Reshaping Palestinian Urban Structure towards Sustainable Urban Development[1]

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Summary:

Based on the need to develop a model for sustainable urban development that makes use of all related analysis and to overcome threats of all other proposals like the Regional Plan proposed by Palestinian Ministry of Palestine and the Arc proposed by the American corporation the RAND, the new model is to be named, "t*he Leaf*". The name is referred to the shape of the proposed Palestinian urban structure and related networks. The leaf is to be based on two main concepts: *balanced urban development and land resources sustainability*. Moreover, the Leaf is considering also a long-term vision with regard to absorption capacity, accessibility, and urban and rural developments. The Leaf is considering the Palestinian planning arena. It goes behind the limit of other trials in more than the long-term vision and sustainability. For example, it converts some national policies for urban development into spatial issues. This is clear when the Leaf translates the proposed policy of urban corridors into new cities or urban agglomerations. The Palestinian protection plan is also considered when primary boundaries for such urban developments have been proposed within the Leaf. Some main factors the paper is discussing thoroughly based on the Leaf plan are: Balanced development, long-term vision, capacity, accessibility and coverage, rural development, Israeli settlements, existing urban centers, existing networks, national policy, the Leaf versus other proposals.

Key words: Smart Growth ،Sustainability, Development, Urban Pattern, Networks.

(1) This paper is based on a doctorate research submitted by the author to the University of Gent by 2008.

1 Introduction:

The successive occupations and administrations of the Palestinian Territories lead to directive policies of limited developments serving the occupier goals and plans. As an example, the urban structures and networks have been implemented to serve either military schemes or occupations' colonies. The Israeli colonies as an example got their "integrated" networks and functioned as an integrated structure while the Palestinian communities stayed as history seems to be stopped in early years of previous century. The existing network forced neighboring population withshared interests and business to communicate through the "available" network.

As a "virgin" region for planning and development and due to political circumstances, there are several trials by different bodies to propose physical plans for the PT. All trails used to have short-term vision or medium-term vision in best cases despite the fact of expected major and rapid changes in the region. The PT is facing risky challenges for sustainability of its resources; mainly the land. This is due to the fact of the high population natural growth and expected return of displaced Palestinians. The PT has limited land available for urban development and already has a high population density. For this, it became more essential to explore the sustainability of such resources on the long-term. The paper is designed to introduce critique discussions of the main proposals in this regard. A proposal overcoming most known threats- *the leaf* -will conclude such discussions.

Existing Urban Pattern:

Urban Sprawl[(2)]: There are 546 urban agglomerations in the West Bank (PCBS, 2005). The average community size in the West Bank, in terms of population, is less than 5,000 inhabitants per community. The average gross land per community is about 10 square kilometers or 3 by 3 kilometers as an average space per community. This could sharply indicate an urban scattered structure. Illustration (1) shows existing urban pattern in the West Bank while the focus-blocks in illustration (2) may show to what extent the pattern is scattered and randomly structured.

Arguments behind such a structure are based on several facts. The main cities have been developed as commercial and services centers along the main roads. The rural centers and villages occupy hilltops where they could be close to terrains and water for agricultural activities and better defended. Some cultural behaviors have been the reason for continuous disengagements and new outputs formulations. Fighting for water and land resources have been the main reasons for such behavior. The natural result was a scattered rural agglomerations.

(2) When something "sprawls", it extends and spreads out in a straggling, disorderly fashion. Consequently, "sprawl development" is a land use development pattern in which homes, roads, shopping areas, and offices extend out across the land in a straggling, haphazard way. (http://www.smartgrowthgateway.org/whatissg.shtml)

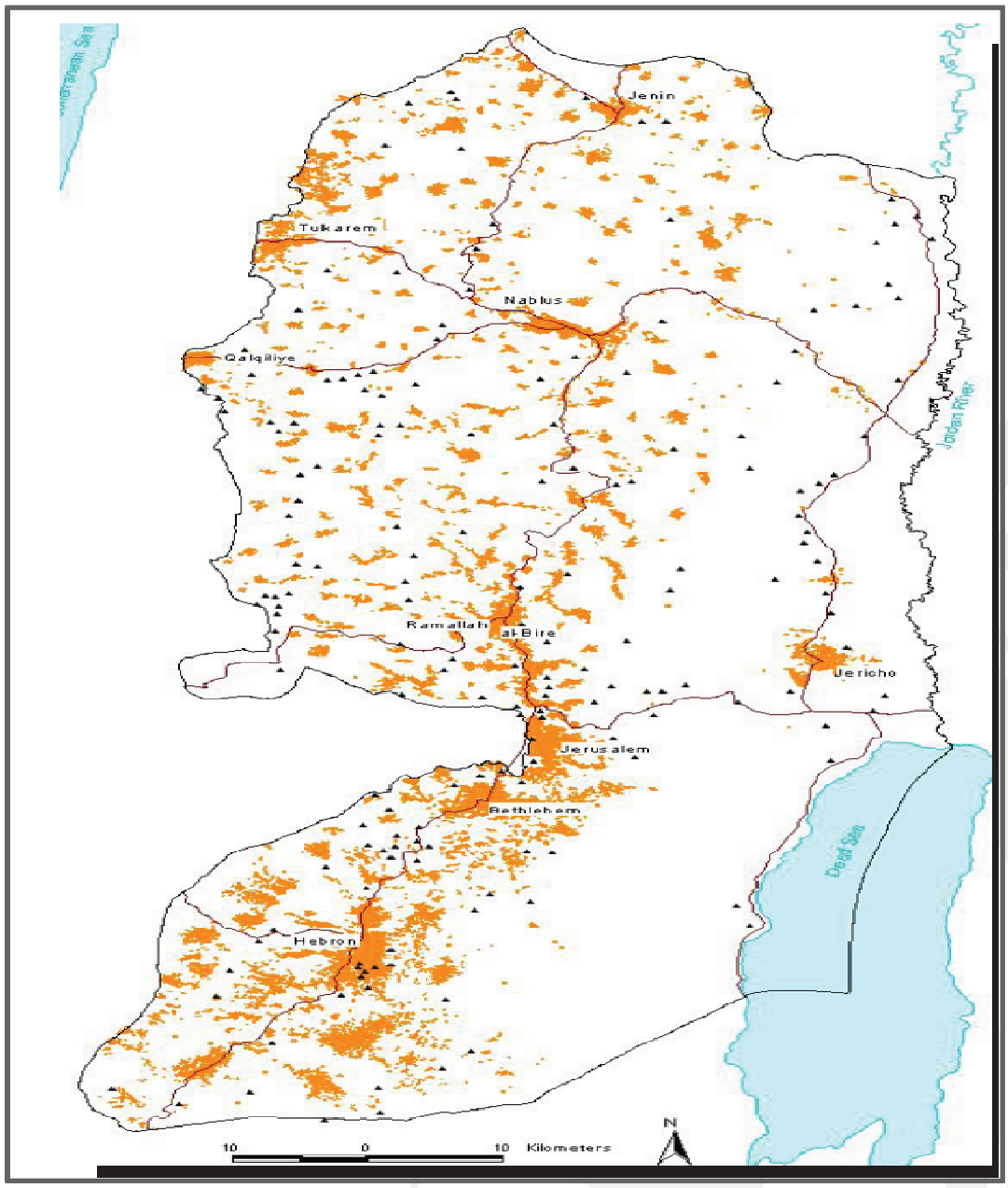


Illustration (1): Existing urban pattern in the West Bank Source: Ministry of Planning and International Cooperation 1998.

The main urban centers followed more organized form along the main road corridors while the rural agglomerations followed a random structure based on available resources and needs. The facts behind such structure result with village-to-city relations rather than village-to- village networks (Ghazi and Shuman, 2005).

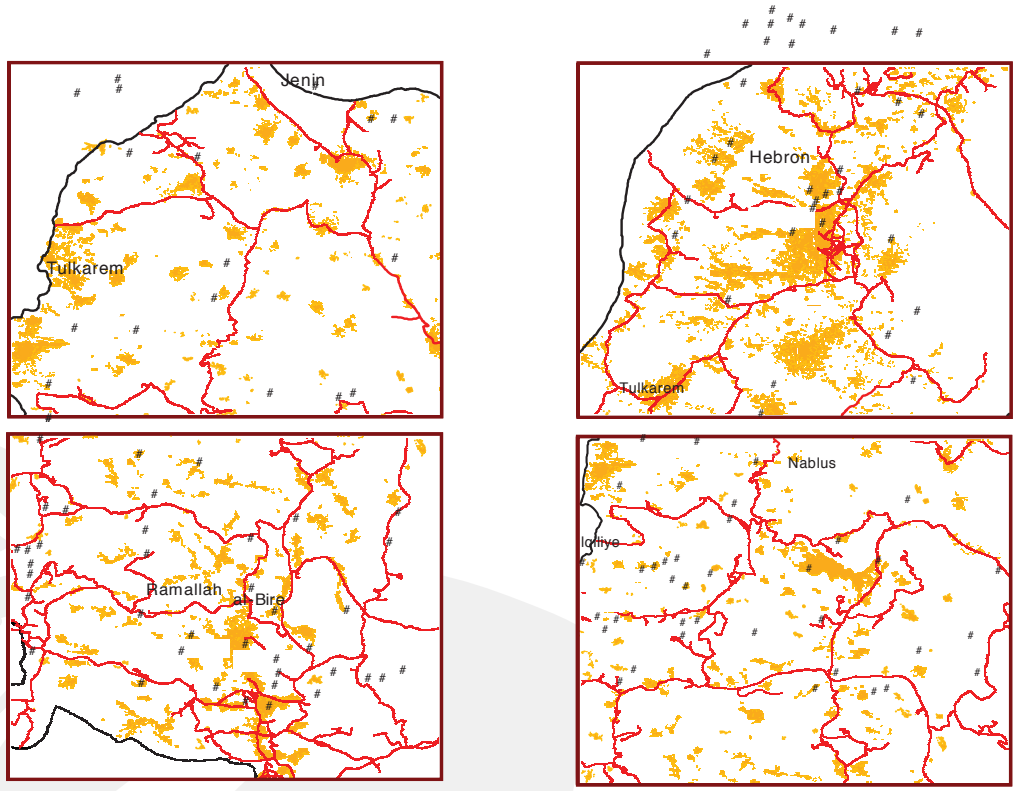


Illustration (2): focus blocks shows scattered Pattern and random structure of urban agglomerations.

