- Dam Catchment Area
- National Granary Areas
- Paddy Fields Outside Granary Areas
- Flood Risk Area
- Tsunami Risk Area

Coastal Erosion Risk

- Level 5 Critical Erosion
- Level 4 High Erosion
- Level 3 Medium Erosion
- Level 2 Proctected Area
- Stage 1 Stable

Projected Sea Level Rise

- 2040 Year 2040
- 2100 Year 2100

Sources:
1. Department of Wildlife and National Parks, Peninsular Malaysia, 2015
2. Forestry Department, Peninsular Malaysia, 2015
3. Drainage and Irrigation Department,2014
4. Department of Town and Country Planning, Peninsular Malaysia, 2013
5. Department of Agriculture, 2013
6. Malaysia Coastal Zone Physical Plan,, 2012

P4: MECHANISM FOR SUSTAINABLE LAND DEVELOPMENT AND MANAGEMENT

Land plays a significant and critical role in the economic, social, cultural and environmental development in Malaysia. The control of land and its natural resources have frequently been a source of conflict that is related to the issue of power and the rights to it. Conversion of land use is also becoming more aggressive due to the development pressure and rapid progress within various sectors. Large-scale land development; whether for construction, agriculture, logging or mining, also threatens environmental quality.

The NPP-3 has given major emphasis on sustainable management of land and natural resources to address climate change issues. This is stated in Thrust 2 of the NPP-3, with sustainable urban land use planning and environmental sustainability, including the ecosystem and biodiversity maintenance, being the main pillars of sustainable and viable spatial planning.

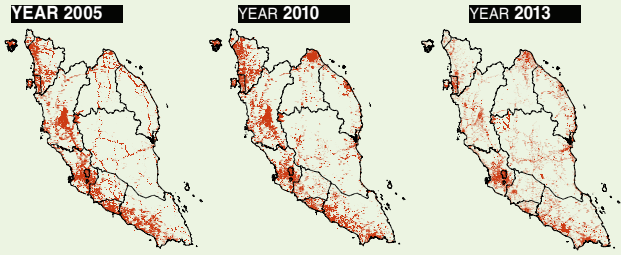
State Authorities and Local Planning Authorities play important roles in land use planning as well as land management and development in Malaysia. Among the key areas that require special mechanisms to regulate land development so as to make it more sustainable are managing urban growth and land use changes outside growth boundaries.

The NPP-3 proposes two (2) mechanisms: Transfer of Development Rights, and Infrastructure Levy. These mechanisms are expected to be able ensure compliance with the Development Control Plan established by the State Authority in the State Structure Plan and by the Local Authority in the Local Plan. In addition to providing benefits to land owners outside the planned growth areas, these mechanisms also assist in determining the of urban growth boundaries, preservation of food resource and urban conservation areas.

Box 7.4 Need for Land Use Management Requirements

Sustainable land use management is important to ensure the trend of activity land use changes due to development pressure and rapid urbanisation rate are controlled and in accordance to the needs of growth.

1. Built-Up Area Changes in Peninsular Malaysia 2000-2013



Built-up percentage **3.32%**

Built-up percentage **5.76%**

Built-up percentage **8.91%**

Built-Up Areas

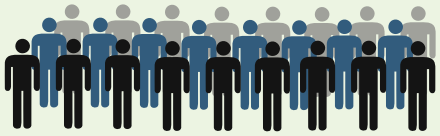
2000 400,610 hectares → **2013** 1,057,460 hectares

Change in Built-up area **+164%**

2. Population Increase

YEAR **2005**
Total population in Peninsular Malaysia
18.52 million people

YEAR **2010**
Total population in Peninsular Malaysia
22.57 million people



YEAR **2040**
Total population in Peninsular Malaysia (according to the NPP-3 projections)
36.70 million people

MECHANISM 1: Transfer of Development Rights

The Transfer of Development Rights (TDR) mechanism is suitable for rapidly growing urban areas as well as areas that have to be protected from development activities. This includes controlling natural resource areas and their environment, areas of heritage value, conservation areas, parks, green spaces and agriculturally productive areas such as the granary areas of the country.

