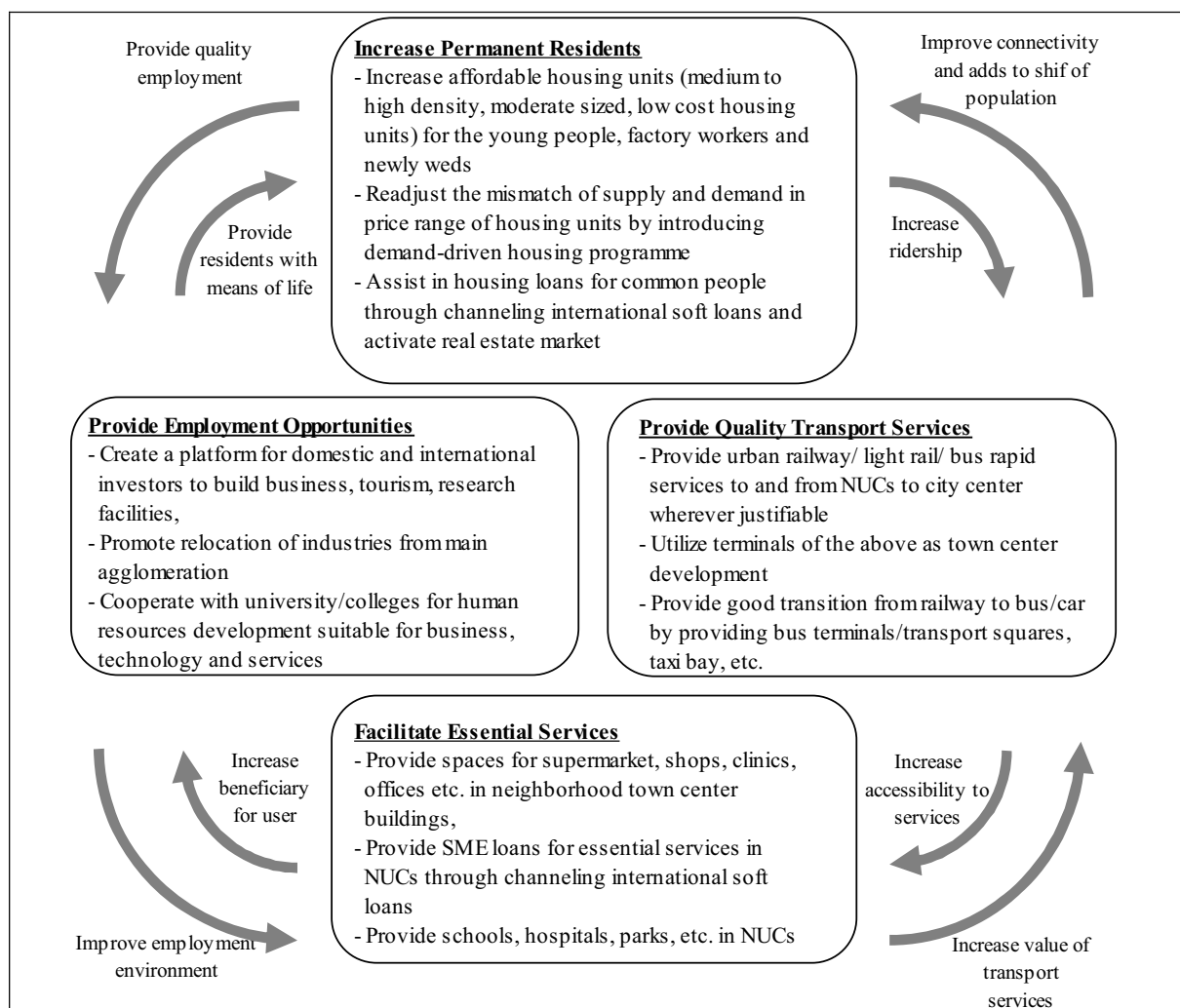


Source: JICA Study Team

Figure 6.6 Distribution of Tourism Promotion Areas

6.4 Connecting in Cairo

(1) “*Vitalizing the new urban communities*”: Based on the people’s perceptions and their current intentions for moving to NUCs, four measures have been formulated to vitalize the NUCs. These measures focus on providing better accesses to: (i) affordable housing by provision of low cost housing, housing loan schemes, and public assistance; (ii) public transportation; (iii) job opportunities; and (iv) services and utilities. These are illustrated in Figure 6.7.