Source: Ministry of Planning and International Cooperation 1998 (edited).

Historical Development of Urban Centers:

Historically, changes in main urban centers of the West Bank have been limited to the size of built-up areas. Limited available records of urban development due to political constrains makes it difficult to monitor such development. Illustration (3) shows the only three available records of built-up areas; one during the last period of the British mandate (1917-1948), the other just at the starting period of the Palestinian National Authority (1994) and the last one is the most recent available one (2006), about 12 years after the Palestinian National Authority has started its role in the Palestinian Territories. The maps

show that no significant changes in the urban structure have been recognized. Changes are limited almost to sizes of urban agglomerations.

Through the period of the Palestinian National Authority and within about 13 years, the built-up area has almost doubled. This has missed any sort of planning and management of the development process (ARIJ, 2006). The main driving force behind such an increase is related to loosening the Israeli restrictions on development on one hand and to the hope of an economic boom on the other.

No new agglomerations were developed in about one century while population doubled several times. On the other hand, the region of the West Bank has experienced an enormous change in terms of Israeli settlements. About 300 Israeli settlements have been built following a policy of land grapping (PCBS, 2005). The result was a new independent Israeli urban structure following three politically driven accesses: two east-west accesses and one along the eastern borders (Illustration 4).

According to the Ministry of Planning (2002), the Israeli settlements are to be integrated within the future Palestinian urban structure *when possible*. Some of those settlements may be demolished as they are built over a highly sensitive land or could not be sustainable by any means.

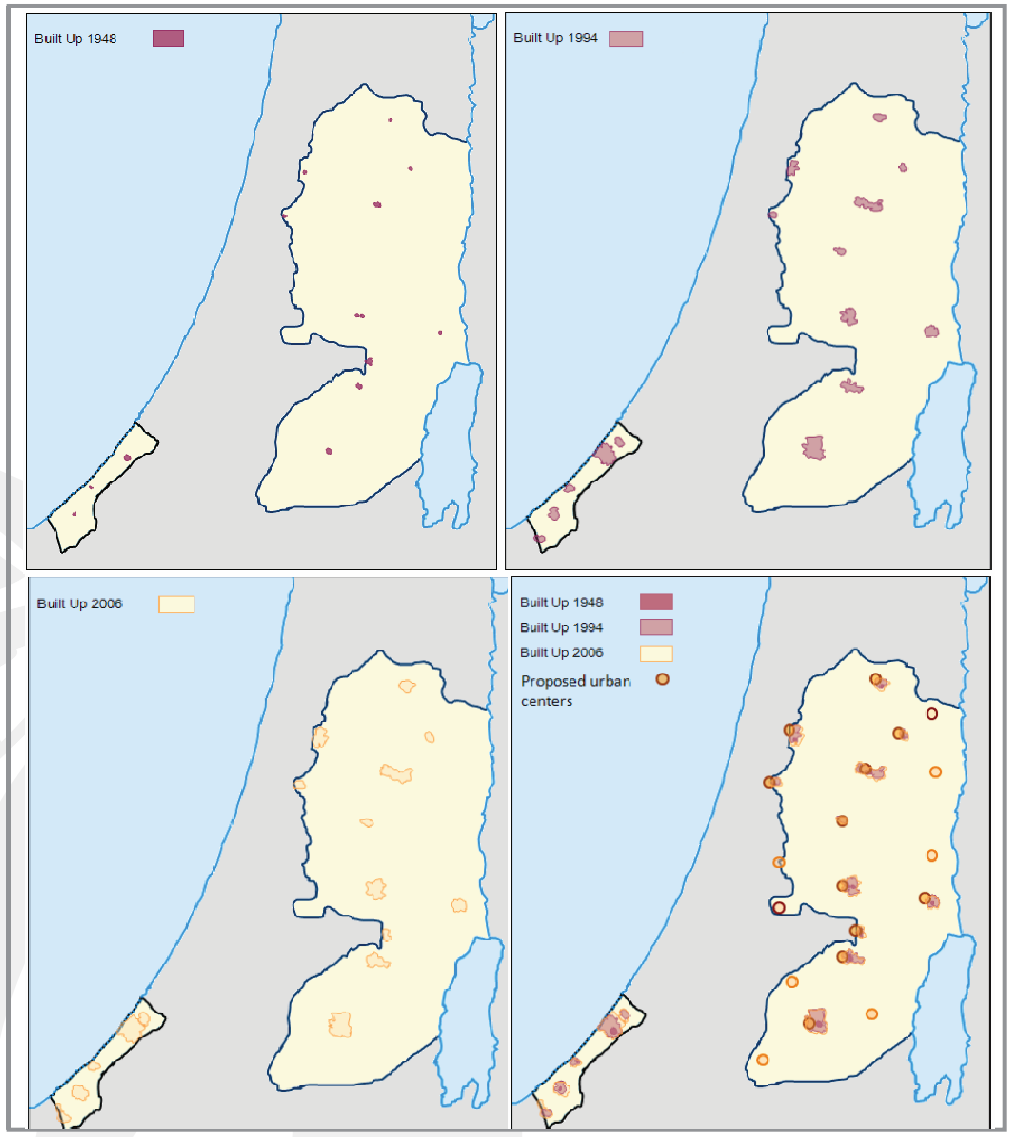


Illustration (3): Historical development of main urban centers in the West Bank in three different years; 1948, 1994 and 2006 and overlapping of those built-up areas.

Source: Ministry of Planning and International Cooperation 1998 and Ministry of Planning and International Cooperation 2008 (edited).

The sizes of the majority of those settlements are within the scale of minor Palestinian villages. Practically, those settlements may not have big influence on the proposed Palestinian urban structure due to the following facts:

- Size is not economically feasible in term of running costs of services and infrastructures.
- Urban topology is not consistent with Palestinian "urban culture" in terms of size and design.
- Most of those settlements are in conflict with protection plans and could be either demolished or changed in function.
- Previous experiences in Sinai, Gaza and Jenin have shown that Israelis would demolish their settlements prior to withdrawal.
- If any of those settlements constructions will continue to exist, then they could be dealt with as Palestinian villages and integrated to the new urban structure.

Urban Concentrations:

The West Bank main agglomerations are mostly along the middle north- south ridge. Two cities (Qalqilya and Tulkarm) are on the western border while Jericho (the most ancient city in the world) is almost at the other edge of the eastern borders with Jordan. Salfit and Tubas are also exceptions; they are located somewhere between the ridge and the borders.

Relative sizes of urban centers in the West Bank are shown in Illustration (5) while densities of the West Bank sub-regions are shown in Illustration (6). It is clear that the eastern part of the West Bank is almost empty. This part has great potential for development; it has land and water resources more than other regions. It also contains the lowest point in the world, the Dead Sea, where many tourists like to visit for medical or religious purposes and located at the southern end of this region.

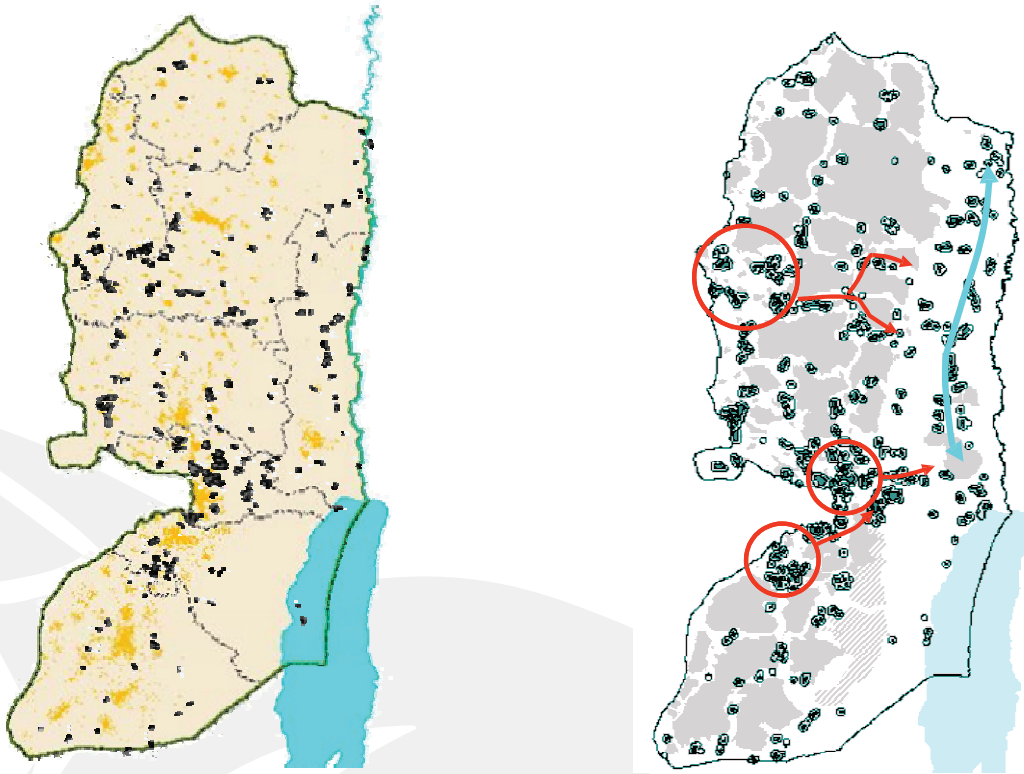


Illustration (4): Israeli urban structure in the West Bank; three geopolitically-driven accesses.

