

October, 2009

STRATEGY AND FRAMEWORKS FOR THE DAMASCUS CITY URBANIZATION TO GUIDE THE CITY MASTER PLAN REVISION

1. Introduction

The JICA Study completed in 2008 presented useful materials for the urban and regional development master plan for the Damascus Metropolitan Area (DMA). Based on the recommendation of the JICA Study, a new technical cooperation project has been initiated by JICA to effect further capacity development for urban planning and management of experts of the three counterpart organizations: the Ministry of Local Administration (MoLA), Damascus governorate (DG), and Rural Damascus governorate (RDG).

Subsequent to the JICA Study, both DG and RDG have initiated the preparation of their own master plans. It is expected naturally that these master plans should be prepared in line with the DMA development plan proposed by the JICA Study. In the course of these follow-up initiatives, it may be found that the DMA development plan itself needs to be modified to reflect policy changes after the JICA Study and ideas and aspirations of DG and RDG not properly reflected in the DMA development plan.

Prior to the JICA Study, the General Company for Engineering and Consulting (GCEC) had been working for years on the revision of the 1968 city master plan. Although the GCEC work did not conclude, it provided useful input to the JICA Study. Similarly, it is expected that the JICA Study would provide useful input to the on-going planning initiatives by DG and RDG. The JICA Study should go through review and may be modified consequently, but it would be most important that the on-going planning initiatives should build on the JICA Study. In particular, it would be a pity if it is not utilized for the revision of the city master plan.

While the new JICA project focuses directly on two selected areas for detailed planning and subsequent implementation of model projects to be formulated through the planning, the follow-up activities of the previous JICA Study constitute important part of its scope of work. It is not only that JICA is naturally in the best position to ensure the consistency between the DMA development plan and the plans for DG and RDG, but also that the broad capacity development by the new JICA project should be along the extension of what was accomplished through the previous JICA Study to be most effective.

2. JICA Study – A Point of Departure

The previous JICA Study took a very unique approach from macro, through meso, to micro levels on the recognition that sustainable development of the DMA would be subject to the socio-economic and spatial development of Syria as a whole. It first presented a vision and development scenario for Syria. Then, development prospects for the five regions were presented to clarify future roles and characteristics of different regions. Based on these clarifications at the macro and the meso levels, the DMA development plan was prepared. The Study further presented an indicative land use plan for the Damascus city as a prototype. Also, more detailed plans were prepared for two selected areas in the city and a few new cities proposed in Rural Damascus.

It would make a good sense to start the complete revision of the 1968 city master plan based on the DMA development plan and the indicative land use plan for the city. When a preliminary mission visited Syria to discuss the scope of work for the new JICA project, DG presented “Damascus Masterplan: Development Visions and Strategic Guidelines (Guidelines hereafter),” which were prepared presumably to guide the city master plan revision. The Guidelines show clearly a significant discrepancy with the DMA development plan in the basic stance, reflecting apparently misperception of the reality facing the city.

The JICA Study presented basic conditions for the DMA urban development toward 2025. They are, in sum, 1) no inter-basin water transfer from other regions, 2) sustainable population of 6million in the DMA in 2025 based on the local water resources of the Barada and Awaj basin, and 3) decongestion of the Damascus city by strengthening sub-centers in the conurbation area and creating new cities in the outer area.

On the contrary, the Guidelines propose densification in selected areas of the city, and avoidance of sub-centers and new cities development in the outer area. They claim the high density as the main cause of urban problems in the Damascus city represents a misperception by many city planners and decision makers. They further argue that this misperception has led to planned development of areas outside the city, resulting in “strong investment pressure on surroundings, particularly in Ghouta and also in the Qassioun mountain area, and significant urban sprawl.” This perception is totally wrong as clarified below.