The TDR mechanism is in line with the NPP 2 National Rural Physical Planning Policy and the emphasis of NPP-3 on more sustainable land planning and management. This includes encouraging development in existing urban areas, using efficient urban services and infrastructure, promoting productive agricultural activities and preserving the rural landscape.

Implementation of this mechanism comes under the jurisdiction of the Local Planning Authority and it can be adjusted according to the profile and issues faced by an area. The TDR process can be implemented through existing development planning systems i.e. the Local Plan and Special Area Plan. Planning control mechanisms through zoning and development intensity can be aligned with the programme objectives of the TDR.

Mechanism 1: Transfer of Development Rights

The TDR mechanism aims to preserve natural resource areas, agriculturally productive areas, heritage areas, environmentally sensitive areas or any area that is valuable to a town or region. It also helps to regulate urban development.

Proposed Transfer of Development Rights Programme

The TDR mechanism provides an effective and flexible land regulation mechanism for Local Authorities. It can be used to protect natural or man-made properties for the public interest, as the TDR scheme distinguishes land ownership from the right to develop the land.

Mechanism is aimed to control land use zoning as well as development activity and intensity. It also assists in the implementation of policies on conservation and preservation of heritage areas, environmental conservation areas and productive agricultural land without burdening land owners or affecting the planning of Local Authorities planning. The TDR programme allows the land owner to sell the development rights to his land or other land owners or developers for use on a property located in a more suitable or less sensitive area.

Figure 7.17 Transfer of Development Rights Mechanism Determinants

State Structure Plan	State Authority sets policies at state level for application of TDR mechanism in the relevant areas.
Local Plan	• Local Authorities should identify the sending and receiving areas in the TDR mechanism through the Local Plan. • Establish appropriate planning control through classification of land use and development intensity.
Special Area Plan / Special Action Plan	Provides detailed planning and design as well as management mechanism for areas / zones in the form of Special Area Plan or Special Action Plan.

Example of potential areas that uses the TDR mechanism

George Town Heritage Area, Penang

Kampung Baru, Kuala Lumpur

MAIN COMPONENTS FOR TRANSFER OF DEVELOPMENT RIGHTS

1 Sending Areas

Areas where development should be controlled wether it is either reduced or new development is not permitted. The sending area must be a natural area , recreational or agricultural area, open land, or an area of historical, cultural, aesthetic or special economic value that needs special protection.

2 Receiving Areas

Areas with the potential to receive transfer of development rights from the sending area. However, the receiving area must be located in an area with a market demand for development and can accommodate an increase in development intensity due to the TDR without affecting the environment, has adequate infrastructure and urban services, as well as contributes to the local quality of life and built environment. Suitable locations are existing city centre areas with access to public transport, an urban redevelopment area, or a new township.