Source: Ministry of Planning and International Cooperation 1998.

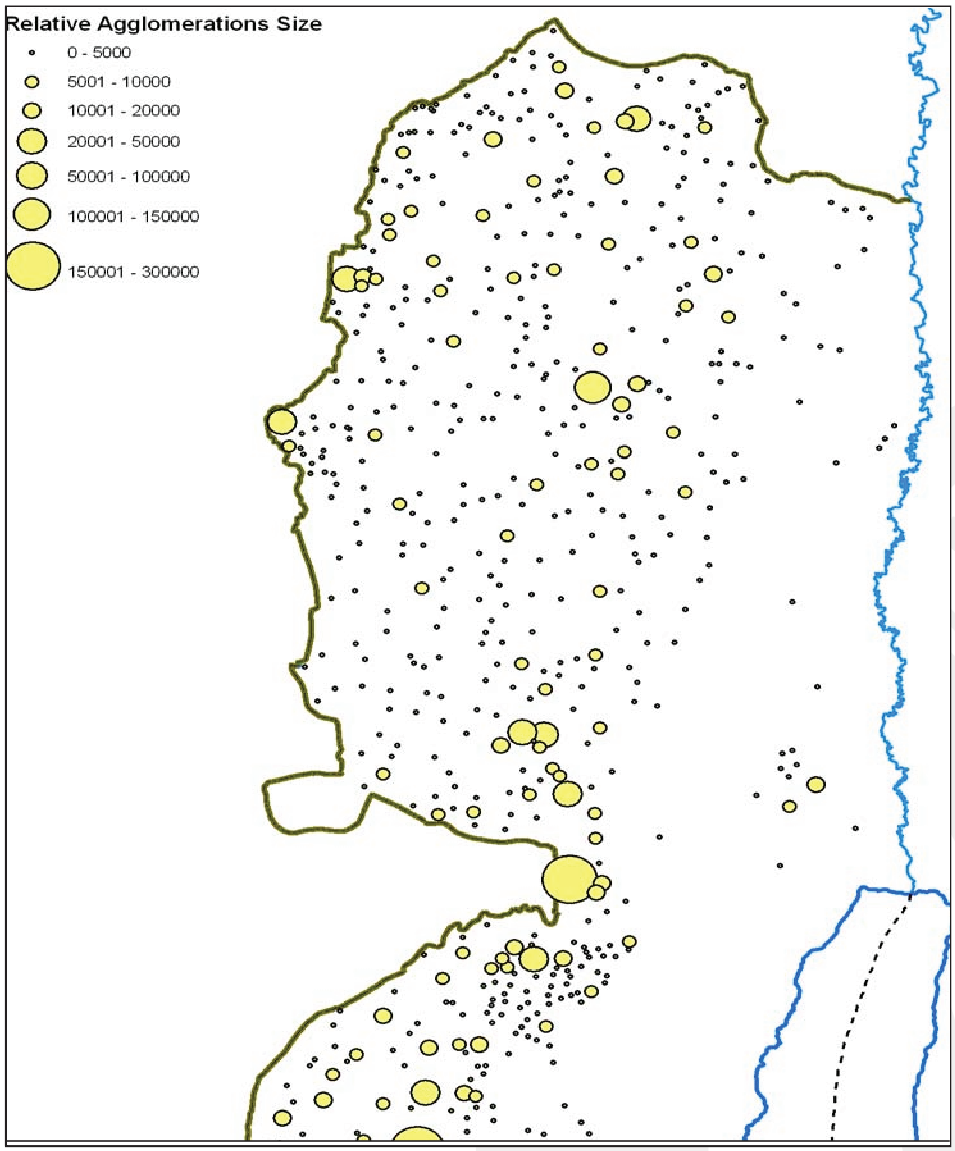


Illustration (5): Relative size of West Bank urban agglomerations.

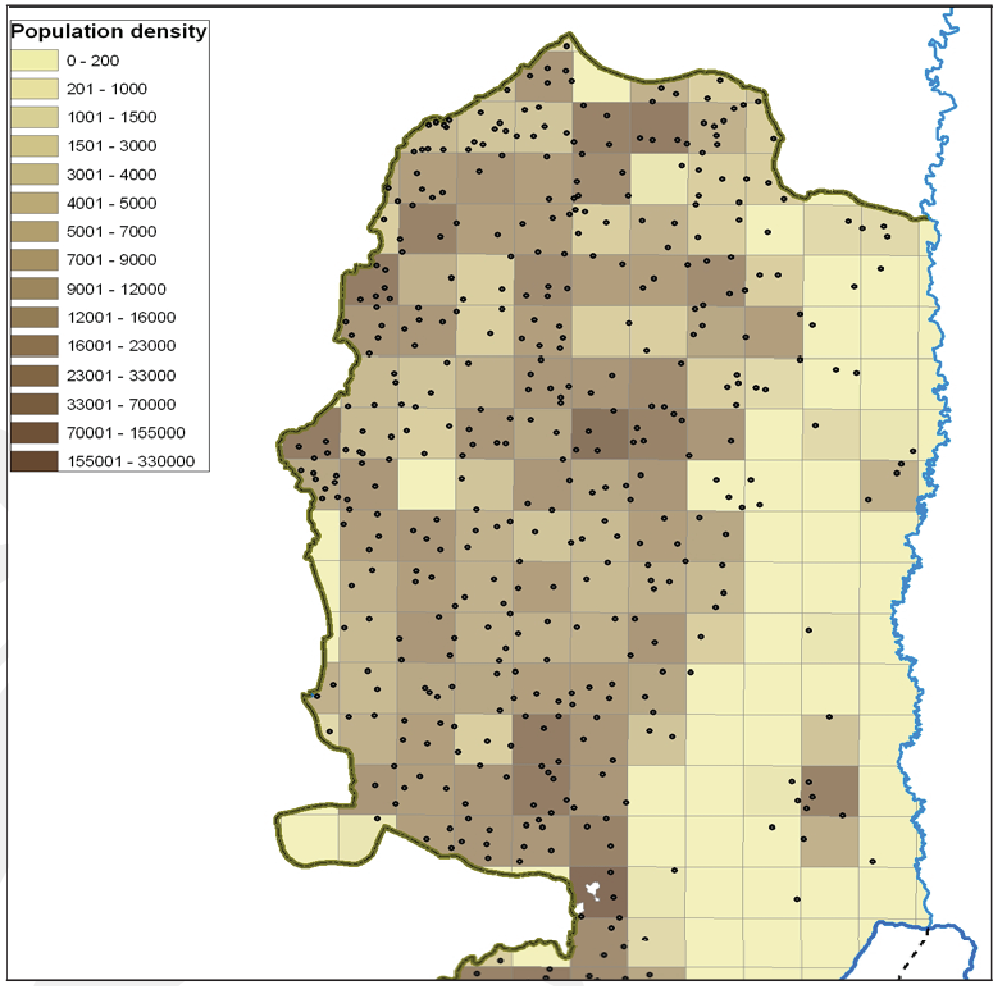


Illustration (6): Relative densities of West Bank sub-regions.

Existing Infrastructure Networks:

The backbone of the existing networks; mainly land network, was made by the British. During the Ottoman period, only dirt roads and part of a railway system were functioning. The "Hejaz" railway connected Istanbul in Turkey with Hejaz region in Saudi Arabia partly through Palestine. Part of this path passed the northern regions of the West Bank as shown in illustration (7). This railway was partially damaged and stopped since the beginnings of the last century during the British mandate on Palestine.