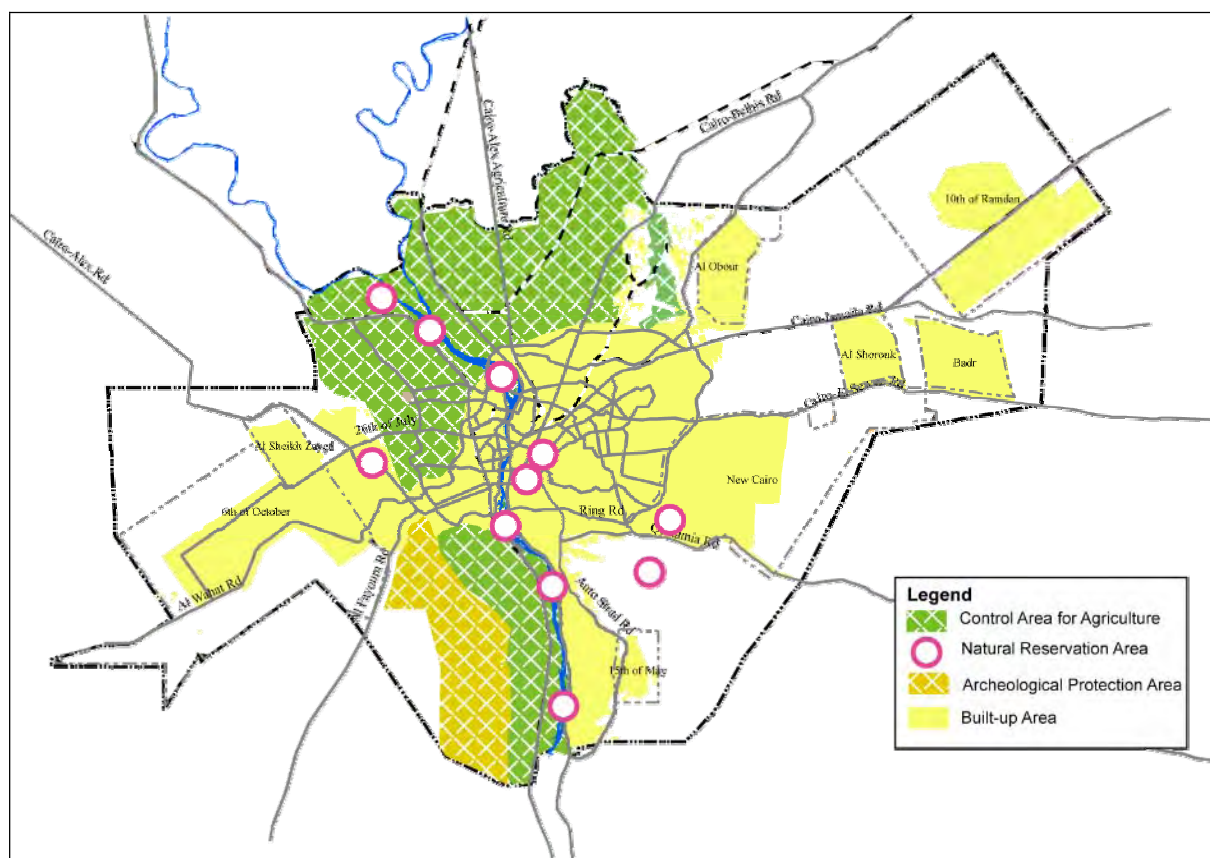
Source: JICA Study Team

Figure 6.7 Measures to Vitalize NUCs

(2) *“Promoting transport-oriented urban development areas”*: Business, commercial, and industrial areas will be interlinked by public transportation systems to encourage reorganization of the urban form within the Study Area. In addition, the NUCs will be incorporated in this transport-oriented urban development program to augment the other measures for vitalizing them. Three transport routes were selected as the prioritized development corridor: (i) a western corridor to interlink the main agglomeration and the western urban cluster of 6th of October and Al Sheikh Zayed NUCs; (ii) an eastern corridor to interlink the main agglomeration and the eastern urban cluster of 10th of Ramadan, Badr, and Al Shorouk NUCs; and (iii) an intercity corridor to link the main agglomeration and New Cairo NUC.

6.5 Managing Natural Environment (Conservation of Natural Resources)

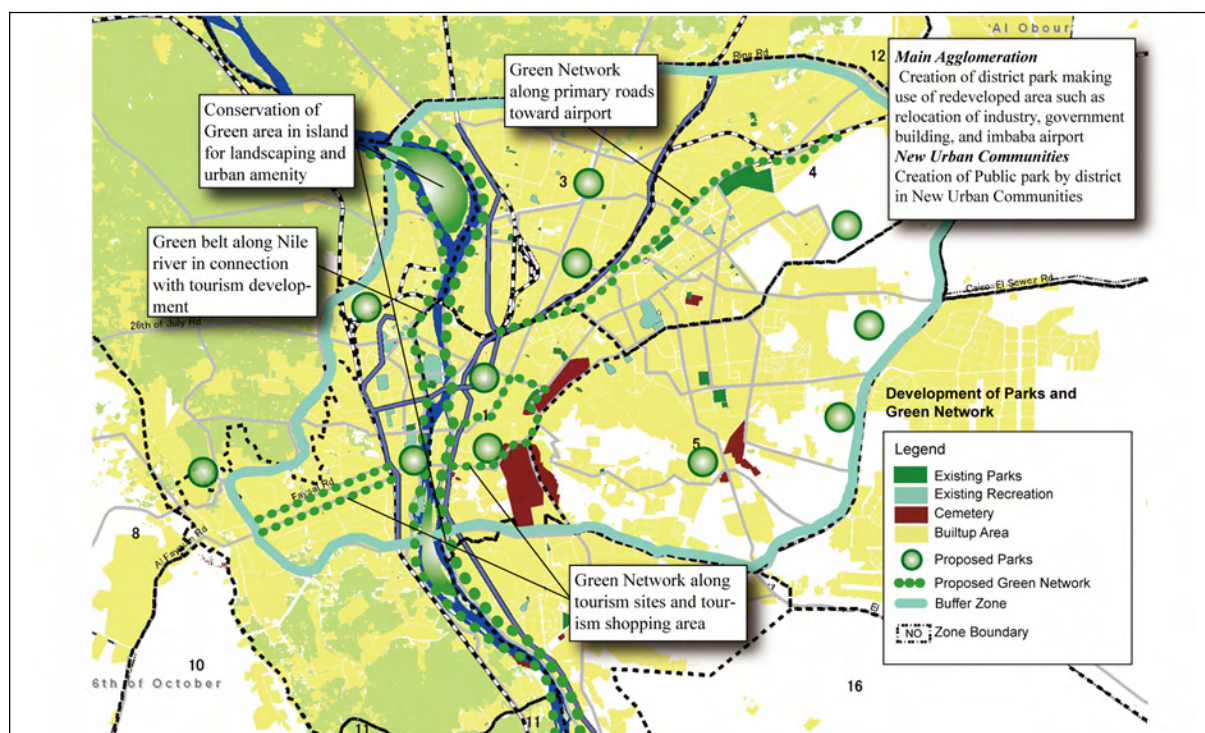
(1) *“Conserving agricultural lands and natural resources”*: Valuable agricultural and green lands are located outside the main agglomeration, and these shall be preserved. In addition, there will be preservation areas for natural and cultural assets. Figure 6.8 depicts the preservation areas in the Study Area in 2027.