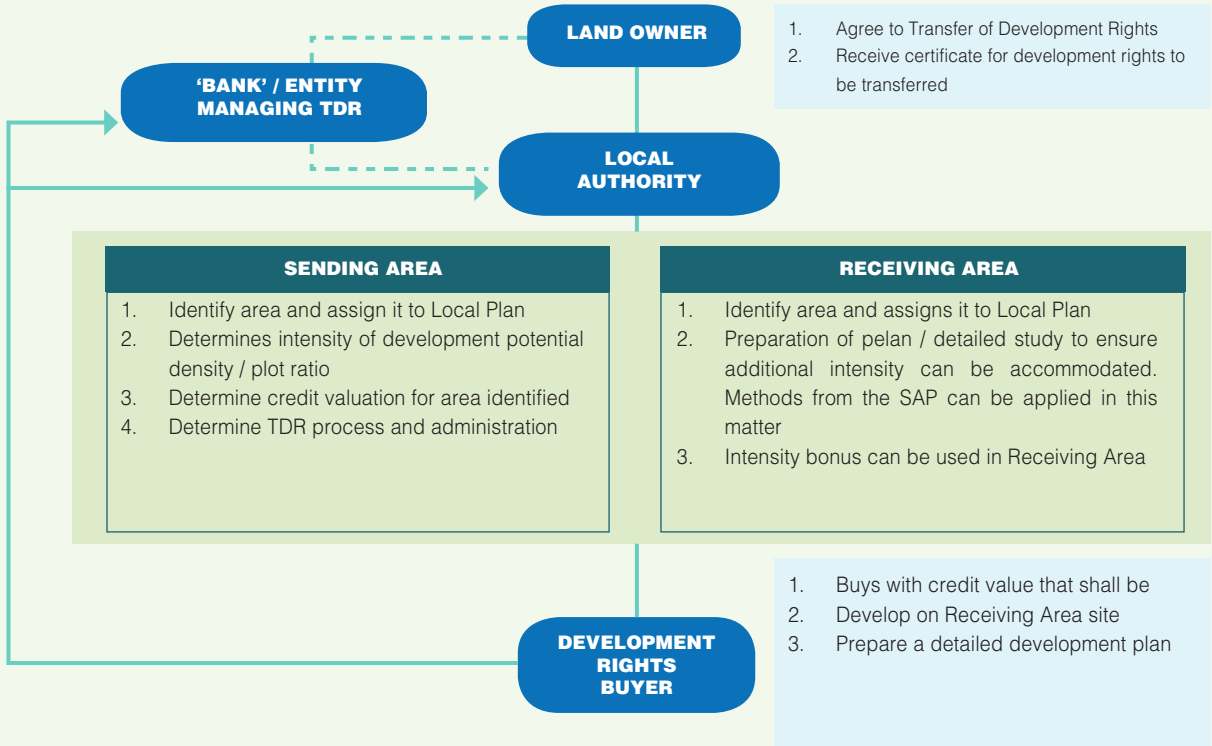
3 Development Rights

Development rights are the rights that are tied to the specific land, including the type of land as described in the land title, or development permitted according to land use zoning, or development activity and intensity as permitted in the Local Plan. With the TDR, the development rights can be transferred, and a valuation needs to be set for development rights in terms of units per acre, in square feet of floor area, or in unit height of the structure. The valuation is a formula that needs to be set determine value of development rights. A simple way to determine the valuation set by land owners of sending areas is through identifying the limit of development intensity if the land is developed.

4 Zoning and Intensity

Zoning and intensity should be determined for the receiving area. Additional intensity in the form of a 'bonus' is for additional TDR at sending areas.

Box 7.5 Process of Transfer of Development Rights

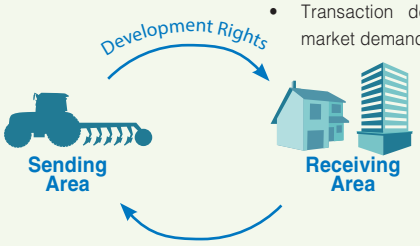


Box 7.6 Forms of Transfer of Development Rights

The form of the TDR categorized varied according to the challenges faced. The example below is a TDR framework in New York that has set a Density Transfer Charge whereby a TDR land development 'bank' is identified to enable the successful implementation of this process. The bank keeps records of development rights, manages sending and receiving transactions, and sometimes 'buys' development rights to be sold at a certain time.

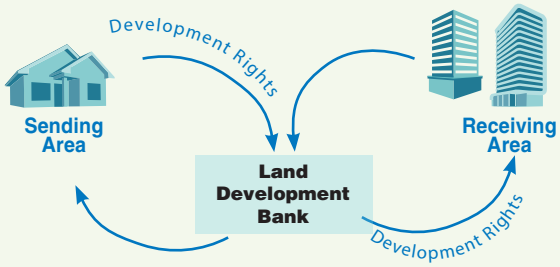
Traditional TDR

- A model that is administered / managed by the community in which the credi seller / land owner can conduct direct negotations ; and
- Transaction depends on current market demand.