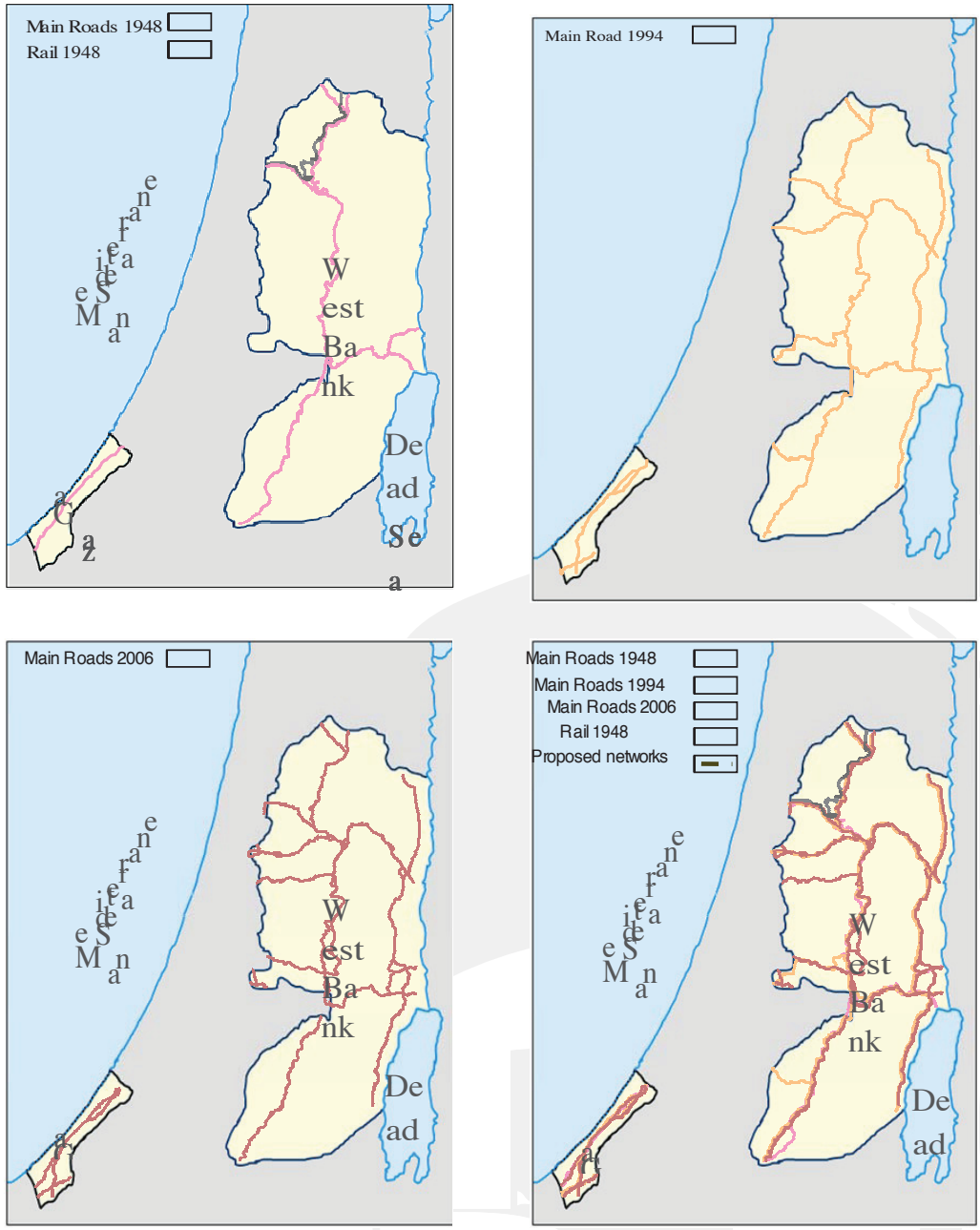


Illustration (7): Historical development of the network system in the West Bank.

The British started to develop the road network on both the national and regional levels since they used to role also Jordan and Egypt beside the whole Palestine. They developed the base surveying maps and cadastre records. By the end of the mandate period in 1948, the British developed the major road corridors in Palestine. Those corridors are still forming the skeleton of the existing road networks. Illustration (7)

shows changes of the main road networks in three selected periods: the end of the British mandate in 1948, the beginning of the Palestinian National Authority period in 1994 and the last available data in 2006.

Illustration (7) also shows relatively minor changes within the early created networks. The British established the road system in principle while the Jordanians in the West Bank and the Egyptians in Gaza Strip (1948-1967) created the other basic networks like wire telecommunications, main water carriers and some electricity networks within the major urban centers.

During the Israeli occupation (1967-?) most of the infrastructure networks have been developed due to international donations through hundreds of NGO's. The establishment of the Palestinian National Authority institutions and the partial self enrolment did not brought major changes to the situation. Developments in the Palestinian National Authority ruled-regions (40% of the West Bank area) are limited to the basic infrastructure and services within the urban communities. For example, the percent of low Level of Service roads have been increased from 15% before 1994 to 50% after 2003 (Maalem, 2003). Table 1 shows some characteristics of the road networks in the Palestinian Territories.

Table (1): Some characteristics of the road networks in the Palestinian Territories.

Total	Local	Regional	Main	Region
2248	1125	634	489	West Bank
621	275	218	128	Gaza Strip
2869	1400	852	617	Palestinian Territories

The entire population of the Palestinian Territories have access to all seasonal roads. According to 2003 statistics, the Palestinian Territories has a density of only 0. 79 km/1000 population in average (0. 98 in West Bank and 0. 47 in Gaza Strip).

Comparing this indicator to other places, this is a low density. In Israel they have 2. 62 km/1000 capita while in Jordan 1. 52 km/1000 capita, 7. 7 km/1000 capita in Germany and 14. 5 in Belgium (illustration 8).

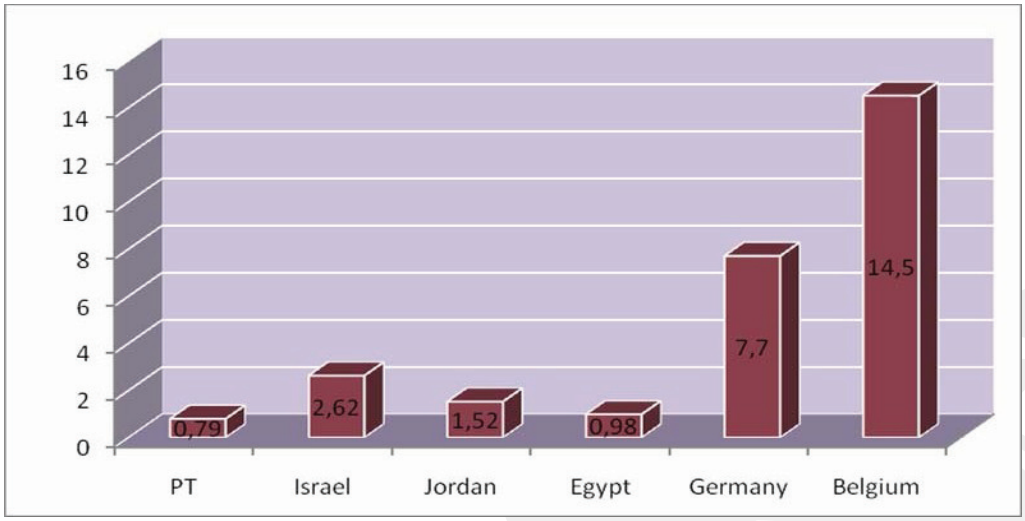


Illustration (8): Road density in kilometers per thousands of population in the Palestinian Territories and selected countries. Source: Maalem, 2003 (edited).

Even when comparing the Palestinian Territories regions to other places using other indicators like the road length-area density, there is still a need for further road construction. In Palestinian Territories this density is 0. 46 km/km^2 compared to 0. 73 km/ km^2 in Israel, 0. 08 km/km^2 in Jordan, 0. 07 km/km^2 in Egypt(3), 1.6 km/km^2 in Germany and 4. 7 in Belgium (illustration 9).

The British demolished the only railway in Palestine about 90 years ago. Since then, the West Bank lacked links to any railway networks. The first seaport to be established in Palestine was in 1929 in Haifa. This seaport was blocked in the face of Palestinian use after the establishment of Israel in 1948. The Palestinians established Gaza seaport instead to be also blocked by the Israelis in 1967 after the Israeli

(3) Area scale for Egypt and Jordan greatly influence the compared results while more reasonable comparison might be done with Israel.

occupation. The Palestinians established Allud airport in 1935 and Qalandia airport in 1952 where they lost any access to both of them in 1948 and 1967 respectively.

No other places in the world one could record decrease in network coverage over time other than the Palestinian Territories. The Palestinians are continuously losing their networks and major transportation nodes like the seaports and airports. In 2001, the Israelis destroyed the last airport and seaport in Gaza Strip before full functioning. Even more, the Palestinians have been forbidden from using the majority of the road networks in the West Bank for the past 8 years. All the roads constructed by the Israelis are either to serve the Israeli settlements or for military purposes. Not a single road has been constructed to serve the original inhabitants. The result was a semi- independent Israeli by-pass road system.

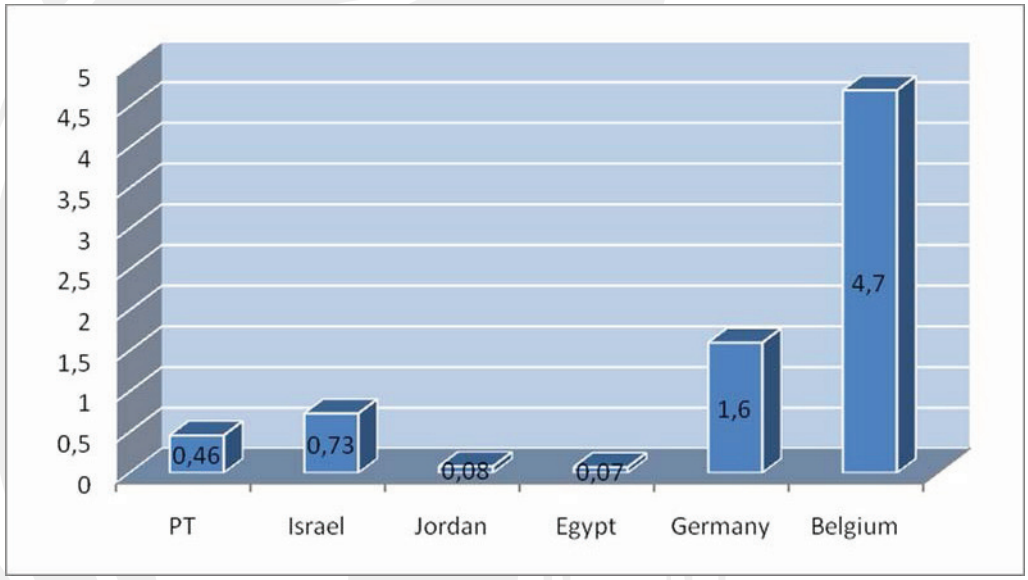


Illustration (9): Road density in kilometers per square kilometers in the Palestinian Territories and selected countries. Source: Maalem, 2003.

