

# Status of the Environment in the occupied Palestinian territory

*A Human Rights - Based Approach*

**2011**

*- Summary -*

Prepared by:



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## Preface

In 1997, the Applied Research Institute – Jerusalem (ARIJ) published its first comprehensive "Environmental Profile" for the West Bank entitled, "The Status of the Environment in the West Bank". This was prepared based on sound environmental information integrated into a designated Environmental Information System (EIS). It included an overall description and assessment of the state of the environment and a blue-print for future actions to be considered to protect and sustain the environment of the West Bank.

In the same token, after a decade, in 2007, ARIJ published an updated profile for the occupied Palestinian territory (oPt), entitled, "The Status of the Environment in the oPt - 2007". This was prepared based on harmonizing and updating the related physical, environmental and socio-economic data available in its databank, and bridging the gaps to develop a more comprehensive and updated EIS. This study covered both the West Bank and Gaza Strip, in order to bring into the forefront the geopolitical conditions that have impacted the potential for sustainable development in the oPt.

Now in 2011, ARIJ has taken the initiative of updating and developing the environmental profile to incorporate a comprehensive time sequence order for the state of the environment in the oPt. This time, for the first time, such reporting has been conducted from a human rights based approach, rather than adopting the prevailing approach, which defines sustainability from a need-based approach. **“Man has the fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits a life of dignity and well-being, and he bears solemn responsibility to protect and improve the environment, for present and future generations ”**Stockholm Declaration, (1972); **“All human beings have the fundamental right to an environment adequate for their health and well-being”**, The Experts Group on Environmental Law of the World Commission on Environment and Development, (1987).

ARIJ is proud to present “Status of the Environment in the occupied Palestinian territory – A Human Rights Based Approach, 2011”, which has been developed with the support of the NGO Development Center (NDC) and the Swiss Agency for Development and Cooperation (SDC). This Profile provides a narrative, statistical and cartographic description of the current environmental status in the oPt, presents the correlation of the environmental aspects with human rights, the existing international laws and treaties that establish the rights to a healthy environment, the impact of the human rights violations on the environment, and the interrelationship between the Israeli violations and the deterioration of the environment in West Bank and Gaza Strip. In addition, it presents the major trends and changes in the environmental and socio-economic indicators over the period from 2007-2010. Furthermore, the legal and institutional aspects of the

Palestinian environmentally related sectors are presented and analyzed. It also includes a list of recommendations to monitor and control further environmental degradation. It is noted that the Profile will be posted on ARIJ's Website, in order to ensure accessibility to decision makers, the public masses, and all other who may benefit from them.

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**The occupied Palestinian territory within the current regional context**

## Sustainable Development from a Human Rights' Perspective

The relationship between development and human rights, both in terms of concept and practice, has a long history. Human rights and sustainable development are interdependent, inextricably linked, and mutually reinforcing. People are at the center of sustainable development, and as such, "The logic of human rights in development is inescapable" (Robinson, 2002). The development of a society requires the meeting of the basic needs of each individual. The right to development declares that all people should be treated equally in the access to the resources and the means of sustainable development.

The link between sustainable development and human rights has developed over the years. The first time for the right to development to be recognized as an individual and collective right was in 1981, in Article 22 of the African Charter on Human and Peoples' Rights "All peoples shall have the right to their economic, social and cultural development with due regard to their freedom and identity and in the equal enjoyment of the common heritage of mankind". Later, the right to development was proclaimed by the United Nations (UN) General Assembly in its resolution No. 41/128, the Declaration on the Right to Development of 1986, which was adopted. Article 1.1: "The right to development is an inalienable human right by virtue of which every human person and all peoples are entitled to participate in, contribute to, and enjoy economic, social, cultural and political development, in which all human rights and fundamental freedoms can be fully realized". Article 1.2: "The human right to development also implies the full realization of the right of peoples to self-determination, which includes, subject to the relevant provisions of both International Covenants on Human Rights, the exercise of their inalienable right to full sovereignty over all their natural wealth and resources". The UN Conference on Environment and Development (Rio Declaration) that took place in 1992 recognized the right to development as one of its 27 principles. Principle 3 of the Declaration states "The right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations". Since then the importance of applying a human rights' based approach to meet the objectives of sustainable development has been better understood. The right to development was afterward recognized in the Arab Charter on Human Rights and reaffirmed in several international instruments including, the Vienna Declaration and Programme of Action of 1993, the Copenhagen Declaration on Social Development and Programme of Action of 1995, the Millennium Declaration, the Monterrey Consensus of 2002, and the World Summit Outcome Document of 2005. The Declaration on the Rights of Indigenous Peoples of 2007 recognized the right to development as an indigenous peoples' right, as they have the right to define their own development priorities.

### Challenges for Palestinian Sustainable Development

The first step of achieving sustainable development is the establishment of a viable Palestinian State; sustainable development in the occupied Palestinian territory (oPt) can't be divorced from the existence of a Palestinian State. The PNA has been seriously working on and engaged in the process of State building and reform. The PNA has formulated and introduced a wide variety of measures to promote sustainable development in the oPt. Moreover, the PNA has recently put much effort to develop the



Palestinian Development and Reform Plan (2008-2010) and the Palestinian National Development Plan (2011-2013) with the goal of establishing a sustainable Palestinian State. Still sustainability is not possible under occupation. The Israeli occupation remains the fundamental constraint to sustainable development and the main cause of environmental degradation in the oPt. The Israeli occupation has fragmented the continuity of the natural landscape, human capital accumulation, and physical infrastructure, and has severely limited the ability of the PNA to implement a comprehensive and effective national strategy for sustainable development. Sustainable development can't be achieved in the absence of peace based on justice. The current situation is not providing the Palestinians with full opportunities to formulate sustainable development policies.

The Israeli occupation policies and practices have always violated the Palestinians' basic human rights, including the right to development. The Israeli occupation has placed restrictions on the development of the oPt and individual human development. Israel seized complete control over the oPt's land and natural resources soon after the 1967 war. The enjoyment of the Palestinian indigenous citizens of their right to development has been hindered by the Israeli interests in the Palestinian land and resources. The imposed Israeli sets of policies and rules affect the Palestinian environment and natural resources and cause their degradation. The unsustainable utilization and exploitation of natural resources in addition to the Israeli ambitions in the oPt have destroyed the vital Palestinian infrastructure and environment.

In 2005, the Israeli withdrawal from Gaza Strip represented a shift in Israel's policy, whereby occupation would no longer be dictated by a direct military presence to facilitate policing and control. By fencing in Palestinian communities, controlling their vital resources, and maintaining control of entry and exit points, the Israeli army can far more efficiently control the Palestinian population. Instead of easing movement restrictions in the oPt, the policy of internal closure has increased, while access to the Gaza Strip has been further restricted as a result of declining security in the region. Moreover, the ongoing Israeli air strikes on the Strip, by destroying the vital infrastructure, are imposing restrictions on the Gazan development, in addition to violating the right to development among other human rights. The major challenges impeding the Palestinians from achieving sustainable development are summarized below:

**Lack of Geopolitical Integrity in the oPt:**

The fragmentation within the oPt has caused great social, economic, and political implications. The lack of geographical continuity within the oPt has created a major physical impediment towards achieving Palestinian sustainable development. Thus, geographical cohesion within the oPt will form an important step towards a sustainable Palestinian State.

**Lack of Environmental and Natural Resources Sovereignty:**

The Israeli policies not only have controlled the Palestinian environment and natural resources and prevented the Palestinians from their right to fully utilize their own resources, they have previously and are also currently causing damages to the environment and depleting the natural resources. This Palestinian environmental and natural resources sovereignty is an important factor in regard to the oPt's capacity for

sustainable development. In addition, the lack of complete Palestinian environmental and natural resources sovereignty will perpetuate the ongoing inability for Palestinians to sufficiently manage their natural resources within their borders which is the important precursor for environmental sustainable development.