Density Transfer Charges

- A model that is administered / managed by a bank credit in which this third party administers matters regarding the buying and selling of credit / development rights



Box 7.7 Overseas Examples of Cities Applying Transfer of Development Rights

	Bandar Chesterfield, New Jersey, AS	Sydney, Australia
Implementation Year	1998	1996
Area	14,000 acres	
Purpose	Reducing development pressure for areas with heritage buildings	
Development Plan	*Masterplan of Chesterfield Township* has identified their sending and receiving areas	*Sydney Development Control Plan - Heritage Floor Space (HFS) Scheme*
Sending Area	• Farm land > 10 acres • Sending Area : 7,472 acres • Basic Density Unit : 1 housing unit / 10 acres	• Heritage buildings at City Edge Zone and The City Centre
Receiving Area	• Old York Village • Land area : 560 acres • Number of settlements: 1,200 • Development is allowed only through the Transfer of Development Rights Programme	• City within the Sydney City Centre Zone

APPLICATION OF TRANSFER OF DEVELOPMENT RIGHTS IN SENDING AREAS

1 Granary Areas

Granary areas are in a large irrigation scheme (covering over 218,000 hectares) and recognised by the Government in the National Agricultural Policy as the main area for rice production. There are 12 granary areas in Malaysia, namely:

- Penang - IADA Penang and IADA Kerian-Sungai Manik;
- Kedah and Perlis - Muda Granary Area (MADA);
- Perak - IADA Seberang Perak;
- Selangor - IADA Northwest Selangor;
- Kelantan - Kemubu (KADA) and IADA Kemasin-Semarak;
- Terengganu - IADA Terengganu (KETARA);
- Pahang - IADA Pekan and IADA Rompin;
- Sarawak - IADA Batang Lupar; and
- Sabah - IADA Kota Belud.

2 Heritage Site Conservation Zones

- World Heritage Site Conservation Zones, including Melaka and George Town as well as Lenggong Valley Archaeological Site; and
- Buildings or heritage sites identified in the National Physical Plan, State Structure Plan or Local Plan, or gazetted as a heritage site building under the National Heritage Act 2005 (Act 645)

3 Rice Growing Areas Outside Granary Areas

This area covers 204,578 hectares, or 50% of the national granary area. There are 924 rice irrigation schemes at area outside the granary area. These include mini granary areas, Department of Irrigation and Drainage schemes and areas irrigated by rain water. These rice growing areas outside of granary areas are found in all states with areas between 20 hectares to 200 hectares.

4 Environmentally Sensitive Areas (ESAs)

ESAs identified in the National Physical Plan, State Structure Plan or Local Plan (Refer to Thrust 2).

Rank 1

- Existing and proposed protected areas;
- Threatened habitats outside of protected areas;
- Existing and proposed dams; and
- Areas above 1,000m contour.

Rank 2

- All forests and weltands otuside of protected areas;
- 500m buffer zones around ESAs Rank 1; and
- Areas between 300m - 1000m contour.

Rank 3

- 500m buffer zones around ESAs Rank 2;
- Catchment of water intake and groundwater recharge zones;
- Areas between 150m - 300m contour;
- Islands and marine parks; and
- Coastal areas

5 Controlled Development Areas Identified by Local Authorities

Any area identified by local authorities as controlled development areas such as urban parks, gardens, low plot ratio / low density areas, urban growth boundaries, economically important agricultural lands, traditional villages and any area that exceeds the carrying capacity.

APPLICATION OF TRANSFER OF DEVELOPMENT RIGHTS IN RECEIVING AREAS

Receiving areas in a town or district should be identified and allocated to one or more sites. Generally, a receiving area must have market potential and can be developed to a higher intensity. It also must have adequate infrastructure and urban services that can accommodate high-intensity development.

However, the identification of receiving areas is also be used as an incentive to develop economically deprived areas in existing urban areas by allowing redevelopment that can benefit from the increased development intensity resulting from the transfer of development rights.