The Palestinian National Authority has proposed minor changes to the existing road system. Such changes could not have the chance to be implemented due to geopolitical and economic facts. The Palestinians are not allowed to construct any

roads under Israeli control within the Palestinian Territories. This fact has restricted activities of the Palestinian National Authority with regard to any type of developments outside the urban agglomerations. Illustration (10) shows existing networks of the West Bank region as an organic system.

Even though the free movements of goods and people have been acknowledged and agreed-upon within Oslo agreement, all connections between Gaza Strip and the West Bank have been totally constrained. Three routes from Gaza Strip to the West Bank have been marked by Oslo agreement as "safe passages" until an independent "link" to be constructed.

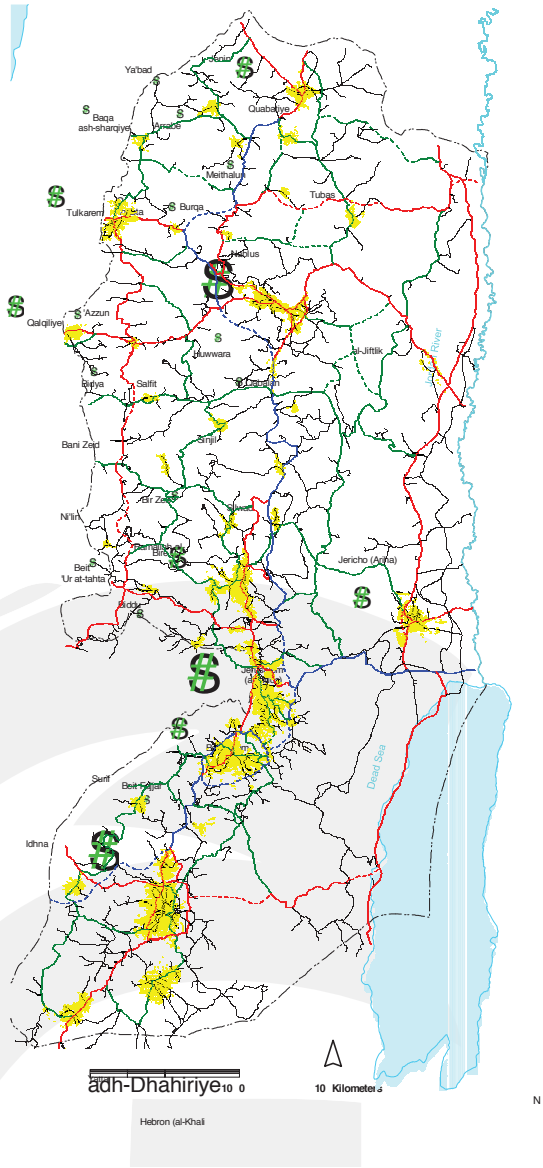


Illustration (10): Existing networks of the West Bank region; an organic system.

Regional Links:

The Palestinian Territories forms a regional node in the Middle East. It connects Asia to Africa and through the Mediterranean to Europe. Through Palestine the most interesting tourist paths could be completed: Petra-the Holy Land- Pyramids. Within a peaceful environment, a tourist to the region could move between different types of tourist attractions. For this promising scenario, there is a need to develop a network of corridors within the region. A proposed network of regional tourist-paths is shown in illustration (11).

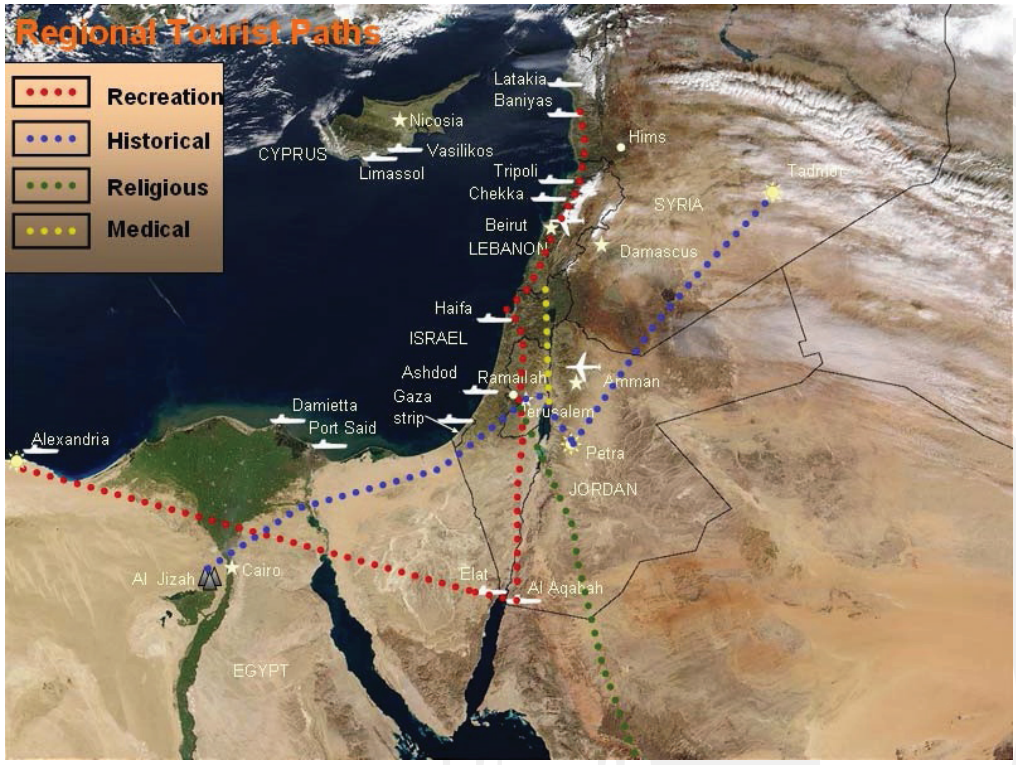


Illustration (11): Proposed regional tourist-paths where the Palestinian Territories is the major node for those paths.

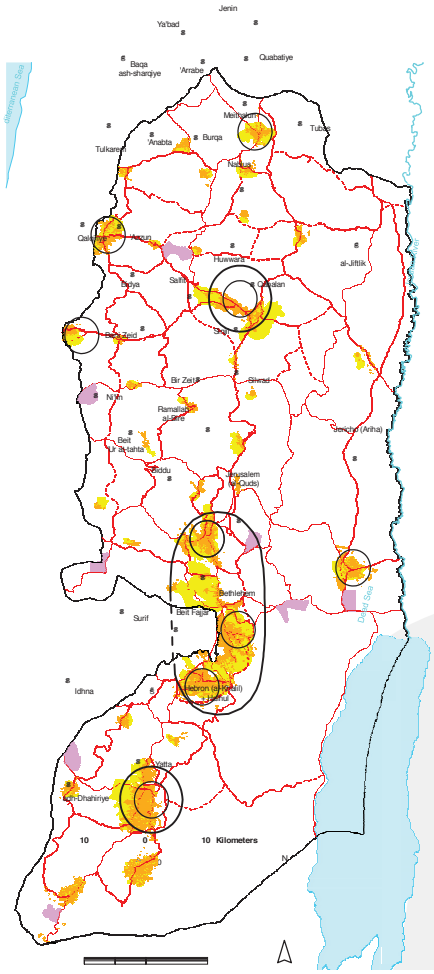
Source of base map: Google Earth 2007.

Reshaping Palestinian Urban Structure and Networking:

Below are critique discussions of the main proposals in this regard. A proposal overcoming most known threats -*the leaf*- will conclude such discussions.

The Regional Plan: Short-Term Vision:

The Ministry of Planning prepared the first Palestinian regional plan for the West Bank in 1998 when uncertainties were high. Moreover, available data and planning indicators were limited (illustrations 12 and 13).



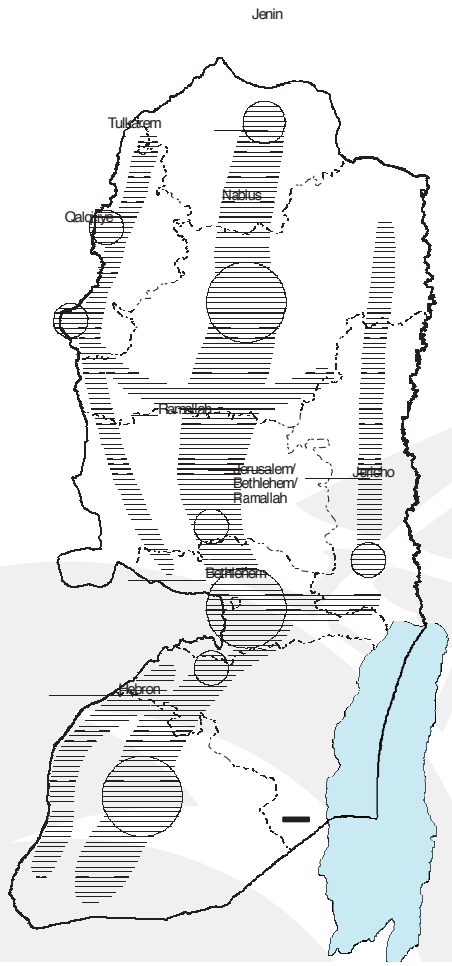


Illustration (12): Urban hierarchy of the West Bank agglomerations.

Illustration (13): urban development policy as proposed by National Policies for Physical Development.