Source: JICA Study Team

Figure 6.8 Proposed Environmental Conservation Areas in the Study Area in 2027

(2) *“Promoting open and green area network”*: All possible resources must be utilized and networked to enhance the attractiveness of the landscape and restore harmony with the environment. In NUCs, green areas will be provided according to the land use plans, while the green areas in the main agglomeration will be expanded by converting and utilizing vacant land that remains after relocation of existing facilities, as shown in Figure 6.9.

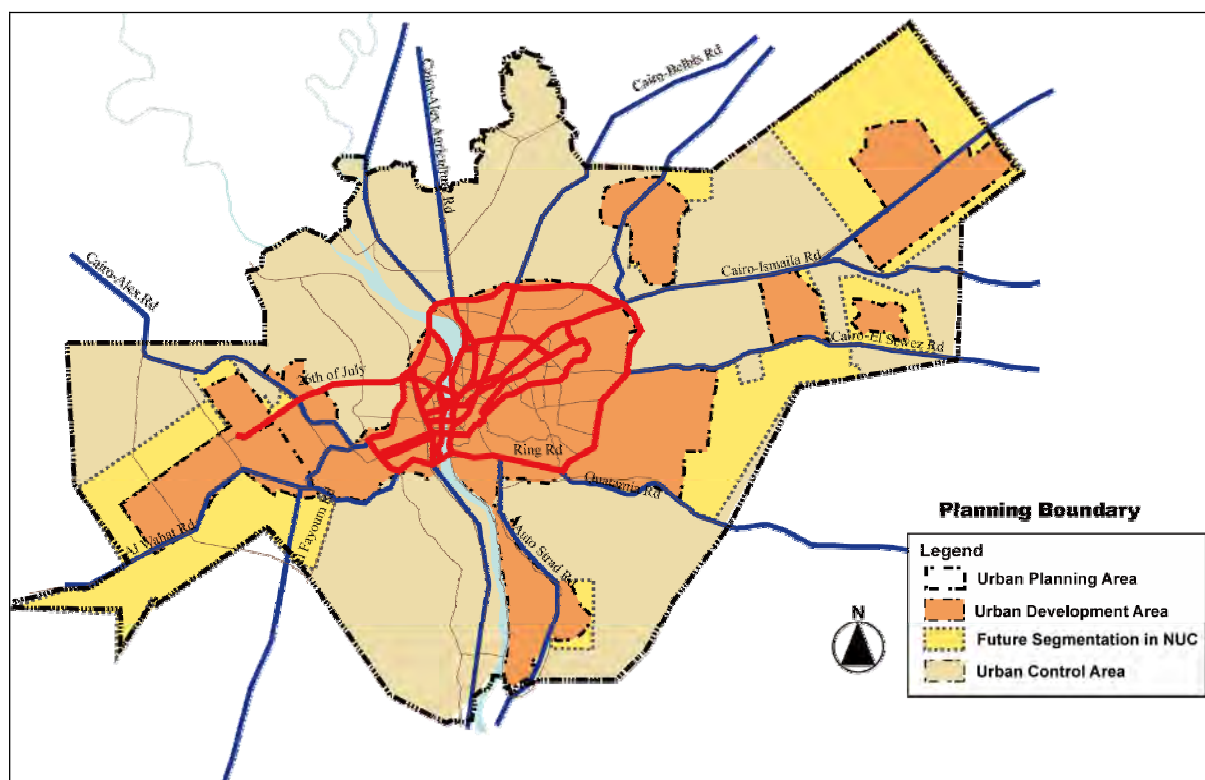


Source: JICA Study Team

Figure 6.9 Proposed Green Area Network in the Study Area in 2027

6.6 Designing Sustainable City (Well-balanced Urban Development)

(1) *“Strengthening management of urban growth boundaries”*: Urban growth boundaries (UGBs) have been updated to control the urbanization within an expected limit in order to conserve precious green areas and regulate urban growth. Urban growth boundaries designate urban areas capable of accommodating the population in 2027. These boundaries, as shown in Figure 6.10, were designed to include the main agglomeration, on-going and approved urban development projects, and urban areas designated in the 1997 master plan, and excluded the preservation areas for historical and environmental assets as shown in Figure 6.10.