Potential receiving areas include :

1 Transit Areas

These areas are within a 250-metre radius from a rail station or transport network infrastructure. Development in these areas should be of high-intensity to allow users to use and support the transit system.

2 Infill Sites in City Centres

Infill sites refer to vacant land or plots or infringements and redevelopment of existing buildings within city centres.

3 Brownfield Sites in City Centres

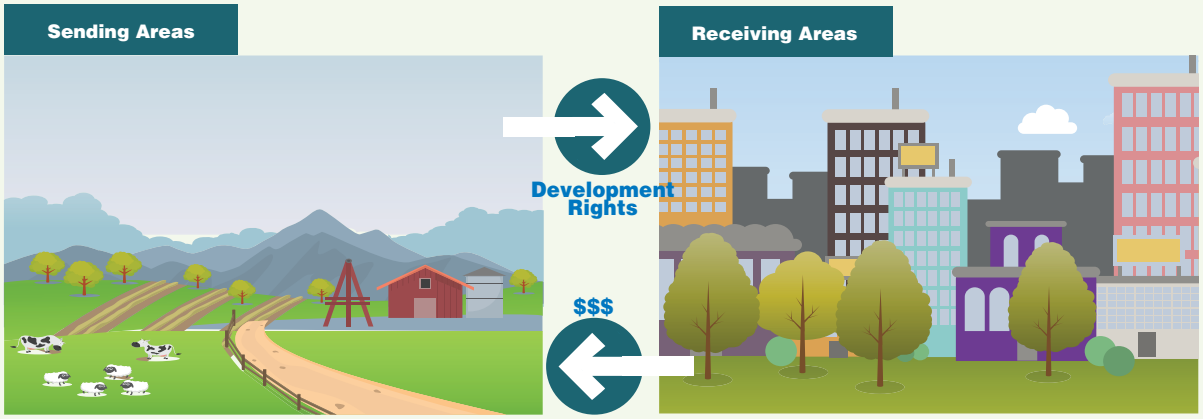
Brownfield sites refer to areas that have been developed but are left vacant or neglected, have dilapidated structures or are incomplete developments that are abandoned. These areas may or may not be contaminated. Brownfield areas may be on government or private land.

4 Central Business District Zone

These are the main business centres in a city with an emphasis on economic aspects and high-intensity development.

Box 7.8 Mechanism for Transfer of Development Rights

The transferred floor area could be used at building sites within the Receiving Areas to increase the maximum height of floor area. However, Receiving Areas should ne in accordance to Zoning Plans of existing areas including the height limitations, building setbacks and other conditions stipulated.



Land at rural areas could be preserved and land owners could still realize the value for development

Land in cities targeted for development could be implemented through creative transfer of rights.