The regional plan has proposed three longitudinal axes for development in addition to two lateral axes. The plan is strengthening the main urban- ridge along the middle series of mountains where six of the eleven governorate administrative centers are located. Moreover, the plan emphasizes the need for enhancing urban development along eastern and western edges of the West Bank region. Natural extensions for the center of the region (Jerusalem) to the east and another axis in the northern part have been proposed. The policy for urban development is based on balanced development with a high influence of political environment context.

The plan does not suggest future strategies to deal with existing and future urban sprawl and random development. It limits the treatment to the administrative implications of semi- decentralization structure by the proposal of the 30 sub-district centers.

The Arc: Shrinkage Planning:

The RAND Cooperation[4] introduced a planning and development concept for the Palestinian Territories. The Arc planners advocate that the concept is more than a refugee housing plan or an infrastructure project but a built symbol of Palestinian aspirations (Adams, 2005).

The main concept of the Arc is a linear urban network based on a high- speed train linking "linking" Palestinian centers to each other and to the Gaza Strip. The "arced" corridor is about 225 km including a railway, highway, open water canal and an energy network.

In general, one could say that the plan does not overcome the main challenges of the Palestinian spatial planning. The capacity of the plan is much below the near future expectations. The plan considers a total population of 5 million inhabitants

including returnees. The West Bank population is expected to exceed this limit in about 20 years excluding returnees and in about 10 years including returnees. This ten-year period is the period needed to implement the Arc, which means that the proposed plan will be “under-designed” at the opening day.

The plan does not deal with about 350 Israeli settlements in the West Bank. There are no assumptions related to mandate on resources as a main player for future development. Physically, the plan will concentrate the population along the middle ridge of the West Bank leaving the majority of the land under geopolitical risk! "*On the political level, the Palestinians feel that the Arc Plan will consequently redraw the West Bank eastern borders with Jordan, as it runs in parallel with the Israeli Eastern Segregation Zone*. "(Arij, 2005). The plan also neglects development of territorial lands on the western side of the West Bank and directs the Palestinian development to the east; away from the Green Line and the border with Israel. It could be considered as shrinkage planning.

On the other hand, the path of the Arc breaks the Palestinian landscape and the Palestinian natural reserves along the eastern West Bank terrains. The open water path proposed by the plan does not consist with the semiarid nature of the region.

The plan lacks the vision of "balanced development" of the territories. It limits the development on the ridge and for the 11 main urban centers neglecting the fact that there is more than 50% of the population living in scattered 550 smaller communities. The plan suggests a future distribution of population growth along existing main urban centers with no reference to their capacity in terms of space or infrastructure. There are no new agglomerations to enhance the absorption capacity or to achieve balanced development of the sub-regions (illustration 14).

Israel 2020: Between Regional Dependent and Independent

A team of 250 planners have prepared a national strategic plan for Israel. A set of comprehensive studies have suggested the bold lines of future major developments of Israel. As a common environment, Israel also does have uncertainties in planning factors; mainly uncertainties [4] An American research institute. related to geopolitical context. The Palestinian Territories is naturally integrated with Israel. The planners introduced several scenarios; one of them was called the peace alternative. Within this scenario, the Palestinian networks are integrated with the Israeli ones. Even more, there is a vision of broad regional integration that includes Jordan, Egypt and maybe beyond (illustration 15).

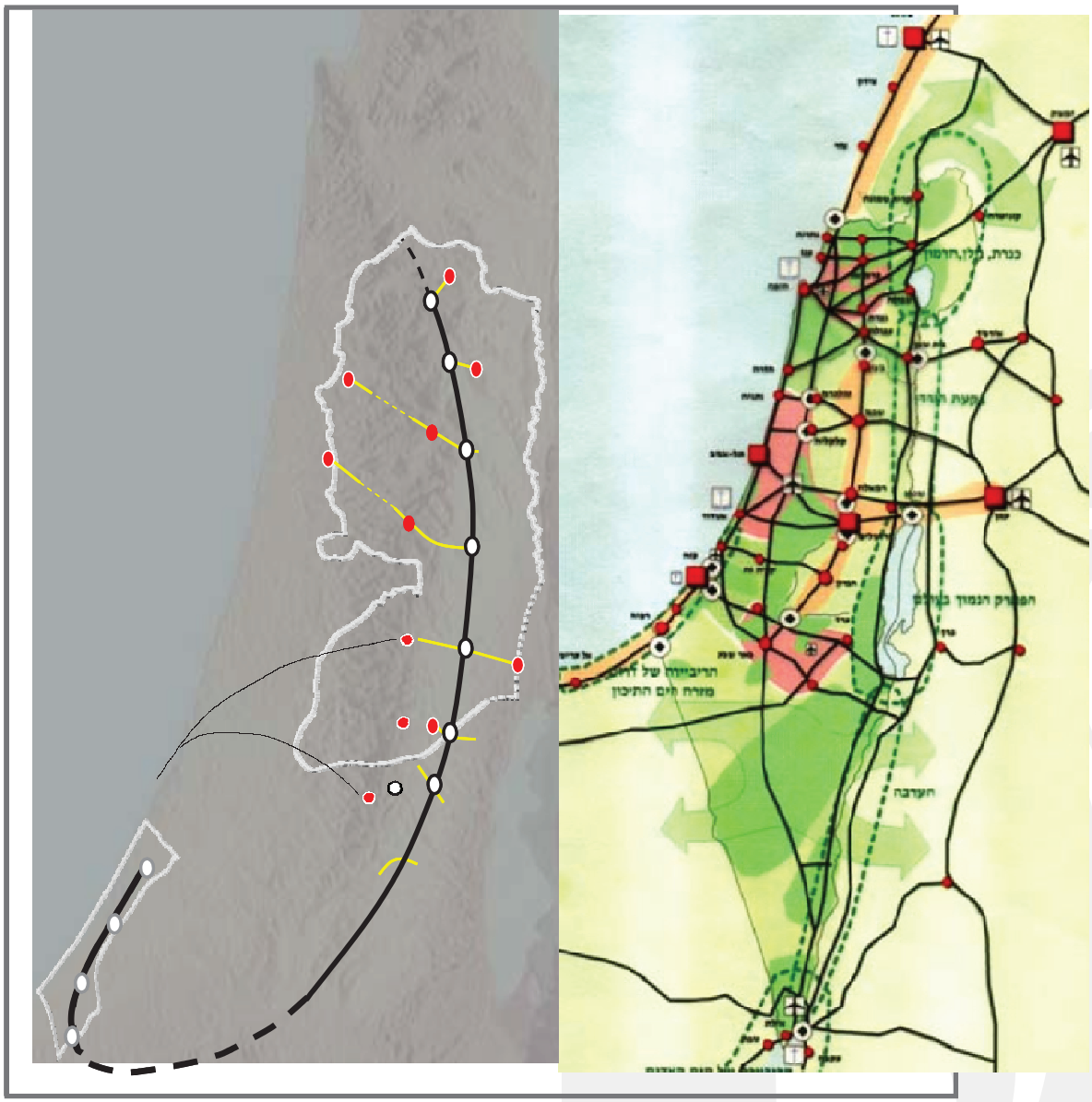


Illustration (14): The RAND proposal for The Palestinian network; the Arc (2005).

Illustration (15): The peace scenario within the Israeli master plan Israel 2020 (Ministry of Economic Development and Regional Cooperation, 1997).

The Leaf: Towards Sustainable Urban Development

There is a need to develop a model, that makes use of all related analysis and to overcome threats of the above plans. The new model is to be named, "*the leaf*". The name is referred to the shape of the proposed Palestinian urban structure and related networks. The leaf is to be based on two main concepts: *balanced urban development and land resources sustainability*. Moreover, the leaf takes into consideration a long-term vision with regard to absorption capacity, accessibility, and rural development. Illustration (16) shows the leaf conceptual plan.

The proposal is to have a four-level model:

- Three regional centers (Nablus, Jerusalem and Hebron) will form three main metropolises.
- The other four district centers (Jenin, Tulkarm, Qalqilya, and Jericho) will form new regional centers.
- Another six regional centers are proposed based on the new model (the Leaf) with harmony with the national policy and balanced development.
- Other local centers and rural communities are to follow a controlled natural growth so to end with minimization of urban sprawl.