### **The Presence of Two Contradictory Planning Schemes**

Palestine is characterized by the presence of two contradictory planning schemes that aim at exploiting its natural resources to serve two peoples: these are the endogenous Palestinian population and the Israeli settlers and army, which has been controlling the area since 1967. The fragile Palestinian environment has been the first casualty of this reality. It has been exposed to pressures ensuing from the practices of the Palestinian population, on the one hand, and from the practices of the Israeli Occupation, on the other hand, which have significantly contributed to changing the environmental features of the oPt.

### **Population Growth:**

The high rate of population growth is presenting a challenge for implementing sustainable development in the oPt. The growing population means an increasing demand on the basic needs (water, food and energy) among other things. Population growth places high pressure on the environment and natural resources, and hence impedes the achieving sustainability in the oPt. Moreover, the high population growth leads to an increase in the labor force which necessitates the creation of thousands of jobs per year, forms a further challenge for sustainability in the oPt.

### **The Israeli dominance over the Palestinian Economy:**

The Israeli- Palestinian economic relationship is characterized by an overwhelming Israeli dominance of the Palestinian economy. The Israeli occupation actions including closures and restrictions on movement and goods have essentially enabled Israel to control the Palestinian economy according to Israel's own geopolitical interests. The Second Intifada led to the erosion of the Palestinian production base due to destruction, closure, and lack of maintenance. In addition, Israeli actions severely inhibit the ability of certain sectors to develop to their full potential. Furthermore, the economic sustainability in the oPt will be vital to ensure genuine independence, and to address the high poverty levels currently existing there.

### **Poor Governance:**

The democratic government in the oPt lacks stability. The institutional and governmental frameworks are not capable of effective governance. The PNA continues to be plagued, by factional infighting, as well as allegations of corruption and nepotism. Furthermore, the PNA suffers from donor-aid uncertainty and systematic Israeli efforts aiming to undermine it. Crippled economy in the oPt, as well as the Israeli increasing pressure on the PNA have led to further complications in the situation, and in more hardships on the Palestinian population in the oPt.

## **The Road to Sustainable Palestine**

Although the road to sustainable development in the oPt is paved with challenges and obstacles, still there is an opportunity for sustainable development in the territory. Various interventions play major roles in achieving the Palestinian sustainability. Below is a list of these interventions

1. Establish a national commission for sustainable development that should consider respect of human, environmental, social, and cultural rights. The commission needs to include relevant ministries, NGOs and private sector.
2. Restore the Palestinian sovereignty over the Palestinian natural resources. Without sovereign control over the Palestinian natural resources, the oPt will be unable to implement comprehensive environmental and otherwise managements.
3. Ensure that the exploitation of Palestinian natural resources should be in a sustainable manner.
4. Adopt new techniques and tools and green technologies to help in protecting and sustaining the natural resources.
5. Utilization of non-conventional resource including: solar power, treated wastewater, and desalinated water.
6. Adopt Local Agenda 21 approach.
7. Develop the infrastructure and improve the basic services provided for the Palestinian citizen.
8. Preparing a comprehensive traffic management plan and constructing ring roads that encircle and link urban areas
9. Clarify the mandates of public institutions through reviewing and developing frameworks, legal acts and guidelines, in addition to encouraging the cooperation among these institutions.
10. Encourage the involvement of the private sector at all levels of environmental management and planning.
11. Building a strong and independent economy. Economic viability will be vital to ensure genuine independence, and to address the high poverty levels currently existing in the oPt.
12. Promote to the international community the costs of the environmental damage and the use of economic instruments
13. Promote good and effective governance to ensure political stability, effective economic planning, security and provision, as well as environmental management. This will be vital to improve social and economic development in the oPt.
14. Capacity building and human resources development to ensure better and effective environmental management and sustainable development planning.
15. Promote public awareness regarding environmental rights and sustainable development.
16. Increase and ensure the public participation of all concerned citizens and social sectors, at all levels of environmental management and planning.
17. Develop community-based environmental and nature resources management
18. Enforce the environmental law and apply the polluter pay principle.
19. Strengthen regional and international cooperation and coordination.

## 1. Charting the oPt Geopolitical Situation

The overall geopolitical situation in the occupied Palestinian territory underlies the injustice committed against the Palestinians who were deprived of their lands and right to establish a State of their own. The Israelis had and still has ambitions to grab much of the Palestinians' right; something mostly demonstrated through the systematic and organized land grab policy based on discriminatory laws tailored and forced by the Israeli occupation to realize their land grab plans in spite of their explicit violation to the international laws and regulation and convention.

Israel's intention toward the lands it illegitimately occupied during the 1967 war with the immediate colonization activities it carried out following the occupation of the land; particularly of East Jerusalem, when Israel illegally redefined its boundary and illegally claimed that part of the city as their eternal Capital. More to that Israel has systemized laws of residency in a discriminatory manner to exclude Palestinian Jerusalemites to deprive them their residency rights in the occupied city, which resulted to strip –to revoke- some 15000 Palestinian Jerusalemites of that right since the occupation of the city in 1967. Even more, Israel has synthesized their discrimination policy to the Palestinian Jerusalemites residential rights, complicating all sorts of procedures to acquire proper licensing to build houses and cope with their population growth as the Israeli municipality of Jerusalem gave no attention to them, in fact they master minded procedures to make it difficult for them to accommodate the municipality requirement for building licensing; of which it included ridiculously astronomical licensing fees, restriction on construction in terms of land use and number of floors, when simultaneously the Israeli municipality waved such procedures/ fees for the Jewish settlers in the occupied city of Jerusalem.

During the Israeli belligerent acts of occupation and colonization, Israel violated a bundle of the international and human right laws and regulations when it intentionally facilitated the settling of its citizens in the occupied Arab territories, in hundreds of illegal settlements. With the start of the Peace process, Israel maneuvered the signed agreements with the Palestinians not to alter the status on the ground by using the myth of natural growth to justify the illegal act of construction. As Israel continued to breach the agreements signed with the Palestinian, peace talks encountered several bumps, hence, several initiative were introduced to recommence peace talks all of which stumbled by the turmoil that stormed the Israeli political arena. However, when Israel commenced the construction of Segregation Wall in the West Bank, Israel's intention became more explicit in how it aims to tailor the final scene of the peace process with the Palestinians, annexing large chunk of the West Bank to Israel's proper, continue to claim both sides of Jerusalem as its capital, and maintain sovereignty over natural resources and the border points.

Since the course of the peace process, Israel demonstrated distinguishable indifference to the main theme of what the peace process was based on “Land for Peace” and for Palestinians and the logical receptive it meant Israel withdrawal from the lands occupied in 1967 in exchange for peace with the Palestinians but Israel had a different interpretation in mind and in its mind alone as it exerted all efforts to fortify the settlements in the occupied territory, expanding existing settlements and even building new one, making sure in the process to eliminate the possibility of a Palestinian state to

emerge on a viable ,and geographical contiguity terms. The Israeli Segregation Wall under construction also employed by Israel to put forth to what they believe would be a final settlement of the conflict disregarding in the process the terms of the peace process and what the Palestinians stand on such acts, in fact Israel has disdain all international efforts to stop the settlements' construction, and expansion and totally disregarded the stance to dismantle the Segregation Wall. Israel endeavor to control the occupied territory mainly depended on the altered matrix of transportation grid that established two different network of transportation one designated for the settlers and the other for the Palestinians both of which based on territorial carve up.

Moreover, Israel insistence to hold and maintain control over occupied territory classified according to the Oslo Accord as area "C" has undoubtedly contributed immensely to hinder the Palestinian development in that area, which constitute some 61% of the West Bank thus denying Palestinian of their natural rights to expand there to cope with the population growth or even develop the industrial, commercial, or tourism sectors among others. On the other hand, Israel spared no effort to exploit the natural resources of the occupied territory to its own interest and that of its settlers' citizens, building industrial zones throughout the West Bank to hold thousands of Israeli based factories operating illegally and contrary to international law; exploiting the lands' natural; resources, water the most important of which, in addition to exploiting cheap skillful Palestinian labor force, and uncontrolled, unregulated industrial and environmental standards.