3. Clarification of Existing Urbanization Conditions of the Damascus City

The population in the Damascus city was 1.54million at the 2004 census. The land area and land use in the city was examined by both the GCEC work for 1994 and the JICA Study for 2004 as compared in Table 1. These data appear to be consistent and thus reasonably reliable. The total land area of the city is more or less 10,500ha, which makes the average density 147/ha. This appears high but probably not too high. This density, however, is rather misleading. The city land area excluding the Qassioun mountain area is approximately 7,700ha as estimated by both GCEC and the JICA Study. This makes the average effective density 200/ha, very high as the gross average of sizeable urban area.

The population density in some informal housing areas is as high as 800/ha. This means some areas have population density much lower than the gross average. In such areas, densification may be an option. However, densification as the strategy for the city as a whole is completely misleading. In selected areas in the city, urban renewal would be necessary as proposed by the JICA Study. In such areas, the population density may increase as multi-story or even high-rise buildings are constructed. Even in this case, however, densification should not be an objective. The construction of multi-story or high-rise buildings would be justified only if it will create more open space and greenery for better urban environment.

The urban sprawl has been proceeding from the city to neighboring *nahiyas* of Rural Damascus. The population growth rates in Erbeen, Jaramana, Al Mlaiha, Al Hajar Al Aswad and Babilia during 1994-2004 are much higher than the average population growth of Rural Damascus as a whole. This is a fact, not a perception. This is not a result of planned development of new urban areas.

People don’t make their decisions on where to live based on mere perception. Only planners and decision makers may make decisions on planned development based on their perception. The observed urban sprawl into the neighboring *nahiyas* of Rural Damascus, however, is not an outcome of planned development. Rather, lack of planning is indeed causing this phenomenon. This is why the JICA Study

proposes the development of multi-functional urban centers in these *nahiyas* to avoid un-orderly urbanization.

The encroachment on agricultural land of Ghouta is another fact. The Ghouta area cannot be protected by densification of the Damscus city as suggested by the Guidelines. The Guidelines describes “a concentrated, dense city gives space to the Ghouta oasis between the city and the edge of the desert to reinforce its environmental role.” This is a perception, which unfortunately is not supported by the fact.

The urbanization has already been proceeding into the Ghouta area and even beyond it in some directions along the main radial arteries. The population growth rates during 1994-2004 were the highest in Al Mlaiha in the direction of the international airport, and in Al Kissweh along the main artery to the south.

Only way to protect or even enhance the remaining greenery of Ghouta is to promote more productive use of the Ghouta land as proposed by the JICA Study. Just like the new law on agricultural housing, the development in the Ghouta area may be allowed under a very strict set of regulations to ensure sufficient greenery would be maintained. At the same time, some incentive measures should be introduced to encourage the private sector to undertake such regulated developments. Also, the urbanization momentum already existing along the main arteries should be effectively utilized to guide the urbanization to the outer areas beyond Ghouta. New city development as pursued already is a means to realize this. The DMA development plan endorses such initiatives rather than densification in the city.

**Table 1 Approximate Correspondence between Land Use Data of Damascus City,
1994 and 2004**

1994 (GCEC Study)		2004 (JICA Study)	
Land use	Area (ha)	Land use	Area (ha)
Agricultural	1,006	Cereals	17
		Fruit trees	187
		Olive trees	446
		Other field crops	322
		Subtotal	972
Residential	4,590	Continuous urban	4,099
Mixed residential & agriculture	414	Discontinuous urban	548
Subtotal	5,004	Informal urban fabric	1,199
Social & administrative	455	Subtotal	5,846
Non-built up area	117		
Greenery & parks	510	Sports & leisure facilities	81
		Green houses	304
		Universities	74
		Green urban area	13
		Subtotal	472
Industrial	222	Industrial	156
Special uses	355	Airport	249
Qassioun mountains	2,956	Bare land	1,663
		Scrubland	928
		Grassland	87
		Water related	89
		Subtotal	2,767
Total	10,625	Total	10,462

Sources: GCEC, The Third Stage Report of the Contract on Damascus General Structure Plan Study and Preparation Project, March 1997, and GIS database created by the JICA Study.