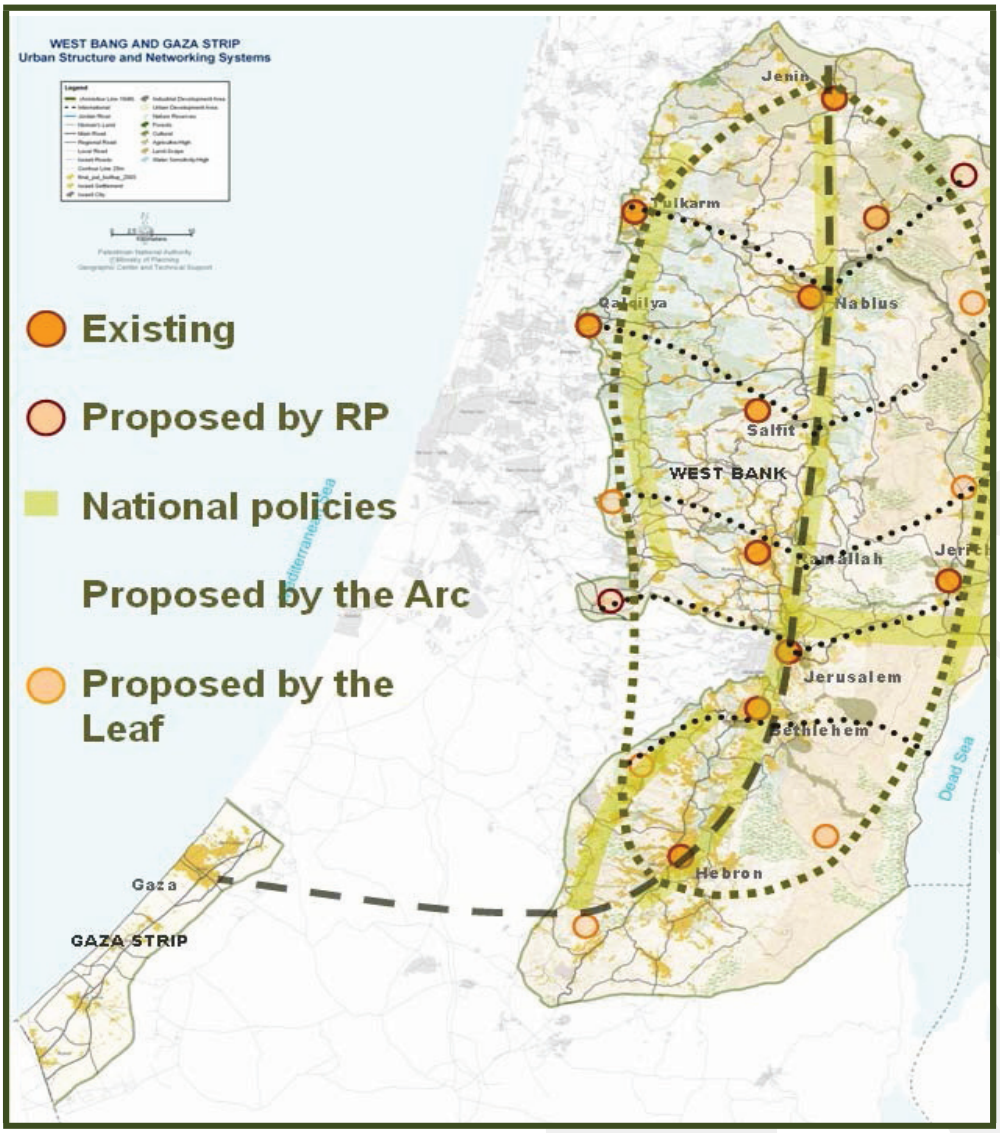


Illustration (16): The Leaf conceptual plan.

The leaf focuses on the Palestinian planning arena. It goes beyond the limit of other trials in more than the long-term vision and sustainability. For example, it converts some national policies for urban development into spatial issues. This is clear when the leaf translates the proposed policy of urban corridors shown in illustration (16) into new cities or urban agglomerations. The Palestinian protection plan is also considered when primary boundaries for such urban developments are proposed within the leaf. Some main factors the leaf considers are:

Balanced development:

Urban centers within the leaf are almost evenly distributed along the West Bank. There are two main objectives behind this concept; rural development and geopolitical concerns. Geopolitically, there is a national need to urbanize marginalized areas mainly along the eastern and western regions. The developments could serve as "urban barriers" against neighboring avidity for this land which may be sharply noticed through the segregation wall and the colonized activities.

The balanced distribution of urban centers is essential in order to offer a sort of "complete coverage" of central services for scattered villages and rural communities. Through the leaf model, all rural communities' residences (about 50% of the West Bank population) will have access to central services within a relatively close urban center. All communities are within a range of 15 kilometers distance from the closest urban center. According to this proposal, almost all communities will form a sort of suburbs to main centers

Long-term vision:

The Leaf emphasizes the long-term vision through assessing all future scenarios of population growth and their needs. The long-term vision here has a critical consequence due to the exceptional population growth and limited resources. Those facts as shown in the research model could drive vital results if not considered in long-term vision. All scenarios and all possible combinations have been considered through developing computerized software. The predicted results are demanding a long-term treatment; otherwise urban sprawl may consume irreversible resources.

Within dramatic changes and high uncertainties environment, one could under-estimate this need of long-term vision. This could be true when considering a design

task but as the discussion is related to planning, it is fundamental to have such a vision in order to draw various scenarios.

In some cases, the development process could be irreversible which demands a pre-knowledge of all possible scenarios long-way ahead. The time horizon 2100 is just the far point needed to draw “a straight” line.

Capacity:

The Leaf proposal achieves more capacity than other proposals on the short and long-terms. The flexible and high capacity of the Leaf accomplishes the sustainability concept. The Leaf is supposed to "absorb" about 50 million inhabitants by the year 2100 without touching the upper limit of the potential land for urban development. This is achieved by providing an urban density of about 20,000 inhabitants per square kilometer. This density is about 40 percent more than existing density of some Palestinian urban centers like Nablus and 40 percent less than the density of some international centers in the region like Istanbul and Cairo. Such density is expected to be reached in some urban centers in about 10 years if urbanized pattern is to continue in the same manner (Tuhinah and Addasi, 2008) an areas may not reach such a density within the short-term but the outcome average is supposed to be close to the planned density. Such a density is convincing when analyzed rationally on one hand and needed to achieve sustainability of land resources on the other.

Illustration (17) shows land needed for urban development based on different proposals. Such needs are compared to potential land resources and limits available for urban developments. Diagrams offer a proof that other proposals compared to the Leaf are unsustainable on the long-term. Some of them will show difficulties to cope with population increase even on the medium-term.

Accessibility and coverage:

The Leaf plan provides integrated-full- coverage networks. The model based on a semi-grid network connecting all proposed urban and economic nodes with potentials for regional corridors. The plan also considers historic urban centers by providing a major corridor linking the majority of such centers. The corridors within the Leaf are proposed to incubate all infrastructure installations based on a "holistic" approach. The major links are supposed to provide space to a major highway, a railway and national infrastructures. Typical sections of the longitudinal major corridors links are shown in Illustrations (18).

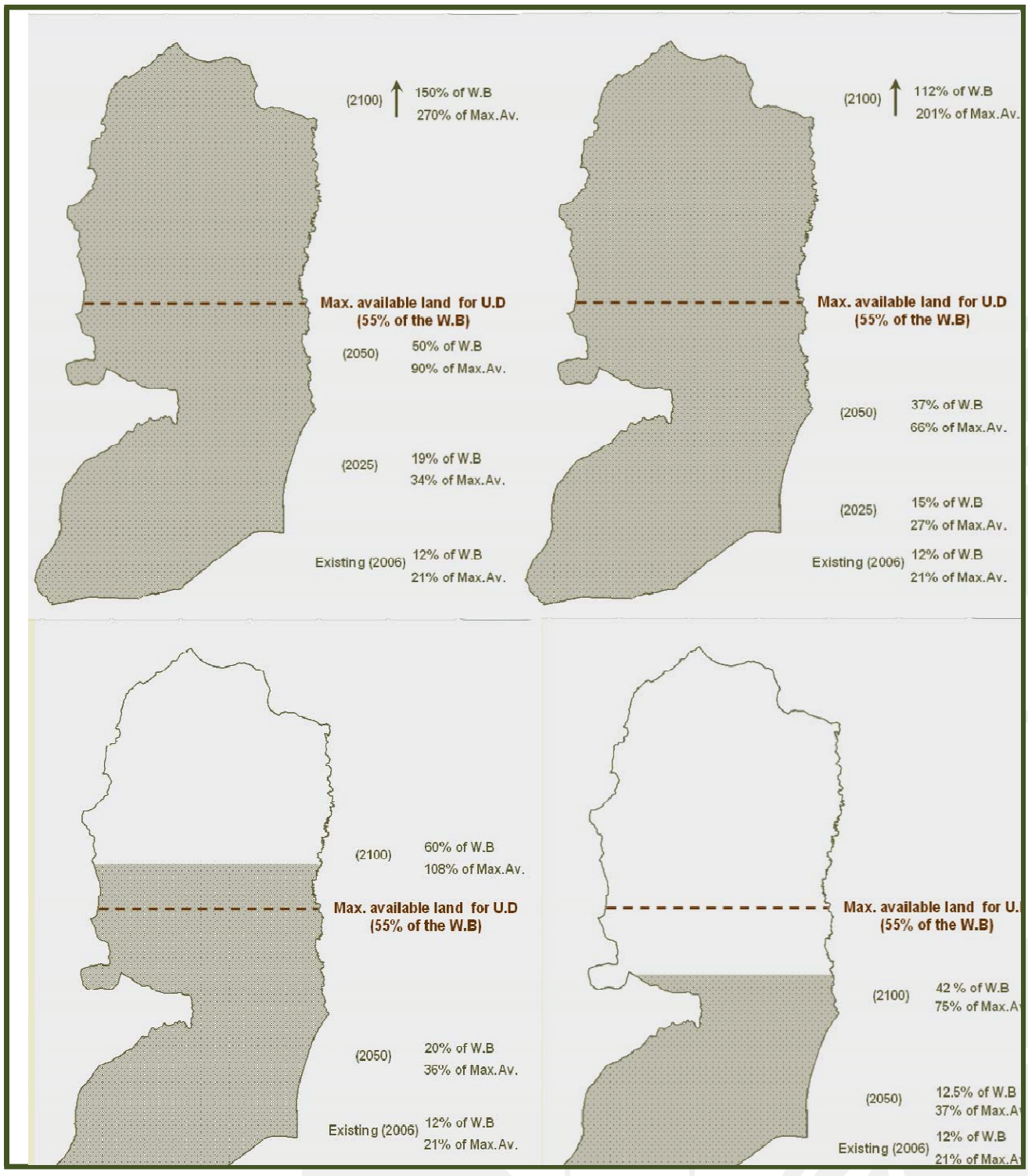


Illustration (17): Land needed for urban development based on different proposals; (a) the regional plan, (b) Ministry of Local Government, (c) the Arc and (d) the Leaf proposal