In the Gaza Strip; Israel's seizure there led to the ongoing humanitarian crises; depriving the people there access to proper medical treatment, medicine, and of many of the simple human rights aspects, including proper housing or even restoration of houses following the Israeli war on Gaza and to proper livelihood means, such as fishing, an industry that diminished for thousands of families in Gaza with Israel decreasing the fishing right territory as was determined in the 1994 Oslo Accord from 20 nautical mile to 3 nautical mile in 2009.

Twenty years have elapsed since the Middle East Peace conference was inaugurated in Madrid and regrettably, a permanent status agreement has not been achieved between Israelis and Palestinians. Meanwhile, oPt has been subjected to major geographical and demographic changes. Unless immediate actions are taken, instability will continue and may spread to the whole region.

Ultimately, the incapacitation if the international community to deal and stand up to the Israeli unilateral actions aimed at the De-Palestinization of Jerusalem, the expansion of settlements, expropriation of Palestinian land, compartmentalization of Palestinian land with bypass roads, and the Segregation Plan; is the greatest failure of the Peace Process.



**The Geopolitical Status of the Palestinian territory 2011**

## 2. Praxis of Human Rights in the Palestinian Urban Sphere

### Urbanization Trends

Now, more than half of the world's population are living in urban areas (UNHABITAT, 2008). The World Bank (2009) is expecting that nearly two billion new inhabitants will be dwellers of cities in the coming two decades. Within the Palestinian context, statistics show that the Palestinian societal development is being “forcibly” urbanized, as almost three-quarters of the oPt inhabitants live in urban areas (69% in the West Bank and 81% in the Gaza Strip) (PCBS, 2009). According to PCBS (2009) the rate of natural annual growth in the oPt reached 3.3%, and it is considered high when compared with other countries, as the world growth rate is 1.2%, the Arab States is 2.1%, and the less developed countries is 1.5% (PRB, 2008).

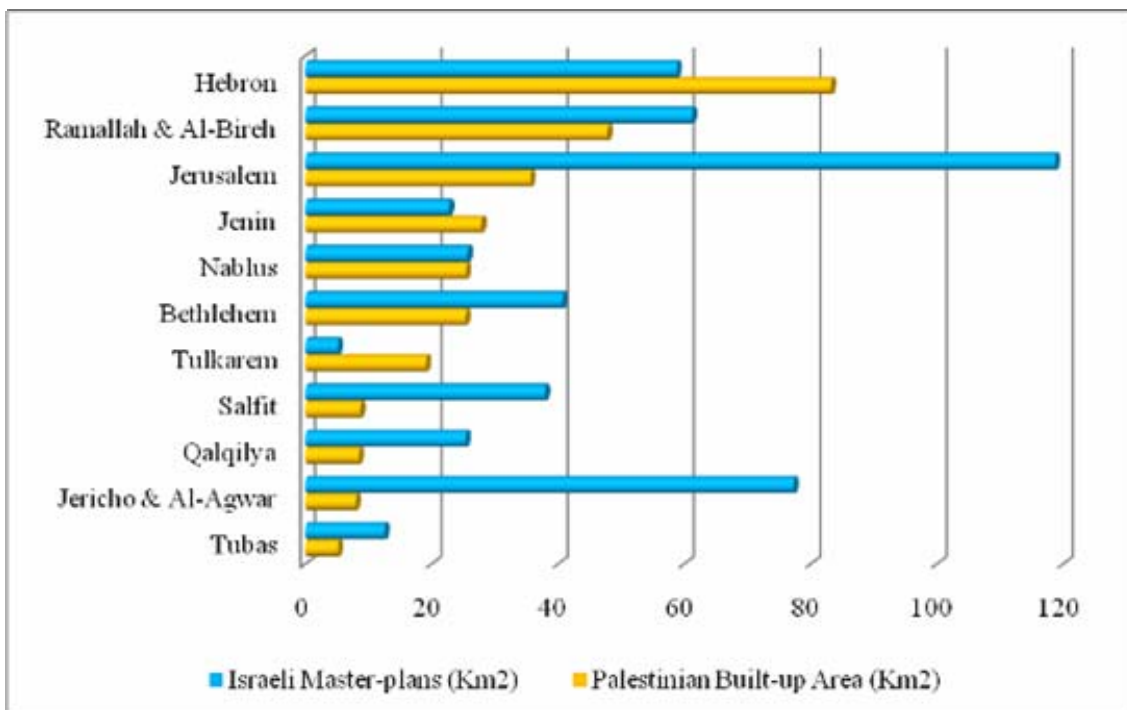
**Human Rights in the Context of Urban Sphere:** At the advent of the Universal Declaration of Human Rights for the year 1948, the world was characterized by a rural nature, and in spite of the existing concern for the over-growth of some cities, the problem had not been focused from the human rights perspective (COHRE, 2010). Therefore, many charters, laws, constitutions, and international human rights treaties have been presented with the overarching goal of pointing out the need for protecting “rights” in a specific sphere, namely: the urban sphere. The most prominent charter on this regard is the World Charter on the Right to the City that was elaborated at the Social Forum of the Americas & the World Urban Forum. COHRE (2010), traces the legal antecedents of World Charter on the Right to the City, and concludes that the founding principles are extracted from the following documents: General comment n<sup>o</sup> 4,7 and 15 of the Committee of Economic, Social, and Cultural Rights (CESCR) of the UN ;Articles 34.1 and 45.f of the Organization of American States (OAS) Charter; European Charter for the Safeguarding of Human Rights in the City (Saint Denis, 2000); Statute of the City (Brazil, 2001); Montreal Charter of Rights and Responsibilities (Montreal, 2004); Constitution of the Autonomous City of Buenos Aires (Argentina, 1996); Article 65 of the Constitution of Portugal (1976); Article 47 of the Constitution of Spain (1978); Article 182 and 183 of the Constitution of Brazil (1988); Action Program of the XVII Ibero-American meeting of Heads of State and Government (2007) point 29; and Articles 31 and 376 of the Constitution of Ecuador (2008).

*“The right to the city” “the right to the city is the collective right of all people that dwell in a city to equitable usufruct of cities within the principles of sustainability, democracy, equity, and social justice.”* Like other human rights, this is an interdependent right (COHRE, 2010).

**National Trends of Urbanization:** In 1997 the distribution of housing units in the West Bank territory for urban, rural and camps were 48.0%, 45.5%, and 6.5%, respectively (PCBS, 1999). However, this distribution has drastically changed as reported in the PCBS census for the year 2007, where the housing units for urban, rural and camps became 69.6%, 25.0%, and 5.4%, respectively (PCBS, 2009). This entails that the rate of urbanization in the housing units in the West Bank territory was increased by 46% on behalf of the rural and camps areas. This reflects the silent rural-urban migration or the geo-demographical disturbance induced in the West Bank (El-Atrash, 2009). A housing unit is a building or part of a building constructed for one household

only. The tenure of the housing units has been also changed as the reported household resided in owned housing units for the year 1997 and 2007 were 75.4% and 81.1%, respectively. Whereas, household resided in rented housing units for the year 1997 and 2007 were 12.2% and 9.6%, respectively (PCBS, 1999 & 2009). In the same token, the Gaza Strip has witnessed an unconventional urbanization trends. In 1997, the population of Gaza Strip calculated about 1 Million in comparison to the year 2007 that calculated 1.4 Million (PCBS, 1999 & 2009). A Striking example on the radical change in the urbanization trends in the Gaza Strip is the plummet rates in the numbers of war refugees. The plummet factor stands at 3 as the percentile of war refugees in the years 1997 and 2007 in the Gaza Strip were 65.12% and 15.77%, respectively (PCBS, 1999 & 2009). It is worthy to notice that the highest decrease in the distribution of refugees in the Gaza Strip between the years 1997 and 2007 was in Rafah Governorate. This could be interpreted due to the Israeli consecutive military practices that targeted that area during that period. Nowadays, statistics show that more than 628,000 Israeli settlers inhabit about 188,267 dunums of the West Bank territory in terms of built-up area, noting that the Israeli settlements have future master-plans that calculate 486.262 km<sup>2</sup> of the West Bank total mass area (ARIJ GIS-Database, 2011). In comparison, circa 2,700,000 Palestinians inhabit only 282,503 dunums, in terms of built-up areas.