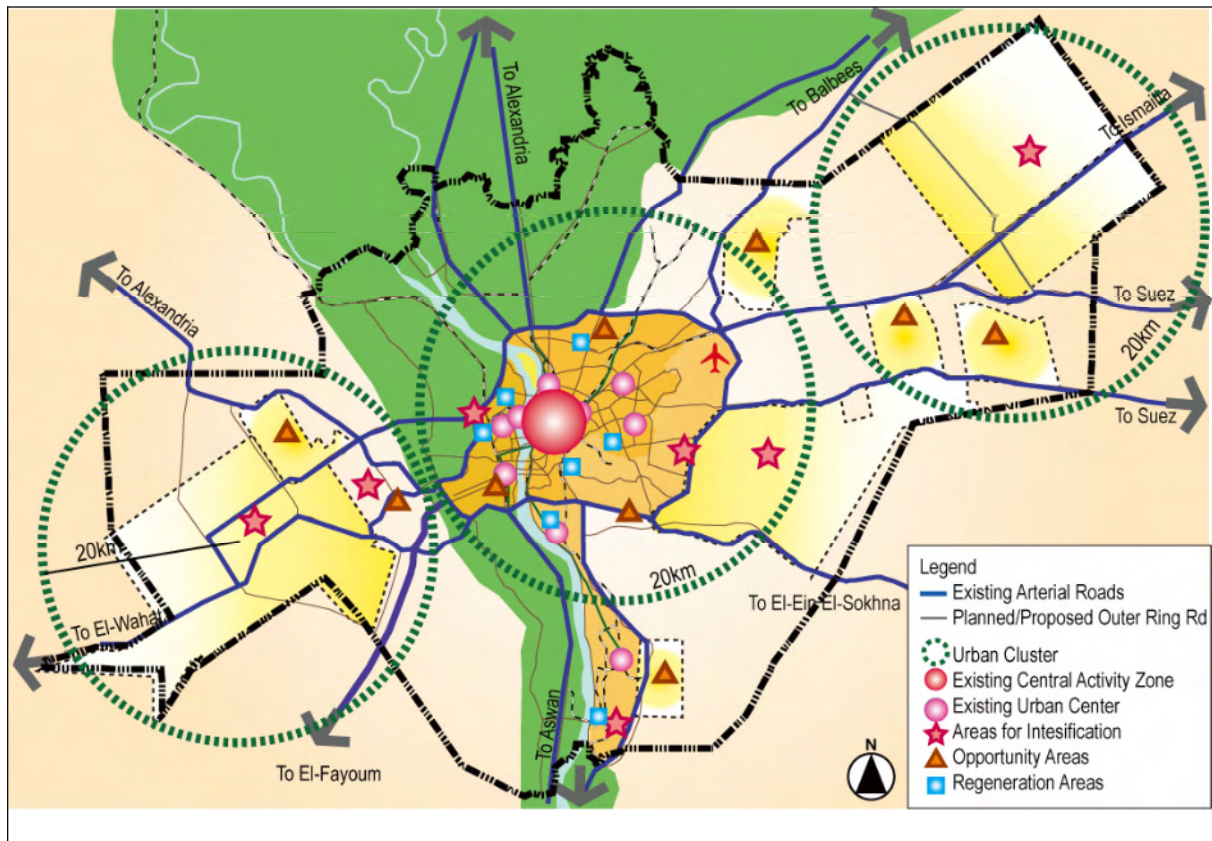
Source: JICA Study Team

Figure 6.10 Urban Growth Boundary, UDA, and UCA in the Study Area in 2027

(2) *“Improving implementation systems of the master plan”*: An effective statutory urban planning system is mandatory for ensuring the implementation of the proposed master plan. The master plan is considered as a vision, which physically specifies the expected land use in the Study Area. It should be complemented by a reliable implementation system, which requires implementation of the following: (i) a hierarchy of statutory urban plans; (ii) planning standards for urban development; (iii) a permission system for urban development; (iv) a taxation system for urban development; and (v) an organization structure to implement the master plan.

7 Key Diagram and General Land Use Plan in 2027

7.1 Based on the proposed sub-sector strategies, a key diagram of the Study Area in 2027 was formulated. To achieve the proposed goals of the sub-sector strategies, three types of priority areas were identified in addition to the existing central activity area and urban centers, as shown in Figure 7.1. The priority areas consist of “Areas for Intensification” (urban cores), “Opportunity Areas” (new development and redevelopment), and “Regeneration Areas” (for improvement of the living environment).



Source: JICA Study Team

Figure 7.1 Proposed Key Diagram for the Study Area in 2027

7.2 Accordingly, a general land use plan for the Study Area was formulated for the target year of 2027. This plan, which is shown in Figure 7.2, is based on the proposed sub-sector strategies and key diagram. The proposed land use plan indicates 16 land use categories which represent the expected urban form in the Study Area.