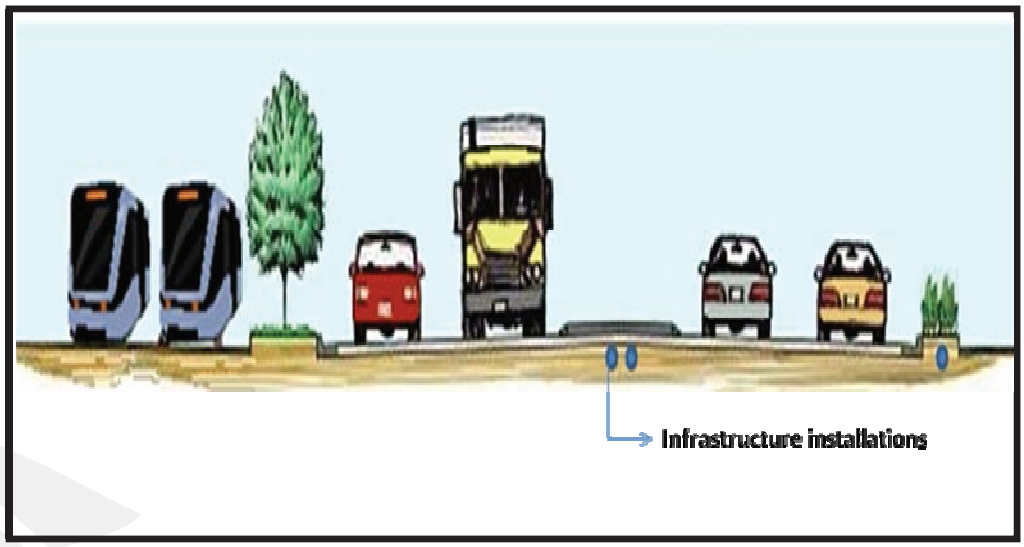


Illustration (18): Typical sections of the major corridors within the Leaf.

Rural development:

The outcome of the "semi-grid" concept results with sub-regions. Such a system provides access to all rural communities within those sub-regions. Each of the existing and proposed urban centers is supposed to form a sub-regional center. All rural communities within the range of the predicted development boundaries of such centers will "melt" within those centers. Other rural communities will form suburbs of the closest urban centers. Table 2 shows all existing and proposed urban centers and their areas for development and expected capacities through an assumed year 2100. Illustrations (19) and (20) shows expected future capacities of existing and proposed urban agglomerations respectively.

Table (2): Existing and proposed urban centers and total population capacity.

Type	Number	Capacity due the year 2100	
Existing Urban Centers		Area	Total Capacity
	1	117. 3	2,346,000
	2	92. 4	1,848,000
	3	80. 1	1,602,000
	4	226. 2	4,524,000
	5	119. 5	2,390,000
	6	120. 5	2,410,000
	7	201. 0	4,020,000
	8	260. 9	5,218,000
	9	81. 2	1,624,000
	10	84. 2	1,684,000
	11	252. 4	5,048,000
Proposed Urban Centers	12	76. 7	1,534,000
	13	88. 5	1,766,000
	14	85. 8	1,716,000
	15	82. 5	1,650,000
	16	85. 6	1,712,000
	17	81. 8	1,636,000
	18	94. 8	1,896,000
	19	110. 6	2,212,000
Totals		**2,341. 8**	**46,836,000**

Israeli settlements:

The Israeli evacuated settlements according to future peace agreement will be either demolished or utilized to enhance absorption capacity of the West Bank. The remaining part of those settlements will function as new Palestinian rural communities and in some cases; a cluster of those settlements could form a new urban center or suburbs of an urban center.

Type	No.	Area km2	Capacity
Existing	1	117.3	2,346,000
	2	92.4	1,848,000
	3	80.1	1,602,000
	4	226.2	4,524,000
	5	119.5	2,390,000
	6	120.5	2,410,000
	7	201	4,020,000
	8	260.9	5,218,000
	9	81.2	1,624,000
	10	84.2	1,684,000
	11	252.4	5,048,000
	Sub-total	1635.9	32,714,000

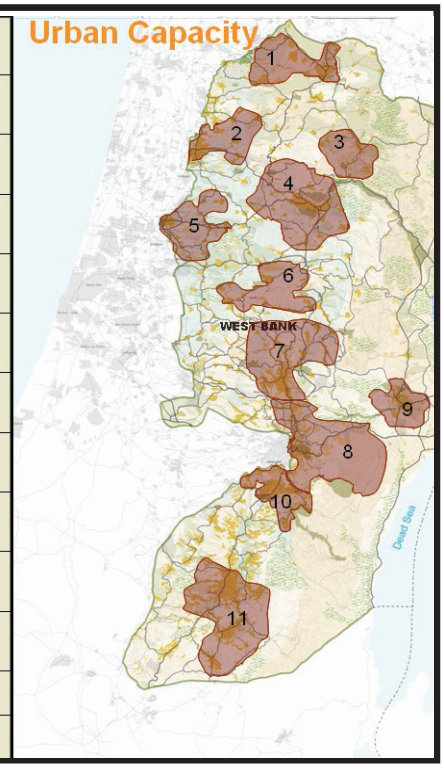


Illustration (19): estimated capacity of existing cities' expansions due to 2100 based on the Leaf plan

Existing urban centers:

According to the Leaf, all existing urban centers of different scales are supposed to continue as urban centers on the long-term. Such centers are of historical and social values. The major corridor within the Leaf is passing or just by-passing the existing urban centers. The exact alignment of this corridor is to consider all planning and

design indicators with no argument on the social and historical values of those centers. Other experiences may show possibility of having an underground system to conserve the cultural and historical values of those centers on one hand and to keep those centers values accessible to public and visitors on the other. Shifting transportation corridors away from such centers may result in gradual negligence through time.

Type	No.	Area km2	Capacity
Proposed by Leaf	12	76.7	1,534,000
	13	88.3	1,766,000
	14	85.8	1,716,000
	15	82.5	1,650,000
	16	85.6	1,712,000
	17	81.8	1,636,000
Proposed by the RP	18	94.8	1,896,000
	19	110.6	2,212,000
Total		2341.8	46,836,000

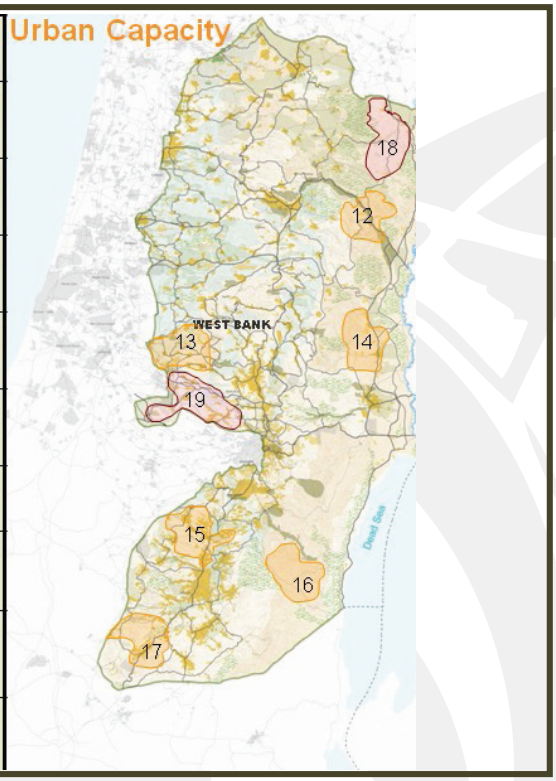


Illustration (20): estimated capacity of proposed new cities due to 2100 based on the Leaf plan

Existing network:

The proposed elements of the Leaf make use of existing networks, where possible. The plan also makes use of existing transportation corridors that pass historic urban centers. This does not neglect any necessary modifications needed for alignments.

The assigned paths of the Leaf are relatively flexible. A wide band reserved for those paths will give an opportunity to have the proper design for the corridor alignment. This could also make it possible to cope with existing network links when possible and when serving the overall concept. Illustration (21) shows relation to existing network links.



Illustration (21): Proposed network by the Leaf (dark green), relation to existing network links (brown) and the arc (orange).

National policy:

National policies emphasize urbanizing the eastern region of the West Bank and propose urban development along the western part. Illustration (22) shows the bold lines of the proposed urban development within the National Policies for Physical Development. The proposed urban centers within the Leaf comply with that proposed urban policy within the National Policies for Physical Development (illustration 16).



Illustration (22): Proposed urban centers within the Leaf and the proposed urban policy within the National Policies for Physical Development.

Conclusion:

The Leaf aims to overcome all visible threats of other proposals. A comparison matrix (table 3) summarizes relative accomplishment of basic indicators by different proposals. The negative mark (-) indicates lack of accomplishment for the items under discussion while the positive mark (+) indicates successful treatment of the item by the proposals. The Leaf as a new proposal targeted to overcome all other proposals' threats is expected to have no negative marks. This may not indicate the ideality of the proposal but may indicate high accomplishment of the seen objectives.

Table (3): Relative accomplishment of basic indicators by different proposals.

The Leaf	**The Arc**	**Regional Plan**	
+	-	-	Capacity
+	-	+	Balanced development
+	-	+	Relevance to national policy
+	-	-	Long-term vision
+	-	+	Rural development
+	-	+	Existing urban centers
+	-	-	Israeli settlements
+	-	+	Existing networks
+	-	-	Accessibility/ coverage

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