However, the Palestinian inhabitants are trapped and cantonized into military-administrative designations of area A, B, C, and Nature Reserves. The current distribution of the Palestinians into area A, B, C, and Nature Reserves is 52.1%, 41.4%, 6.4%, and 0.1%, respectively. This means that 93.5% of the Palestinian West Bankers inhabit only 36% of the West Bank mass area that falls under the PNA planning jurisdiction (i.e. area A and B) (ARIJ GIS-Database, 2011). A thorough analysis of the available aerial photos of the West Bank, would reveal that the Israeli slated future plans exceeds those of the Palestinian communities in 8 out of the West Bank 11 Governorates; namely: Ramallah & Al-Bireh, Jerusalem, Nablus, Bethlehem, Salfit, Qalqilya, Jericho & Al-Agwar, and Tubas.



**Allocated Area for Palestinian and Israeli Settlers in the West Bank**  
 Source: ARIJ GIS-Database (2011)



**Limitations on Palestinian Urbanization:** The inefficient existing laws, regulations, and decrees that wrap the legal planning system in present Palestine include the Ottoman Turks (1516-1917); British Mandate laws (1917-1948); Jordanian laws in the West Bank Governorates and the Egyptian laws in the Gaza Strip (1948-1967); Israeli military orders since 1967; Decrees issued by the PNA since its inception in 1994. During the period of Ottoman rule in Palestine, a Land Register Law known as the “Tabu” was introduced in 1858 to establish rights of land ownership. Accordingly, the Land Settlement Ordinance to the year 1928 that was introduced during the British Mandate also tried to solidify rights of land ownership (Halabi, 1997). However, both approaches failed to document the situation of land ownership in, what is now the oPt, as the Arab family-based communal farmers who formed the majority of the landowners resisted those systems for several reasons. Nevertheless, Israel - as a consequence of 1948 war - took control of 78% of Mandate Palestine (ARIJ, 2007).

Up until the 1967 war, the West Bank came under the Jordanian administration and Egypt took the overriding responsibility in the Gaza Strip. Since land ownership has always been the key issue in the Palestinian-Israeli conflict, Israel neither recognized nor authorized the traditional communal based system of ownership that had existed for many generations on the land that covered almost the entire Palestinian rural areas. Knocking effects on the last-present occupation era (Israeli Occupation), Hanafi (2009) indicates that one of the many repertoires of the Israeli “state of exception” occurs when issued law carries along with it the rule of suspension of this law without specifying a context. Using such a power technique, Israel has been able to constrain the Palestinian residential construction, predominantly using military orders. In 1971, the Israeli authorities decreed Military Order No. 418, under which all significant decisions on permits and plans would be made by a High Planning Council (HPC) appointed by the Military Commander. Most members of the HPC have been military officers and all are Israeli citizens. Israeli Military Order No. 418, “*Order for the Planning of Towns, Villages and Buildings (Judea and Samaria)*”, outlines the requirements for obtaining building permits in the West Bank territory. The later iniquitous policy of freezing land registration was initiated through the issuance of Military Order concerning Land and Water Settlement No. 291 for the year 1968, by which the Israelis could claim that the majority of unregistered land constitute “government property”, as at that time only 30% of the whole West Bank area was registered with the Land Register as part of land settlements initiated first by the Mandatory authorities and subsequently by the Jordanian crown. Such a strategy ended with the confiscation of more than 2,910 km<sup>2</sup> (51%) of the West Bank geographic area as to “state property” lands (ARIJ GIS-Database, 2011).

The Palestinian-Israeli Interim Agreement (Oslo Accords) stipulated that all civil powers and responsibilities related to the territory, including planning and zoning, in populated area, will be transferred to and assumed by the council. However, the planning and zoning of Area C that remained under the Israeli full control were to be transferred to Palestinian jurisdiction during the further redeployment phases. The PNA have inherited a legacy of inefficient and chaotic institutions that deals with the different facets of the Palestinian domestic life poorly and inefficiently. And, unfortunately based on the fact that the Palestinian development is coerced on a donor driven vision, they faced the trouble of financing future plans, especially when they are of hefty budgets related to the state building scheme.

## **Key Recommendations:**

Palestinian planners do not have till now a clear strategy that would lead the future urban development. This could be more tangible in the case of the current Israeli controlled areas. Experiences have shown that Palestinians have always been indulged into hectic day-to-day activity management. This weakened the links between the different levels, and a loss of focus resulted (NRO, 2009). Therefore, there is a need to formulate a strategic urban development vision at the local, regional and national levels. It is quite important to accentuate on the importance of instigating the local stakeholders to think from a new angle when it comes to urban growth. As the consequences of the present scenarios of urban growth could be dramatic, there is a pressing need to consider other alternatives and their effects on the sustainable development process. Therefore, a series of stringent measures should be proposed and adopted, which would help meet the developed strategic objectives for the future urban growth, in a participatory manner. Nevertheless, such measures should be considerate to the : 1) fact that the Israeli occupation tends to last for indefinite time, and such a case would exacerbate the difficulties faced in engaging with Israeli authorities regarding the environmental-planning issues; 2) fact that there is low level of priority for environment-planning issues within the Palestinian society, and 3) the prevailing donor-driven paradigm would affect the slated interventions by the Palestinian relevant authorities to be engaged in the accomplishment of such measures.

The blueprints of such measures could be scantily presented, as follows:

- Establish a vision for future sustainable urban growth in the oPt, based on the Palestinian rights to urban self-determination; to appropriation of public spaces; and to participation.
- Promote and adopt of local strategic planning for the urban environment.
- Enhancing the environment-planning capacities, and orienting an alternative planning paradigm.
- Pooling and networking with regional and international expertise in the multi-facets fields of interest.