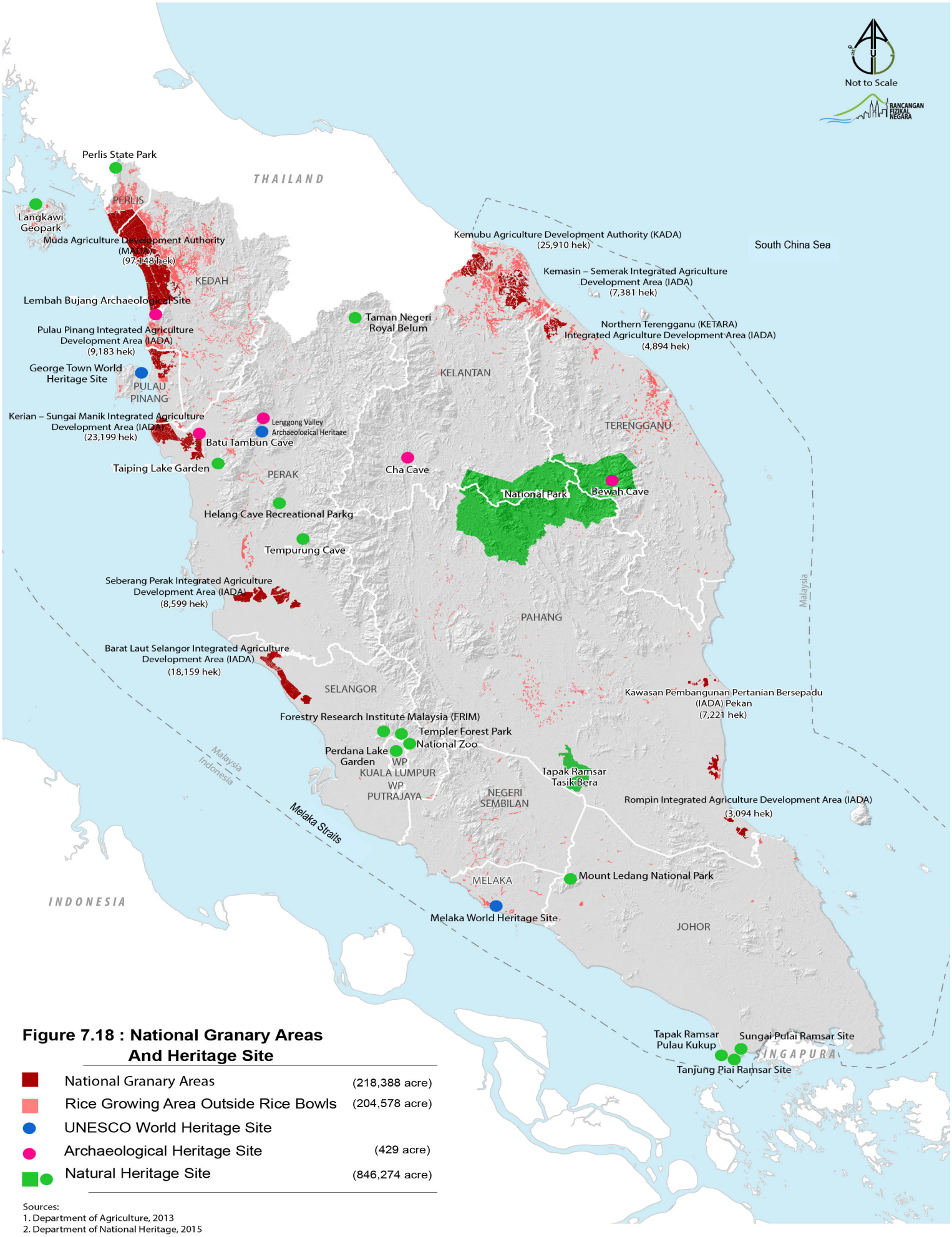


Figure 7.18 : National Granary Areas And Heritage Site

	National Granary Areas	(218,388 acre)
	Rice Growing Area Outside Rice Bowls	(204,578 acre)
	UNESCO World Heritage Site	
	Archaeological Heritage Site	(429 acre)
	Natural Heritage Site	(846,274 acre)

Sources:
1. Department of Agriculture, 2013
2. Department of National Heritage, 2015

Mechanism 2: Infrastructure Levy

The infrastructure levy is a mechanism introducing a charge to developers as a source to finance the development of new and more comprehensive infrastructure in new development areas. The infrastructure levy may be applied to areas outside development promotion zones or to areas outside zones designated as urban growth boundaries that currently have minimal infrastructure. However, this infrastructure levy can only be imposed after obtaining planning permission to carry out development and urban growth boundaries have been established development plan processes at the State Structural Plan and Local Plan Levels.

Mechanism 2: Infrastructure Levy

The infrastructure levy mechanism is a charge imposed on new developments happening outside of urban growth boundaries.

MAIN COMPONENTS

- Determination of the physical limits of urban growth boundaries or urban areas in Local Plans;
- Establishment of District Infrastructure Master Plan / Local Authority Administrative Area pursuant to the Local Plan / Local Authority Administrative Area;
- Determination of an infrastructure levy by each infrastructure service provider together with the Local Authority to determine levies/charges for areas where development is not recommended;
- The levy is limited to the main and basic infrastructure that directly benefits consumers; and
- Determination of the levy is justified by the services to be provided being more than what the developer provides.