4. Some Suggestions for the City Master Plan Revision in Line with the DMA Development Plan

(1) Vision

It is useful to establish an attractive vision for the Damascus city to guide not only the city planning but also its implementation. The JICA Study characterizes the future DMA as the first sustainable mega-city in the modern world, where the sustainable urban development means the continual enhancement of urban functions to serve the citizens.

Also, the Study presented the vision for the DMA in 2025 with six characteristics. Of these, the following would apply to the Damascus city:

- 1) Center for high grade social services such as advanced education and research and specialized health care,
- 2) International tourism gateway and base including conference tourism and various forms of alternative tourism,
- 3) Large and sophisticated urban markets for products from other regions, and
- 4) Cultural city embracing multiple cultures in harmony with the Islam.

Other characterizations may also be introduced such as those suggested also by the Guidelines. They may include administrative and diplomatic center, international financial and business center, and export base for products from other regions.

(2) Development objectives

The JICA Study introduced three planning concepts to guide the DMA development planning, which may guide the plan implementation as well. They are 1) economic efficiency, 2) human security, and 3) cultural city. To guide the planned development of the Damascus city, objectives of Damascus urban development should better be established.

Largely in line with the three planning concepts, the following are suggested as a base for further discussion and elaboration as the objectives of Damascus urban development:

- 1) To create more pleasant, comfortable and pedestrian-friendly urban spaces or environment for residents and visitors,
- 2) To offer a variety of lucrative job opportunities by various economic activities supported by enhanced urban functions, and
- 3) To realize socially inclusive urban society of people having various backgrounds without poverty or the socially deprived.

In defining the objectives, it is important to reflect the economic, social and environmental concerns just like the DMA development plan.

(3) Urban land use

The Guidelines advocate mixed urban land use as suggested also by the DMA development plan. They describe “a city with usage variety and mixture in all quarters” as part of the vision for Damascus, and “to mix all urban-suitable usages instead of creating mono-functional areas” as a component of strategic guidelines. These statements presumably represent their objection against the creation of a government city, diplomatic quarters and the like. These areas, however, are planned usually with residential and limited commercial functions for residents and workers as well.

A more important point related to mixed urban land use is possible effects on land transactions and land prices. Use of residential units in high density urban areas for commercial or office purposes is commonly observed in some districts of the Damascus city. This tends to make rents and prices for residential units high, often beyond the affordability of most citizens. Consequently, some units are left unoccupied, and most citizens are forced to look for their housing units in outer areas. Use of residential units for commercial and office purposes may be controlled in some districts to increase the housing supply and reduce rents and prices for residential units.

On the other hand, in some informal housing areas, land and property prices are too low as residents face insecurity in land ownership and live under the threat of eviction. In such areas, the regularization of land ownership would result in higher land prices, which would work as an encouraging factor for some residents to move to a newly developed area to ease the extremely high density in some informal housing areas.

The point here is that while mixed urban land use is generally desirable, there are some cases where certain land uses would have to be regulated in some districts. Another point is that land ownership and land prices are more important factors for inefficient land use in the Damascus city rather than the density itself or perception thereof.

(4) Some urban indices

To overcome the misperception presented by the Guidelines, it would be useful to introduce some

indices to measure the quality of future urbanization. The per capita open space is one such index. According to the Syrian urban planning criteria, the per capita open space should be 7.5m²/capita, as calculated from Table 2. In reality, the per capita open space in the Damascus city was 3.7m² in 1994, which was reduced to 3.0m² in 2004.

According to the land use data in Table 1, the total land area devoted to mixed residential use was 5,459ha in 1994 and 5,846ha in 2004. By applying the population of 1.39million in 1994 and 1.54million in 2004, the per capita residential area is calculated to be 39.3m² in 1994 and 38.0m² in 2004. Both data indicate that the densification should not be the direction to pursue for further urbanization of Damascus.