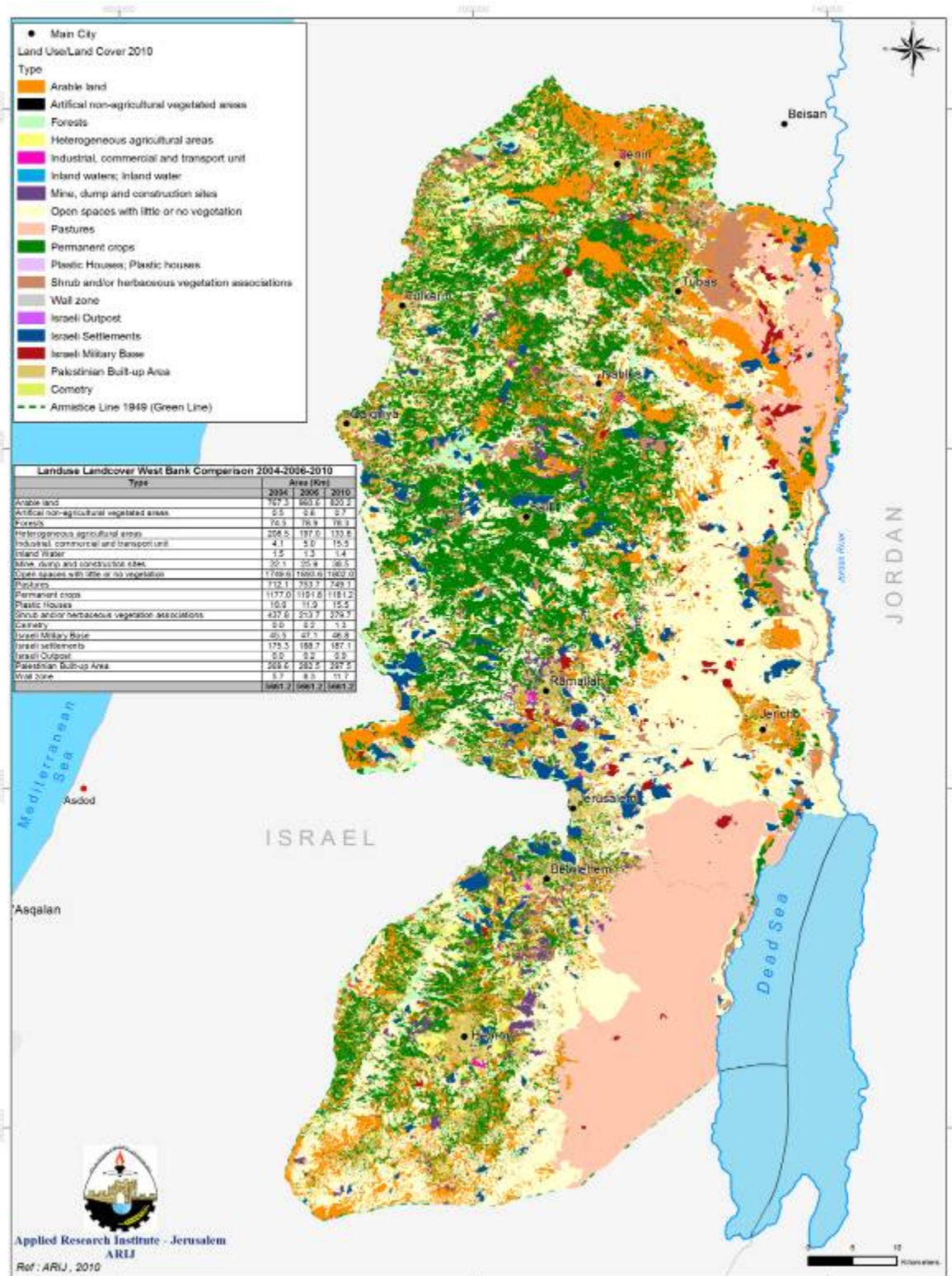
### 3. Palestinian landscape response to socio – natural and geopolitical interactions

Landscape is a complex system of various interrelationships of cultural and ecological diversities attached to people's identity. Landscape is a human concept which reflects our relationship as human with the place, our interaction with its natural components creates distinctive characteristics and features of the place. Worldwide, the rapid growth in demography, industry and economy, in addition to the lack of integrated and inadequate regional landscape management and planning accelerated the rate of landscape changes and transformations; in most cases degrading them.

**Instruments that Protect the Landscape:** The European Landscape Convention (ELC) was the first agreement to address the need to manage land uses for a sustainable landscape. It also recognized the right of people to ecologically-healthy landscape. According to the ELC, landscape is an identity of each society and an important factor for their quality of life; it is the space that supports cultural, social and economic development and thus the well-being of the community. This relationship between landscape and quality of life was abstracted from the understanding of the Universal Declaration of Human Rights adopted by the United Nations (UN) General Assembly in 1948. The Declaration affirmed that the economic, social and cultural rights are indispensable for everyone's dignity and the free development of everyone's personality. It also affirms an existence worthy of human dignity and a standard of living adequate for the health and well-being of each person and of his family. Lately, the relationship between landscape and ethics is being addressed frequently where the relationship conveys the idea of harmonic association of the society with nature, in addition to the idea that landscape is the context in which the society operates and is developed, landscape is a legacy and testament to the daily experience creating an important component of a whole context by which all activities and actions of all generations who occupied this piece of land, should be protected and managed in the present and projected to the future.

In the Palestinian context, landscape is an ambiguous and imprecise term. It is not addressed as a fully independent subject or sector, and it is not yet treated as a right; instead, it is integrated and presented within other sectoral strategic policies. So far, landscape subject in oPt was tackled through tourism and natural resource management, considering it a constitutive part of the environment.

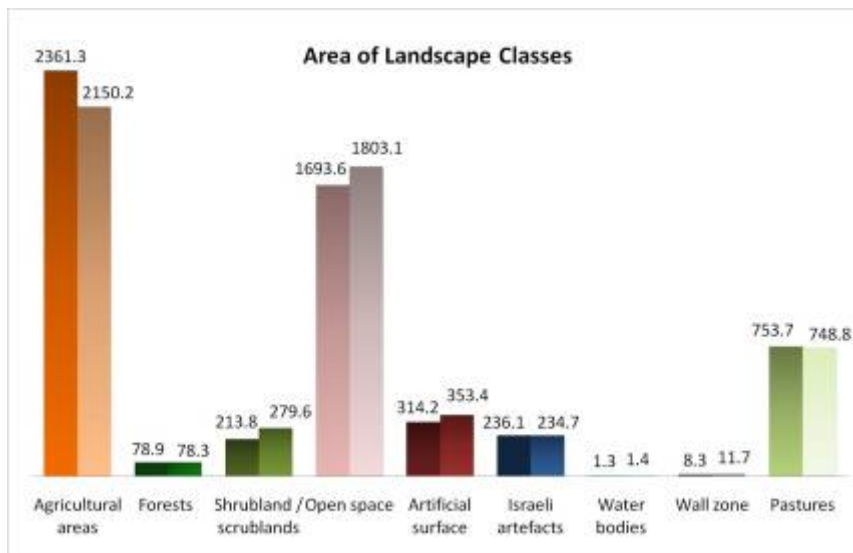
**Palestinian landscape dynamics:** An analysis of land use and land cover was conducted by ARIJ to define main landscape categories in the West Bank. The study defined 9 categories (classes); they include agricultural lands (37.98%), woodlands (1.38 %), shrub- and scrublands (4.94 %), open space (31.85 %), Palestinian artificial surface (6.24 %), Israeli artifacts (4.15 %), inland water (0.02 %), a Wall Zone (0.21 %), and finally rangelands (13.23 %). The agricultural areas comprised the largest landscape proportion and it was found to be around 38% of the total area of the West Bank.



**The West Bank's land use and land cover, 2010**

The analysis further examined the changes in the landscape composition in the West Bank between 2006 and 2010. It was found that around 20% of the total area underwent changes in its structure in 4 years period. That is, some classes increased in size and others decreased and suffered habitat loss. Fragmentation was the major spatial process that changed the landscape structure in the 4 years. The rate of fragmentation increased from 2006 to 2010 by 17%. Of the overall landscape changes that took place in the 4

years, 10% were considered to be degradative<sup>1</sup>, whilst around 2% were irreversible<sup>2</sup>. The most dynamic and affected class was found to be that of agricultural areas. Between 2006 and 2010, the agricultural lands decreased by 9%. The end result of these spatial processes is habitat loss of a number of agricultural parcels. Around 16% of the agricultural areas were degraded and transformed into open space, where 4% of abandoned fields underwent natural vegetation recovery, by which shrubs and/or herbaceous vegetation associations covered the land.



**Land use and land cover changes in that took place in the West Bank between 2006 and 2010. The graph shows the area in km<sup>2</sup> of each landscape class in 2006 (dark color) and the area they occupied in 2010 (light color).**

The fragmentation of the agricultural landscape is a product of the socio-economic and political changes that the area has witnessed in the aforementioned period. The perpetual and increasing migration from Palestinian rural areas to urban ones, due to the Israeli oppressive practices, including the Segregation Wall, has its adverse effects on both sides. More agricultural lands were abandoned and the urban fabric increased (Palestinian artificial surface increased by 12.5% during the same period). Consequently, the organic relationship between Palestinian manpower and agricultural landscape became more fragile, jeopardizing the agricultural production-consumption cycle of agri-economics; ending with agriculture abandonment. On the contrary of the agricultural landscape, the total area of the open space increased by 6%. This increase can be attributed to the abandonment of agricultural lands and degradation of the vegetation cover in some patches close to open space areas. The degradation of agricultural lands and vegetation cover leads to the creation of an area with little or no vegetation that sums up to the small patches of open space. As for the natural green cover, Forests underwent a slight change in this period. Around 1% of the forest area was lost between 2006 and 2010, mainly due to forest mismanagement. For example, around 11% of the forest areas in the West Bank are used for agricultural activities. On

<sup>1</sup> A landscape change is assigned a character of being degradative when the transformation of a land cover to another, causes a loss of a natural cover.