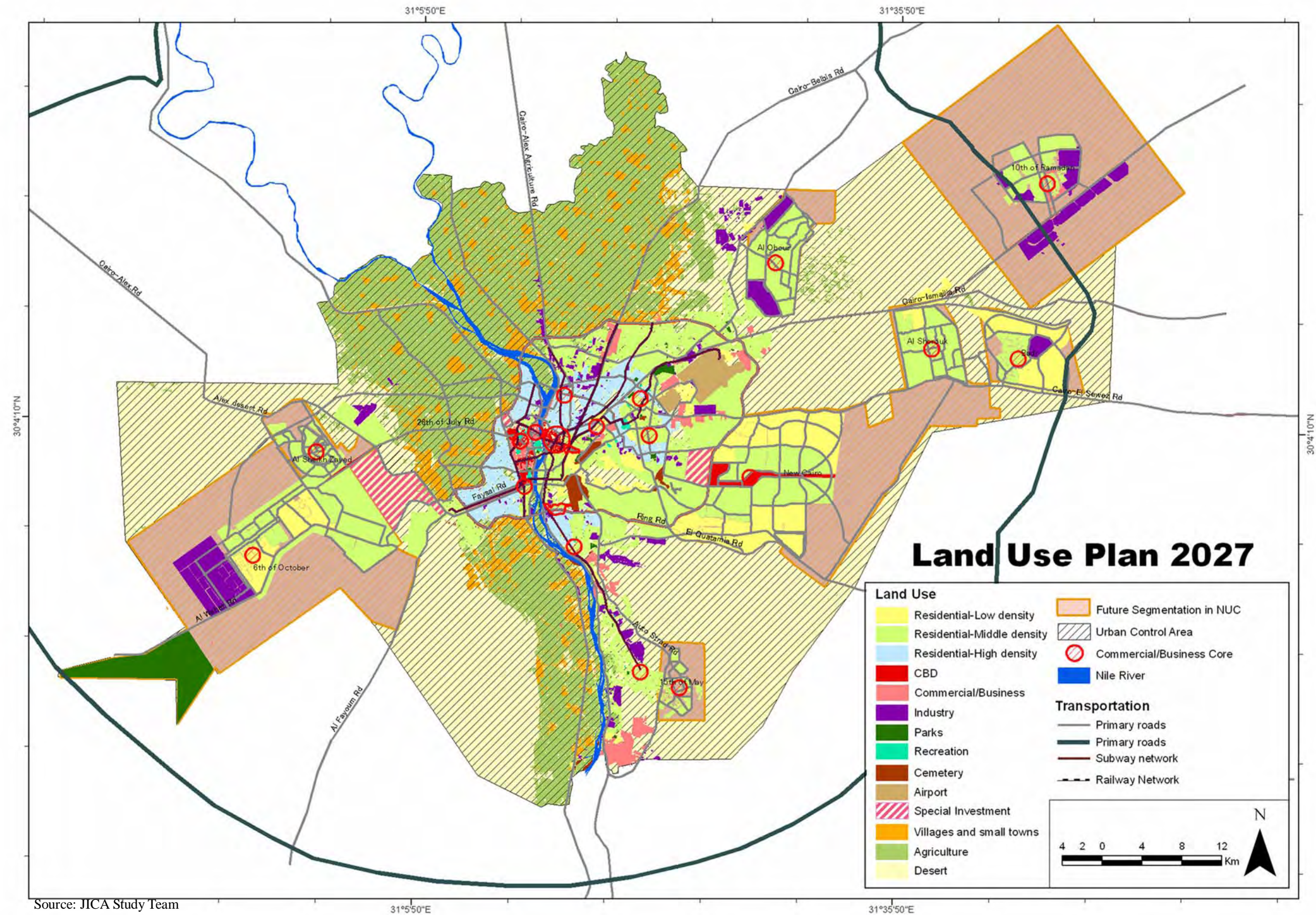


Figure 7.2 Proposed General Land Use Plan in the Study Area in 2027

7.3 The proposed sub-sector strategies comprise 52 projects and programs that have been identified for achieving the master plan for the Study Area by 2027, as shown in Table 7.1. The identified projects are classified into three categories in terms of implementation period (Schedule) and four project sectors (Type of Project). The implementation period comprises three phases: (i) the short term, over the next five years; (ii) the mid term, over the next ten years; and (iii) the long term, over the next twenty years.

Table 7.1 (1/3) Identified Projects in Sub-sector Strategies

Sub-sector Strategy	ID	Project Name	Schedule			Type of Project			
			Short	Mid	Long	Urban	Living	Infra	Insti
Living in Cairo	1.1	Provide affordable housings for low income group					X		
	1.2	Activate housing market and housing stock					X		
	1.3	Enhance housing loan/mortgage scheme					X		
	1.4	Enhance property registration					X		
	1.5	Create inventory of informal areas					X		
	1.6	Promote improvement of prioritized informal areas at Shubra El Kheima,					X		
	1.7	Identify the pollution sources in main agglomeration					X		
	1.8	Relocate cemeteries in main agglomeration				X			
	1.9	Designate new cemeteries outside main agglomeration				X			
	1.10	Upgrade water distribution pipeline						X	
	1.11	Expand water treatment plants						X	
	1.12	Expand wastewater collection pipeline						X	
	1.13	Expand wastewater treatment plants						X	
	1.14	Upgrade solid waste management						X	
	1.15	Designate new disposal site						X	
Working in Cairo	2.1	Promote new sub-center in New Cairo NUC				X			
	2.2	Promote new sub-center in 6th of October NUC				X			
	2.3	Promote new sub-center in 10th of Ramadan NUC				X			
	2.4	Promote new sub-center in South of Helwan				X	X		
	2.5	Promote new sub-center in Imbaba				X	X		
	2.6	Relocate government area from Cairo CBD				X			
	2.7	Regenerate government area				X			

Source: JICA Study Team

Table 7.1 (2/3) Identified Projects in Sub-sector Strategies

Sub-sector Strategy	ID	Project Name	Schedule			Type of Project			
			Short	Mid	Long	Urban	Living	Infra	Insti
Working in Cairo	2.8	Promote R&D area in New Cairo and 6th of October NUCs				X			
	2.9	Promote SME area in Al Shorouk and Badr NUC				X			
	2.10	Relocate highly polluted 21 factories from main agglomeration					X		
	2.11	Upgrade vacant lands after relocating 21 factories				X	X		
	2.12	Relocate tannery from main agglomeration					X		
	2.13	Relocate heavy industry to 10th of Ramadan NUC					X		
	2.14	Designate special planning district for world heritage asset incl. Islamic Cairo & Old Cairo				X			
	2.15	Designate distinguished landscape areas				X			
	2.16	Upgrade Cairo CBD for business, commercial, and tourism				X			
Connecting in Cairo	3.1	Promote development corridor to 10th of Ramadan NUC				X		X	
	3.2	Promote development corridor to 6th of October NUC				X		X	
	3.3	Promote development corridor to New Cairo NUC				X		X	
Managing Natural Environment	4.1	Formulate planning standard for parks and open spaces				X			X
	4.2	Provide public parks at the city level				X			
	4.3	Provide pocket parks at community level				X			
	4.4	Create O&M system for public parks				X			X
	4.5	Upgrade greenery ways along Nile river				X			
	4.6	Preserve islands in Nile river				X			X
	4.7	Designate natural conservation area				X			X
Designing Sustainable City	5.1	Upgrade urban planning law and regulation				X			X
	5.2	Upgrade hierarchy of urban plans				X			X
	5.3	Formulate district plans				X			X

Source: JICA Study Team

Table 7.1 (3/3) Identified Projects in Sub-sector Strategies

Sub-sector Strategy	ID	Project Name	Schedule			Type of Project			
			Short	Mid	Long	Urban	Living	Infra	Insti
Designing Sustainable City	5.4	Formulate planning standard for urban management				X			X
	5.5	Encourage planning permission system							X
	5.6	Delineate urban growth boundary				X			X
	5.7	Establish property assessment taxes							X
	5.8	Establish coordination committee of Cairo, Giza, Qaliobeya, and Sharkia governorates							X
	5.9	Establish implementing agency for the master plan							X
	5.10	Encourage institutional capacity building for urban planning							X

Source: JICA Study Team

8 Urban Transportation Plan

8.1 Based on the planning framework, anticipated future growth pattern, and the proposed general land use plan, the existing transportation master plan (or so-called CREATS) of the Study Area was assessed from the point of view of demand capacity balance.