BENEFITS

- Promotes development in designated areas in the development plan, and ensures that the physical limits of urban growth boundaries are intact until the development plan is revised;
- Promotes development on vacant lands in existing urban centres, at areas identified as development promotion zones and regeneration zones;
- Reduces urban sprawl outside of development promotion zones;
- Reduces encroachment / conversion of productive agricultural land into a development area; and
- Improves level of urban services and infrastructure in existing urban areas and development promotion zones.

ESTABLISHMENT OF INFRASTRUCTURE LEVY

The Local Authority may take the following approach for cost allocation and calculation of charges:

- Determine catchment areas and demand;
- Estimate demand;
- Identify infrastructure adopted to meet the estimated demand; and
- Split the new total cost and existing infrastructure demand to identify appropriate infrastructure.

1. Identify type of infrastructure that could be charged

Types of infrastructure that are subject to the levy shall be identified by the Local Authority in the Infrastructure Master Plan.

2. Determine the areas to be charged

Calculation of the infrastrucutre levy is determined by the layout and complexity of the infrastructure a network.The infrastructure levy charge consists of several areas defined by each infrastructure network on the premises.

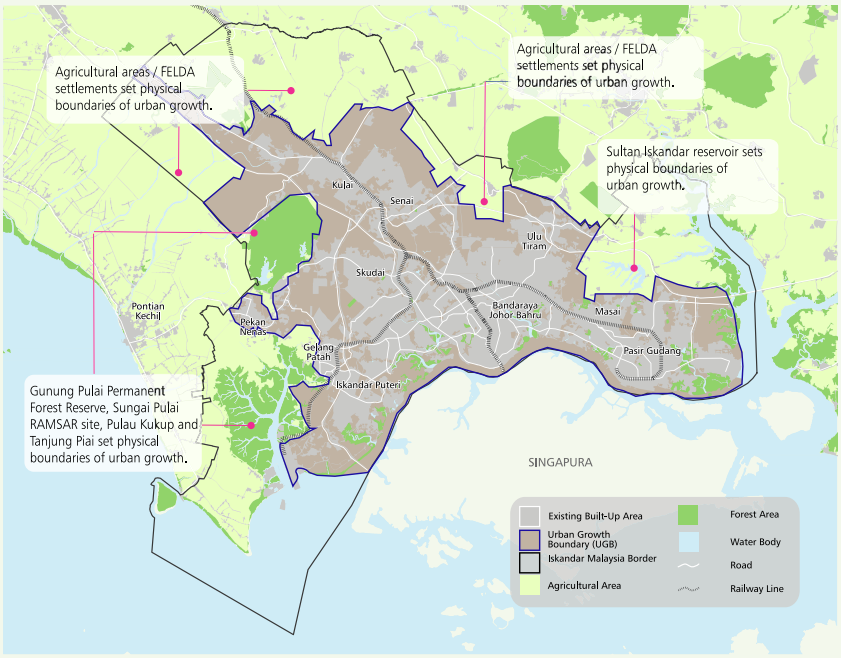
3. Charge Details

The infrastructure levy schedule produced by infrastructure service providers must show the details and network components charged. These details include:

- Complexity of infrastructure and value;
- Flexibility in delivering the level of service required;
- Scale and location of development; and
- Transparency and audit trail.

Box 7.9 Example of Iskandar Malaysia Urban Growth Boundary

The Iskandar Malaysia Comprehensive Development Pelan has identified the urban growth boundary for the Iskandar Malaysia area. This urban growth boundary takes into account the important areas for biodiversity, environmentally preserved areas, agricultural areas, population growth rate and regional economic targets that have been established



Sources:
1) Comprehensive Development Plan II, Iskandar Malaysia, 2014-2025
2) National Physical Plan-3, 2015