<sup>2</sup> A landscape change is assigned to be irreversible when transformation that took place in the landscape cannot be recovered or returned to the initial state without human outputs and in the time period considered in calculating the change.

the other hand, shrub lands and scrublands increased in area by 31% in the same period of 4 years. This increase is a result of secondary succession that took over abandoned agricultural lands and inaccessible areas. For example, nearly 11% of inaccessible area to the Palestinian around Segregation Wall turned into scrublands. Rangelands, the third dominant class of the landscape did not really change in area or undergo transformations in its pattern. However, around 1% of the rangelands were used to develop agricultural activities, another 1% was degraded to open space, around 0.3% was urbanized, and about 1% was confiscated for Israeli occupation activities.

Israeli artifacts and the Segregation Wall zone are two classes that have been deposited and forced into the Palestinian landscape. In the period (2006-2010) the impact of occupation was not really observed as settlements already had pierced the West Bank, disaggregating its integrity, producing an unwholesome landscape. From the analysis it was shown that there was a decrease in the area of artificial surfaces by 0.69%. This decrease is due to the evacuation of two settlements to the north of the West Bank. As for the area of the Segregation Wall, it increased by 41% in 4 years, trying to decrease the distance and aggregate the wall segments to create a continuous barrier. The Segregation Wall is a linear barrier of fragmenting and isolating areas of the existing ecosystems, leading to the alteration and in destruction of habitats and wildlife populations. The Israeli colonial project ushered in to the oPt's landscape with a bundle of modern tools and artifacts. During the last 43 plus years of Israeli military occupation over the oPt, the Palestinian landscape structure have been manipulated and shaped by the Israeli Occupation Forces (IOF). The phantasmagorical attitude of the Israeli planning authorities has been characterized with an ever-flexible interior frontier, where "demography shaped geography". The Palestinian communities were besieged and put in a limbo. This is epitomized by the recent construction of the Segregation Wall in and around the oPt, where the imposed geo-political space resembles a territorial patchwork of enclaves that lay outside the surrounding jurisdiction (Taraki, 2008). Another factor that was imposed by the Israeli occupation and that has disintegrated the Palestinian landscape is the division of the West Bank into areas A, B and C according to Oslo II Interim Agreement. Based on the geographic analysis of the West Bank, only 36.1% of the Governorate's lands are within areas A and B and are inhabited by 93.5% of West Bank's total population (2,7 Millions) (ARIJ GIS-Database, 2011). The rest are within area C and nature reserves where the PNA does not have sovereignty. This shows the high pressure on West Bank's urban environment and the de facto delimitation of urban growth. The third factor imposed by the Israeli occupation are the lines that is represented by existing Israeli bypass roads of nearly 859 km in length inside the West Bank. Over all, the Israeli designated bypass road system occupies 129 km<sup>2</sup> (i.e. 2.3%) of the West Bank's total land area (ARIJ GIS-Database, 2011). In continuation, in June 2002, the Israeli Government embarked on its Separation Plan that expropriates around 40% of the total West Bank area.

**Key Recommendations:** The Palestinian landscape falls under intrinsic and extrinsic pressures that reserve its development to provide a clean healthy environment to Palestinians. The land is highly fragmented and there are no laws or regulations to protect the whole eco systematic, holistic, social, economic and environmental concept of the landscape. As a result, landscape is chaotically shaped into a disintegrated, highly fragmented mosaic. The oPt is facing a serious crisis in its landscape development and sustainability. As mentioned earlier, that around 20% of the landscape has changed in a very short period which is 4 years. The limited access opposed by the Israeli

occupation, in addition to the abandonment of lands in the West Bank leads to degradation of natural and cultural components of the landscape and hence loss of identity. Degradation of the Palestinian landscape also emerged from unplanned and/or illegal human activities. In addition the lack of laws and regulations regarding protecting and managing the landscape have reserved the landscape development toward sustainability. All Palestinian decision makers and stakeholders alike are invited to invest in terms of time and money to ensure the successful transition from the current state of disorder and chaos in landscape management to a more sustainable management.

- (1) Vesting the related responsibilities of landscape management clearly to the relevant authoritative body; most likely the EQA, whereby specific landscape policy documents are to be produced in coordination with other national stakeholders, such as MoPAD. This entails devoting human and financial resources within the current Palestinian plans.
- (2) Empowering Palestinian local authority units in respect of landscape management activities, and guaranteeing their effective participation in the process of landscape management.
- (3) Setting-up a framework for consultation between ministries on landscape matters. This includes setting-up a designated landscape council with certain mandates that would ensure sustaining the management process of landscape.
- (4) Promoting landscape related training and education practices.
- (5) Carrying-out thorough measures to technically identify the landscape and the analysis of their characteristics in terms of catalogues parameters, codes, etc. This entails that there is a need to identify the landscape quality objectives based on the national efforts to build the statehood in the foreseeable future.
- (6) Ensuring the smooth exchange of information and experiences amongst Palestinian and international landscape stakeholders.

## 4. Demographic Conditions and Analysis of Educational rights protection in the oPt

**Demographic Conditions:** Political changes and Israeli imposed restrictions have affected all aspects of life for the Palestinian people in the Occupied Palestinian Territory (oPt), and in the Palestinian Diaspora. The region has witnessed many demographic and social changes; as a result of the 1948-war, 78% of Mandate Palestine was taken to form what is presently known as the State of Israel, where around 800,000 Palestinians were evicted from their lands and homes, while Palestinians who stayed in their homeland were effectively naturalized (against their will) (McDowall and Palley, 1987). The total estimated Palestinian population living in Mandate Palestine by the end of 2010 was 5.5 million, of which some 4.11 million live in the oPt, and around 1.36 million in Israel (PCBS, 2010i). In addition, there are about 5.9 million Israelis, of Jewish faith, living in Mandate Palestine, of which, 5.4 million are in Israel and about 628,000 in Israeli settlements, built illegally on Palestinian lands in the oPt (ARIJ, 2011 and PCBS, 2008a).

**International Human Rights:** The human right related to Demographics has been recognized in different international instruments, most notably the following laws/protocols: *Universal Declaration of Human Rights' (UDHR)*, *Convention on the Elimination of all Forms of Discrimination against Women (CEDAW)*, *Right to Development*, and *Millennium Development Goals (MDG)*.

**(UDHR):Article 13:**(1) *Everyone has the right to own property alone as well as in association with others.* (2) *No one shall be arbitrarily deprived of his property*

**Article 25.** (1) *Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services,....* (2) *Motherhood and childhood are entitled to special care and assistance. All children, whether born in or out of wedlock, shall enjoy the same social protection.*

**Article 17:** (1) *Everyone has the right to freedom of movement and residence within the borders of each state.* (2) *Everyone has the right to leave any country, including his own, and to return to his country*

**Article 15:**(1) *Everyone has the right to a nationality.* (2) *No one shall be arbitrarily deprived*

**National Human rights relating to demographics:** The third draft of the Palestinian constitution of 2005 creates the foundations of the PNA's current Palestinian Basic Law. These constitutional and basic laws include a number of provisions relating to demographic rights' protection (which mirror or match a number of the rights set out in international protocols), such as: Palestinian Constitution namely, Article (20), Article (21); Article (22), Article (23), Article (28), and Article (29). This shows a clear respect for human rights in relation to demography on the part of Palestinian state institutions. De Jure therefore, Palestine seems to uphold legislature that supports the protection of human development, freedom of movement, a protection of life and lifestyle. However the de facto rights' situation may differ from these sentiments. Therefore, one must consider the real application of human rights' provisions on the basis of examine demographic indicators and anecdotal/case study evidence.