Table 2 Urban Planning Criteria in Syria

Item	Quarter (Al Hay)	Town (Balda)	City (Madina)
Unit	Basic unit	2 Quarters	4 Towns
Population	~6,000	~12,000	~48,000
Components	1) Education facilities: - 1 kindergarten - 2 primary schools 2) Community service center 3) Worship center 4) Petrol station 5) Parking 6) Bus stop 7) Pedestrian ways & area 8) Greenery & parks (playground)	1) Education facilities: - 1 secondary school - 1 vocational school 2) Sports field 3) Public park 4) Health center 5) Area service center	1) Hospital 2) City park 3) Sports center 4) Commercial center 5) Administrative & cultural center 6) Others – fire station, bus stop, petrol station, water reservoir, industrial area 7) Main & central roads
Criteria	1) Community park: 1m ² /person 2) Greenery: 1m ² /person 3) Local playground: 1m ² /person 4) Children's playground: 1m ² /person 5) Roads: 15-20% of area 6) Parking: 20m ² /car x 900cars = 18,000m ²	1) Sports field: 1m ² /person → 12,000m ² 2) Public park: 1m ² /person 3) Health center: 1/6m ² /person → 2,000m ²	1) Hospital: 3 beds per 1,000 → 144beds; 150m ² /bed → 2.16ha 2) City park: 1m ² /person → 4.8ha 3) Sports center: 0.5m ² /person → 2.4ha 4) Fire station: 10,000m ² 5) Bus stop & petrol station: 30,000m ² 6) Main & central roads: 5% of area

Greenery & parks:	City park	4.8ha
	Sports center	2.4ha
Sports fields		1.2ha x 4 = 4.8ha
Public parks		4.8 ha
Community parks		0.6ha x 8 = 4.8ha
Greenery		4.8ha
Local playgrounds		4.8 ha
Children's playgrounds		4.8 ha
Total		36.0ha → 7.5m ² /person

(5) Urbanization pattern

The Guidelines advocate compact urbanization patterns. The compact urbanization generally helps to maintain the costs of utilities and some public services delivery comparatively low as correctly stated by the Guidelines. This, however, does not imply that the densification is desirable. The urban planning, in short, is to pursue the agglomeration economy due to compact urbanization, while minimizing

the external diseconomy due to over densification.

One important factor affecting the selection of urbanization patterns is the availability of water resources. The extension of pipe d water supply would become progressively more costly as the urbanized area expands to outer areas. This is particularly true when any city depends primarily on water sources within the city boundaries or nearby. This is not the case for the Damascus city relying almost exclusively on water sources outside the city boundaries. The city has major water sources in the northwest and the west and minor ones elsewhere.

Water from different sources outside the city may be transferred to different areas in and outside the city. Another factor affecting the water availability is the use of treated sewage as already practiced in the DMA. In case of the Damascus urbanization, therefore, local water availability is not the dominant factor to support the compact urbanization pattern, although it dictates the magnitude of urbanization as clarified by the DMA development plan. Other factors should also be taken into account in determining the areas for future urbanization such as the access from existing urbanized areas, land capability for agriculture, slope and other physical conditions as done by the JICA Study.

(6) Coordinated planning with RDG

In planning for the Damascus city development, it would be vitally important to coordinate with the planning initiative by RDG. In particular, the conurbation area in RDG should be taken as integral part of the Damascus city planning since it is directly affected by the city urbanization. Also, without using the conurbation area, it would be very difficult, if not impossible, to improve the quality of urban environment measured by the indices presented above as clarified below.

The conurbation area is defined here as nine districts in Ghouta: Erbeen, Kafr Batna, Jaramana, Al Mleiha, Babila, Hajar Al Aswad, Sahnaya, Daraya and Qudsaya, and Harasta. Combined population of the Damascus city and its conurbation area as defined was 2.81million in 2004, and is expected to increase to 3.68million by 2020 in line with the DMA development plan.

Based on the land use data for this combined area presented in Table 3, the total area used for residential purposes is 12,633ha as of 2004, including the informal housing area. This makes the per capita area for mixed residential use 45.0m². If the per capita area for mixed residential use is increased to 50m² by 2020, the total land area of 18,400ha would be required. The incremental area corresponds to about 30% of the remaining agricultural land in this part of Ghouta.