8.2 The assessment identified shortages in capacity for three corridors, as listed below:

- CBD-Nasr City-New Cairo Corridor.
- CBD-6th of October City Corridor.
- CBD-10th of Ramadan City Corridor.

8.3 Measures for solving the CBD-Nasr City-New Cairo Corridor capacity shortage will consist of:

- Construction of the Metro Line 3 Branch Line between Abbasia (or Al Ahram) and New Cairo.
- Extension of the Urban Expressway (Section E-12).

8.4 Measures for solving the CBD-Pyramid Area Corridor capacity shortage will consist of:

- Early start of the Metro Line 4 (El Malik el Saleh and Pyramid Area Section) construction.
- Timely construction of the Metro Line 4 (Pyramid Area and 6th of October Section).

8.5 Measures for improving the CBD-10th of Ramadan City Corridor transport plan will consist of:

- Re-examination of the installation schedule of Diesel Car Trains and construction of the branch line between Al Shorouk and 10th of Ramadan City, as proposed in CREATS and based on the new framework.

8.6 In regard to “soft” Projects, the most important component is the privatization of bus services, as emphasized in CREATS. To ensure privatization, the following policies shall be studied and executed.

- To integrate private bus/shared owners in Cooperatives or Companies.
- To establish control mechanisms over Cooperatives or Companies.
- To divide CTA (Cairo Transport Authority) operations into several units and sell those to private companies, one by one.
- To let CTA concentrate on administrative functions for controlling Cooperatives or Companies.

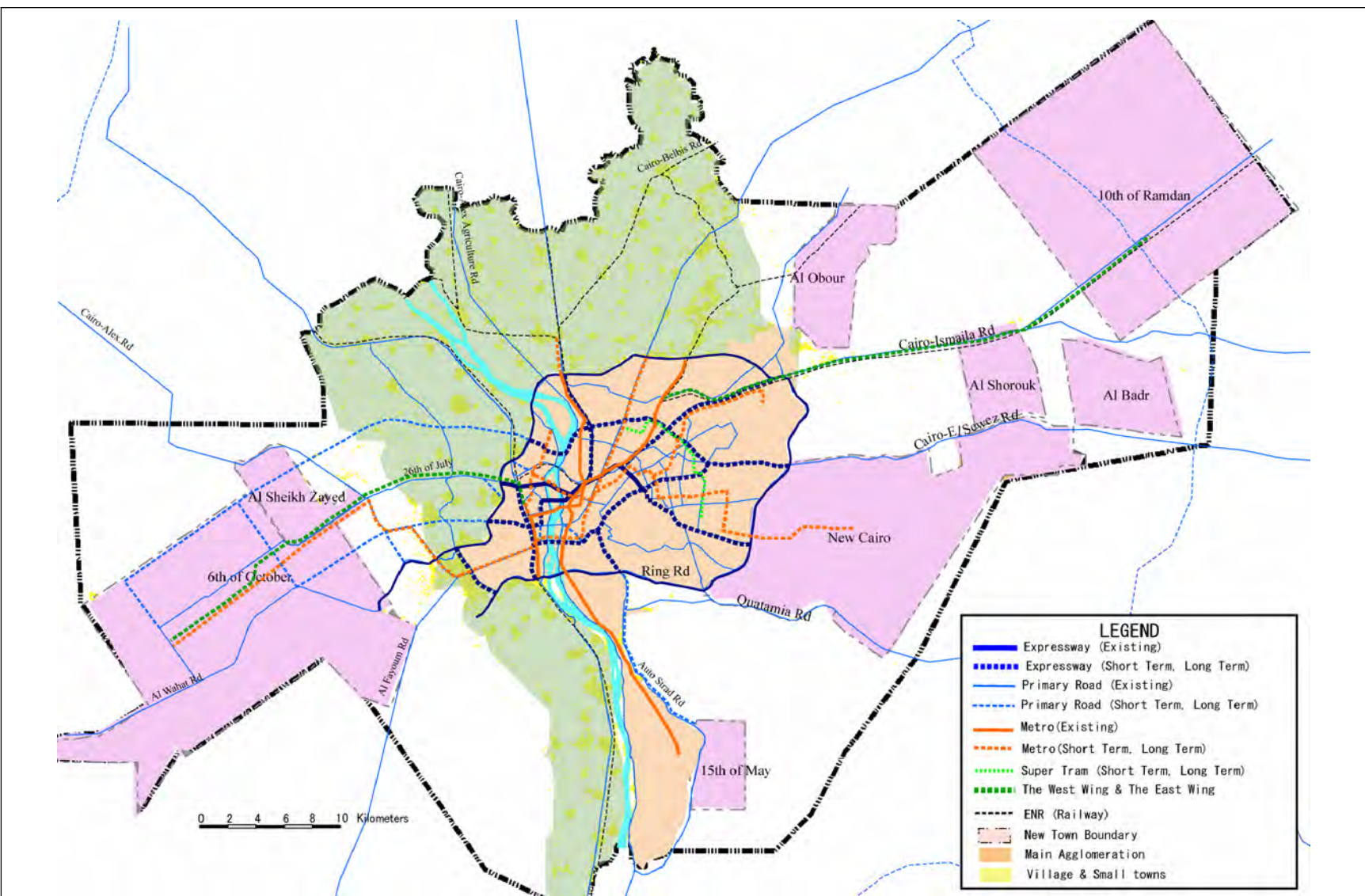
8.7 Revision of the CREATS Prioritized Projects is proposed, based on re-ordering and augmenting the top twenty CREATS projects, as summarized in Table 8.1.