**Demographic Status:** According to the PCBS (2010f) the estimated number of males in the oPt at the end of the year 2010, was 2.1 million compared with 2.0 million females.





**Palestinian population of the oPt (2007 & 2011)**

The sex ratio was therefore 103.1 males per 100 females, compared with 103.0 males in 2007 (PCBS, 2008b). However, according to the 2010 immigration survey, the population's age structure in the oPt indicated that the Palestinian community is young. Around 41.3% of the total population is less than 15 years old, whilst 3.0% of the population are 65 years and above (PCBS, 2010b). This is due to the high fertility rate and decline in child mortality. The continuing growths in population have resulted in an increase in the population density in all Palestinian localities (there has been no stagnation or decline in population density in any region). The average population density in the West Bank in mid 2011 reached 456 capita/km<sup>2</sup> of the total area, whilst in the Gaza Strip it reached 4,353 capita/km<sup>2</sup>. Furthermore, with a yearly growth rate of around 3.3%, the Gaza strip has the 7th highest population growth rate in the world (PCBS, 2010b est.), while the growth rate in the West Bank is 2.7% (PCBS, 2010b est.). According to the UN World Projections Report (2008 revised edition); both the oPt and neighboring Israel fall in the top ten most density populated territories in the World. The

total estimated households in the oPt was 694,652 (PCBS, 2009a). Data revealed that there was a decline in the average households size in the oPt during the period (2007-2010), from 5.8 persons in 2007 to 5.5 persons in 2010. The noticeable decrease was in Gaza Strip where the rate declined from 6.5 in 2007 to 5.8 in 2010 (PCBS, 2010a). Larger households however have an increased chance of falling victims to poverty and the associated problems that come with this condition. The poverty rate among Palestinian households was 34.5% (23.6% in the West Bank, and 55.7% in Gaza Strip). The poverty rate according to the income patterns was 57.3% (47.2% in the West Bank, and 76.9% in Gaza Strip) (PCBS, 2009a)

Within the last 4 years the life expectancy increased from 70.2 years in 2007 to 72.2 years in 2010 (MoH, 2011). Fertility rate is declining in both the West Bank and the Gaza Strip, but still considered relatively high. The Total Fertility Rate (TFR) declined to reach 4.2 births per woman in 2010; in comparison to 4.6 in 2007 (MOH, 2011). However this is still much higher than most other Arab states and Israel. For example the fertility rate in Jordan, Syria, Egypt, and Israel is 3.4, 3.1, 2.8, and 3.0 respectively (World Bank Group Country Stats, 2010). According to paragraph 11 of UN resolution 194 (III), the recognition of refugees' right of return to their homes is stated as follows: "Refugees who wish to return to their homes and live at peace with their neighbors should be permitted to do so at the earliest practical date, and that compensation should be paid for the property of those choosing not to return and for loss of or damage to, property which under principles of international law or in equity, should be made good by the governments or authorities responsible." The concept of refugee rights is further supported by article 13 of the UNDHR: "Everyone has the right to leave any country, including his own, and to return to his country." PCBS statistical data shows that refugees constitute 44.0% of the total Palestinian population in the oPt. UNRWA's records (mid 2010) showed that the number of registered Palestinian refugees totaled 4.8 million; constituting 43.4% of the total Palestinian population worldwide. These refugees were recorded as being distributed in the following regions; 60.4% living between Jordan, Syria, Lebanon, 16.3% in the West Bank, and 23.3% in Gaza Strip (PCBS, 2011e). Furthermore, approximately 29.4% of Palestinian registered refugees live in the 58 refugee camps, of which 10 are in Jordan, 9 in Syria, 12 in Lebanon, 19 in the West Bank, and 8 in Gaza Strip (PCBS, 2011e). The Palestinian population all over the world was estimated at the end of 2010 to total around 10.97 million, compared with 10.1 million at the end of 2006; distributed across the oPt, Israel and abroad (PCBS, 2010a est.).

It is noted here that the oPt has a significantly lower first marriage age for both males and females in comparison to neighboring states. This could be due to economic pressures in the region leading to girls being married off to save economic burden on their families and to provide them with a more secure life. Many rights' groups have observed a link between declining economy and a lower age for first time marriage (Freedom House, 2010). However, about a quarter of all women, in 2001, had married by age 19 suggesting that a sizeable number of women married as teenagers. On the other hand, more than 25 percent had not married by age 27 suggesting that another sizeable group of women postponed marriage until their late 20s, older, or never (Abu-Rmeileh, 2008). Housing and urban planning trends have been affected by Israeli Occupation, which has a notable impact of Palestinian quality of life, their access to services, national infrastructure, and ultimately right to adequate standards of living. With the restrictions on land, the area available for building became smaller, which led to a lack

of housing units and overcrowding in the housing units. However, the housing density decreased slightly in the oPt from 2.0 to 1.6 persons per room during the period 1997-2010 (PCBS, 2010g), with an average housing density in the West Bank of 1.5 persons per room and 1.8 in the Gaza Strip in 2009 (PCBS, 2010h).

**Challenges facing the protection of demographic rights:**

- If the current situation continues, and the population increases, this will lead to a shortage in the housing units and to a future deterioration of the Palestinian households' living conditions.
- The overcrowding within houses and the expulsion of Palestinians from their homelands is a proven direct result of Israeli occupation (Human Rights Watch, 2010). Due to these occupying powers, demography is in such state as to deny Palestinians both their basic human rights and other substantive civil, legal and political rights.
- Many Palestinian women do not participate in decisions regarding their reproductive and sexual health. The high fertility rate coupled with anecdotal evidence and survey results regarding the lack of women's empowerment in fertility choices, gives rise to concern about women's right and sexual education in the oPt.
- In addition to the Palestinians being deprived from their properties, including lands, building and other materials; Palestinians living in Area C are deprived to a greater extent of their human and civil/political rights (EWASH, 2010).

**Violations to the Right to freedom of movement:** The denial of right to freedom of movement on the part of the Israelis is prevalent throughout the whole of the oPt. Palestinians face numerous problems with regards to restriction of movement, which has a great impact on demographic features in the region, including people living in their villages and towns, and some changes occurring in the population causing crowding in some areas. Restriction of movement is not only in itself a human rights abuse but there are many other abuses that result from this impediment. For example, access to vital resources and services are denied by restriction of movement; for example, schools, hospitals, water resources, areas of land (PCHR, 2010). The problem however with determining the restriction of Palestinians as a human rights abuse comes from the wording in article 13 of the UDHR. As stated in article 13; everyone has the right to move and reside freely within each state. But, given the lack of Palestinian statehood, it is hard to determine how this constitutes abuse as special rules seem to apply given its territorial status and occupation. However, it is clear that Israeli restrictions of movement into and around Israel constitute an abuse as Israel is clearly a state and every person (Palestinian or otherwise) should be allowed free movement within these boundaries. Of course it is difficult to determine which boundaries Palestinians should be granted free travel in and between because Israel as the occupier has never formally recognized any particular borders of the Palestinian territories. Therefore, Palestinians are under the arbitrary decision making power of Israeli authorities who often create new checkpoints, new boundaries and new restrictions within the oPt (Bannoura, 2011). Of course those services and natural resource that are denied as a result of restricted movement are human rights' abuses. The second part of UDHR article 13 pertains to the right of return which has been discussed in detail in the right of return section. However, what does deserve a mention here is the entrapment currently felt by Palestinians presently living in the oPt. The right of return often seems to capture the situation of those forcibly permanently (or for an extended time period) displaced from the oPt through conflict and occupation. However, there are additional problems with regards to those currently living in oPt but wishing to leave the country

for temporary purposes. The article states that any citizen should be able to leave their country and return when they wish. However, Israel controls entry and exit points into Palestinian territory and their control of the permit system which allows Palestinians to move between borders. There is anecdotal evidence of Israelis making it very difficult for Palestinians to travel across borders and indeed within Palestinian territory; sometimes denying movement altogether (PCHR, 2010). It is noted that freedom of movement is particularly restricted to residents of Gaza, where Israel has effectively created a 'blockade' in and out of the region (CBS, July 2011).