The total area of greenery and parks in this area is 2,168ha as of 2004. This corresponds to the per capita area of 7.7m², which just satisfies the present urban planning criterion. If the per capita area for greenery and parks should be further increased to 10.0m² by 2020, the total land area of 3,680ha would be required. This can be easily realized if small portion, smaller than 8%, of the existing agricultural land in the area is converted to high productivity use with recreational, cultural, sporting and other uses as proposed by the DMA development plan.

Table 3 Present Land Use in Damascus City and Its Conurbation Area

Land use	Area (ha)
Continuous urban	8,441
Discontinuous urban	1,973
Informal urban fabric	2,219
Subtotal	12,633
Cereals	5,367
Fruit trees	1,268
Olive trees	2,626
Other field crops	10,511
Subtotal	19,772
Sports & leisure	142
Green houses	1,856
Universities	76
Green urban area	94
Subtotal	2,168

Source: GIS database created by the JICA Study

4. Recommendation

Important issues for the Damascus urbanization include land suitability for urbanization, urbanization patterns, sustainable population by local water resources, land ownership and land prices, and development administration as well as vision for further urbanization and need for coordination between the DG and the RDG. These were examined in detail by the JICA Study, and reflected in the DMA development plan. While the proposals contained in the DMA development plan should be reviewed and modified as necessary, it would be most important that the further planning and implementation should utilize and build on it. Therefore, the following are recommended.

First, the following are expected at the macro and the meso levels.

- 1) The vision and development scenario for Syria presented by the JICA Study should be examined and adopted with modifications.
- 2) The development prospects of the five regions analyzed by the JICA Study should be examined and substantiated into regional development plans, respectively.
- 3) The DMA development plan should be thoroughly reviewed and adopted with modifications.

For the Damascus city, the following should be undertaken:

- 1) The indicative land use plan should be further elaborated possibly with additional land categories for land use regulation, and regulatory measures developed;
- 2) The modified indicative land use plan should be used as a spatial framework for the city master plan revision;
- 3) Areas to be developed by the government initiatives should be identified based on the modified indicative land use plan, and detailed plans should be prepared for each area, possibly in cooperation with private developers; and
- 4) Areas to be planned and developed by participatory approach should be similarly identified, and the participatory process should be initiated for them one after another.

More specifically, the following are recommended. The population framework proposed by the DMA development plan should be adopted to plan for infrastructure and utilities for the city and its conurbation area in a mutually consistent way as proposed by the DMA development plan. Specifically, the sustainable population of 6million in the DMA would be reached in 2025 with the city population suppressed at 1.8million.

In revising the city master plan, at least the conurbation area in Rural Damascus should be planned together as it is affected directly by the Damascus city urbanization. For this purpose, coordination between the DG and the RDG is indispensable. It is desirable that some institutional mechanism should be introduced for effective coordination. It may be a test case of the DMA Council proposed by the JICA Study.

The macro zoning specified by the indicative land use plan should be further elaborated in the following way. The original land classification may be revised as follows. Urban renewal area may be re-defined as high grade development area, where the development of multi-story building complexes is allowed to create more open space and greenery under a new building code. Living environment improvement area and mixed residential area may be re-delineated. The delineation for the latter should reflect existing land prices in different residential areas. Distinction between priority heritage restoration and use areas and other heritage areas may be reviewed and modified.

From the constrained urban area identified by the DMA directional land use plan, areas to be formalized should be delineated, together with other formalization areas, based on access from existing roads, existing infrastructure and utilities, density and other criteria. Urbanization area according to the DMA directional land use plan should be left in principle for private sector developments, and the building code should be modified for this land category. A new building code should be introduced for controlled development area according to the DMA directional land use plan.

Regulatory measures should be developed for each of the land use categories. They would consist of new or revised building code for areas to be developed primarily by the private sector, the high grade development areas, and controlled development areas, control measures to resolve certain mixed residential use and to encourage others, support measures for informal housing area formalization, and subsidies to encourage developments to enhance land productivity in the controlled development areas.

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