Table 8.1 Advised Revision of CREATS Plan

Project	CREATS Phase	SDMP Phase	Notes
MRT Line 4	L		
Westward from El Malik el Saleh to Pyramid Area.		S	
Extension from Pyramid Area to 6 th of October.		M	New Project
Eastward from El Malik el Saleh.		L	No Change in this section
Super Tram Line 1	S		
Metro Line 3 Branch. (Same route of Super Tram Line 1.)		S	
Extension to New Cairo Area			New Project
Al Farag Road. (Extension of Toll Expressway E4-3 to 6 th of October NUC.)			New Project
Extension of Toll Expressway to the Ring Road bordering New Cairo. (E-12 section.)		M/L	New Project

Source: JICA Study Team S = Short term M = Medium term L = Long term

Among the planned projects and programs, the major “hard” components were depicted in Figure 8.1



Source: JICA Study Team

Figure 8.1 Proposed Projects of Transportation Plan

9 KEY RECOMMENDATIONS AND THE WAY FORWARD

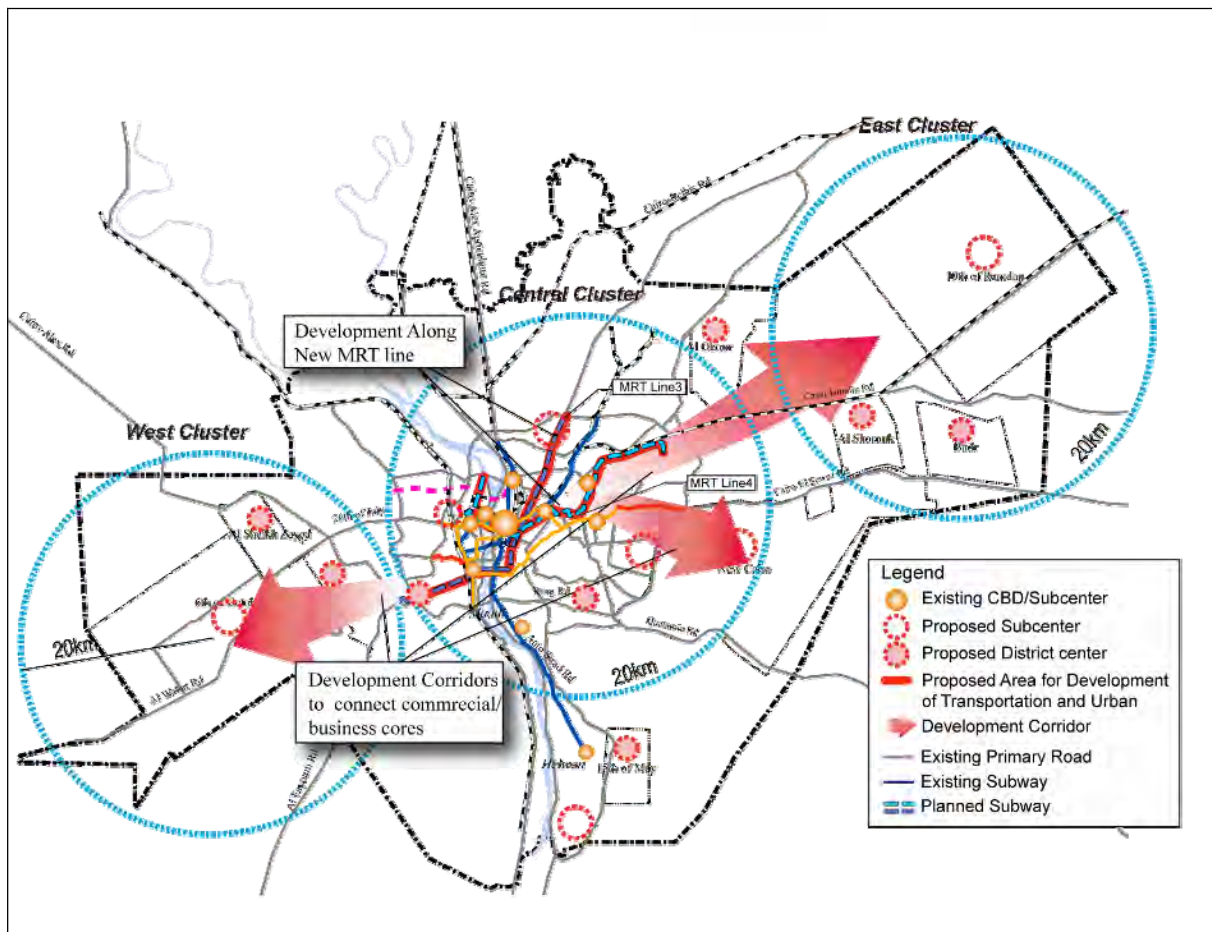
9.1 Proposal of Development Corridors: The present study focuses on rearranging the urban structure from the present mono-centric form to a poly-centric (or a multi-polar) form, and promoting integrated urban and transport development for a prioritized development corridor. The contribution of the development corridor to each element of the sub-sector strategies is shown in Table 9.1.

Table 9.1 Direct and Indirect Contribution of Development Corridor to Sub-Sector Strategies

Sub-sector Strategy		Direct	Indirect	Remarks
<u>Living in Cairo</u>	<i>Providing housing supply for various household group</i>		Yes	Promoting population shift to NUCs
	<i>Improving living environment especially for informal areas</i>		Yes	Promoting population shift to NUCs
<u>Working in Cairo</u>	<i>Promoting new business and commercial area</i>	Yes		Promoting the urban development at the central station area
	<i>Promoting industrial and R&D area</i>	Yes		Promoting the development of industrial areas and R&D park
	<i>Promoting tourism area</i>	Yes		Connecting to the Grand Egyptian Museum and Pyramids in Giza
<u>Connecting in Cairo</u>	<i>Vitalizing the new urban communities</i>	Yes		Promoting population shift to 6th of October and Al-Sheikh Zayed NUCs
	<i>Promoting transport-oriented urban development area</i>	Yes		Combination of transport and urban development at terminal and along the route
<u>Managing Natural Environment</u>	<i>Conserving agricultural lands and natural resources</i>		Yes	Discouraging the population increase in the agricultural lands
	<i>Promoting open and green area network</i>	Yes		Providing large park for recreation and sport activities
<u>Designing Sustainable City</u>	<i>Strengthening management of urban growth boundary</i>		Yes	Discouraging the encroachment on agricultural lands
	<i>Improving implementation system of the master plan</i>		Yes	Experiencing a good sample for the coordination between the related authorities

9.2 Planning for the Western Development Corridor: Three development corridors have been proposed in this study as the prioritized development corridors for the sustainable development of the Study Area. These corridors are:

- Central Development Corridor: Cairo - New Cairo.
- Western Development Corridor: Northern Giza – 6th of October.
- Development Corridor: Cairo – 10th of Ramadan.



Source: JICA Study Team

Figure 9.1 Proposed Development Corridors

In the second half of the study, the Study Team will conduct pre-feasibility studies for urban and transportation development in the Western Development Corridor. The pre-feasibility studies will incorporate on-going and committed projects, including the planned extension of the metro lines, past proposals for public transport including the bus way proposed in the CREATS study by JICA, and proposals made by private companies, such as monorails etc.

From the urban planning aspect, the pre-feasibility will look into terminal areas along the transport system route and adjust some of the existing land use plans for the affected NUCs. In the case of Western Development Corridor, the NUCs that will be affected are 6th of October and Sheikh Zayed. Also, the redevelopment plan for the Imbaba project may also be relevant, as the eastern starting point of the corridor.

The pre-feasibility study will include the following components:

- (1) *Design Standards for Infrastructure:* Design standards which are necessary for infrastructure design will be prepared.
- (2) *Alternative plans:* Alternative plans for the route and type will be analyzed on a comparative basis.

- (3) *Schematic Designs*: As for routes selected in the process of (2), schematic designs will be prepared.
- (4) *Economic and Financial Analysis*: Economic and financial analysis for the development of transportation infrastructure will be conducted.
- (5) *Pre-EIA*: Pre-EIA studies will be carried out for the selected project.
- (6) *Implementation Plan*: An implementation plan for public transportation facilities will be prepared regarding the schedule, methods, and execution scheme.
- (7) *Proposal of Applicable PPP Methods*: The applicability of PPP methods will be analyzed by considering various factors, including financial, institutional and technical constraints, as well as risks, the role of the private and public sectors, and potential investors.

9.3 Capacity Development for Master Plan Formulation and Update: The urban master plan will need to be updated and adjusted, based on the latest conditions of the urban agglomeration, the relevant policy frameworks, and the committed resources and projects. The urban master plan for GCR has been in the process of updating since it was first defined at the beginning of 1980's with French assistance. Updating has continued since that time, until the start of the present study that is being undertaken with Japanese assistance through JICA.

The capacity of GOPP to formulate and update the urban master plan will be increased in order for GOPP to carry out this task by itself. Attention is being given to enhancing the capacity of GOPP to undertake these tasks. Use of GIS tools in formulating the plan is being incorporated to assist with enhancing GOPP skills.

9.4 Enhancement of Coordination of GOPP for Master Plan Implementation: While planning of GCR is basically centered in GOPP, implementation of the plan in the urban development and management sphere will encompass the three Governorates of Cairo, Giza and Qaliobeya, as well as NUCA. The transportation sphere will encompass Ministry of Transport and its subordinate organizations.

In relation to the proposed development corridor, implementation will obviously overlap both the urban development and transportation spheres. In order to allow smooth integration of the development corridor implementation, a joint coordinating body will be established in which the relevant organizations from MOHUUD and MOT will participate. The nodal function will be carried by GOPP, as the initiator of the project.

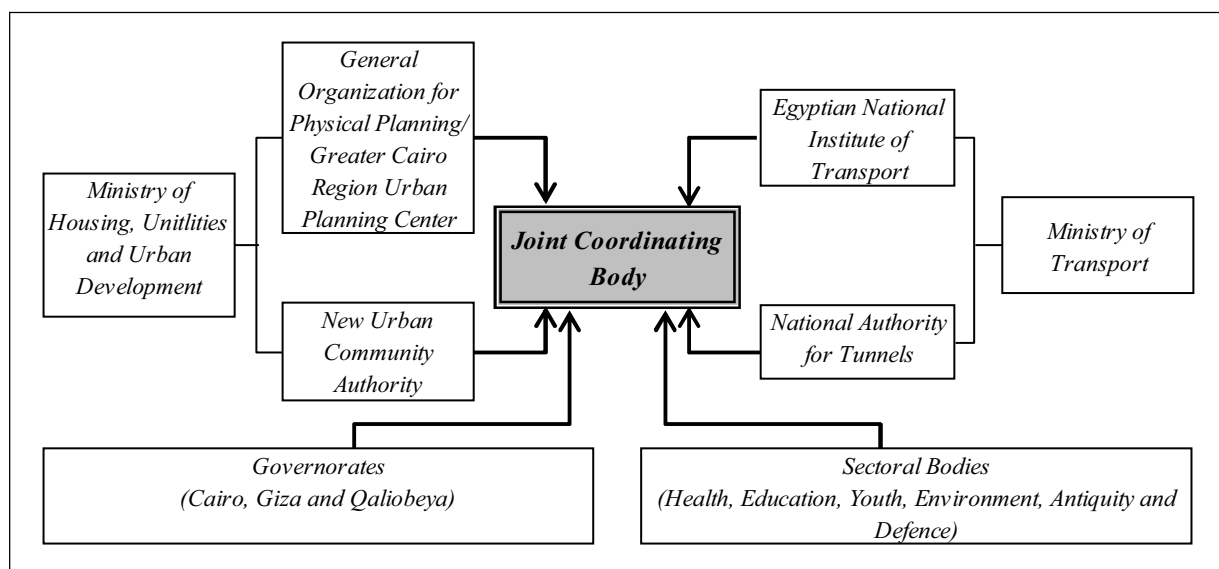


Figure 9.2 Joint Coordination Body for Development Corridor