**Denial of and violations to Property rights:** Property here is understood to entail lands, buildings, material structures and material possessions. The denial of property rights is a big issues amongst Palestinians in the oPt along with those in the Diaspora. The property ownership declaration, claims that everyone should have the right to own property; with the emphasis on the denoted 'everyone'. In terms of a woman's' right to own property in the oPt, there are significant issues. According to Freedom House (2010), Palestinian women have the legal right to own land and property and to exercise control over their property. However, 'prevailing traditions and customs, such as those that encourage women to give up their share of inheritance to their brothers, or those encouraging men to keep property in their names rather than jointly with their wives, render the percentage of women owning property marginal' (Freedom House, 2010). The Jordanian law governing inheritance still applies in the oPt and gives women the right to half the share entitled to a man. Many Palestinian women-especially in rural areas-do not enjoy this right, as they are shamed by society if they claim their legal share of inheritance. It is noted however that no legal barriers prevent women from entering into businesses or economic-related contracts and activities; meaning that this discrimination lies at the de facto rather than de jure level and is a matter of culture and tradition rather than legally enforced prejudice. In terms of the arbitrary deprivation of property in the oPt; this significantly effects Palestinians both in and outside of the oPt. Many Palestinians live away from their homelands because of land destruction, land grab or forced sale of property or land to Israeli occupying forces.

### **Key Recommendations:**

- To implement procedures which encourage Israel to cease actions which restrict Palestinians' freedom of movement.
- To raise local, national and global awareness of nationality restrictions and prejudices towards Palestinians.
- To introduce a gender focus into research concerning effects and impacts of Israeli land possession and Palestinian cultural issues that stop female land ownership and the full protection of women's rights.
- Population density needs to be evaluated by decision makers at all levels and steps need to be taken to ensure: 1) Fair distribution of natural resources and lands, and 2) Adequate civil services in areas deemed as densely populated. These cover; educational institutions, businesses, health care sector, among others.
- In order to reduce the (regionally) higher than average fertility rates steps need to be taken from national and global partners to increase education and awareness amongst female Palestinians of contraceptive measures available.

**Educational Rights Protection in the oPt:** Education in the oPt was in the domain of the military governor and the civil administration until 1994, when, upon the establishment of the PNA, education fell under its control (Nafi&Saleh, 2006). The Ministry of Education and Higher Education (MoEHE) was first established and took responsibility in 1994 (MOEHE website). It has a responsibility for the whole education sector from pre-primary to higher education and for recruiting and training teachers as well.

**The Right to Education in International Law:** Education has long been considered a basic and fundamental *human right*; it being enshrined in International protocol in 1948 upon the Universal Declaration of Human Rights' (UDHR) ratification by its first member states. Since then a number of International bodies, conferences and conventions have affirmed education as a human right and provided an international legal basis for its protection and enforcement by member states.

**UDHR-1948: Article 26 (1):** *'Everyone has the right to education. Education shall be free, at least in the elementary and fundamental stages. Elementary education shall be compulsory. Technical and professional education should be made available on the basis of merit'*. **The International Convention on Economic Cultural and Social Rights (ICECSR), 1976: Article 13** (Summarised): *'The Right to education is Universal and should be conducted with the aim of achieving toleration and peace.'* **Article 14** (Summarised): *'States shall make primary education compulsory and free of charge, and higher education should be available on the basis of merit'*. **Convention on the Rights of the Child (CRC), 1990: Article 28 (Summary):** *'States Parties recognize the right of the child to education, and with a view to achieving this right progressively and on the basis of equal opportunity.'* **Arab Rights' Charter (2004): Article 41:** 1) *The eradication of illiteracy is a binding obligation upon the State and everyone has the right to education.* 2) *The States parties shall guarantee their citizens free education at least throughout the primary and basic levels. All forms and levels of primary education shall be compulsory and accessible to all without discrimination of any kind.*

In terms of schooling, data from 2010/2011 shows that of all schools in the oPt, approx.. 74.3% are government run, 12.65% are run by UNRWA and 13.1% are private schools (PCBS, 2011). In the Palestinian territory's education system, compulsory basic education includes Grades 1 to 10, this is divided into: 1) The preparatory stage (Grades 1 to 4), 2) The empowerment stage (Grades 5 to 10), 3) Secondary education (general secondary education and a few vocational secondary schools) covers Grades 11 and 12, and 4) Higher education, there are 13 universities (8 public, 3 private and 2 governmental), 15 University Colleges (4 are private, 9 are governmental and 2 are UNRWA), 20 Community Colleges (8 of these are private, 9 are public and 2 Governmental), and one Open University operating in the oPt (PCBS, 2010n). UNRWA historically had and still has an influence on schooling in the oPt, with the first refugee camp schools for were established by the Red Cross in 1949 (Maya, 2004). UNRWA schools offer Grades 1 to 10 and do not provide secondary education.

Education in Palestinian territories is centralized in regard to its curriculum, textbooks, instructions, and regulations. The administrative structure of the general education is composed of 22 fields' directorates of education, including 16 in the West Bank and 6 in Gaza. At present, the PNA has taken some measures to create a nation -wide education program, and has enshrined the right to education in both constitutional and national law.

According to the World Bank Group, in 2009, the World average in terms Net Primary enrolment was 89.7%. This decline in children enrolled in Primary education in the oPt

is worrying, especially given the MDG's aim of 100% primary enrolment by 2015 (MDG 2). The same data -base reports that as of 2009, there were 112,604 primary school children out of school in the oPt. In terms of drop- out rates, the World Bank Group records that in terms of primary education the gross drop- out rate for the oPt is 1.5 % (World Bank Ed Stats, 2010). The Palestinian Central Bureau of Statistics (PCBS) finds that for the year 2010/11. The total drop- out rate (both male/female) for West Bank and Gaza is 1.03%. The total (mean) drop -out rate for primary education in the West Bank (2010) is 0.635. The mean average primary drop- out rate calculated for Gaza Strip for 2010 was 1.15% (PCBS, 2010a). In terms of Gross secondary drop- out rates for the West Bank and Gaza Strip, PCBS claims that for 2006/2007 the rate was 3.4%. At the primary level of education, males are more likely than females to drop out; but for both sexes the rate of primary drop out is relatively low. This is a very positive change in terms of gender equality in Palestinian education. However, the data here ends at 2007, and since then the territories have experienced a declining economic situation, with some reporting suggesting that drop-out may be increasing, especially amongst males who may feel the need to work to assist their families, instead of attending schooling.

A World Bank Group report (2009), claimed that the total Palestinian Youth Literacy has reached an impressive 98%-99%; putting the region well on track to achieving the World Education Forum's 100% Literacy goal. However, PCBS statistics show that although in total there exists a high level of literacy; there is a marked difference between female and male literacy rates; 2009 data showing that the literate population constitutes Male- 99% and Female- 87% , respectively (PCBS, 2009).

According to PCBS, the ratio of Male/ Female Palestinian pupils receiving Higher Education degrees in 2009 was 1/ 0.9219, respectively. PCBS' further claims that for the year 2007 the ratio of male to female (of the gross total) enrolled in higher education was 1/ 1.05405, respectively. The data therefore reports that male/female enrolment in universities and higher education institutes is roughly equal (PCBS, 2009). However, in terms of women using their education to secure relevant jobs in the work place, worryingly, women make up just 31% of the total workforce across the West Bank and Gaza Strip (WorldBank, 2008). In terms of the percentage of those women in employment (as of 2010), women in agricultural work made up 21.4, leaving 78.6% in other employment (PCBS, 2010h). Of this 'other employment' labour groups suggest the majority of these works in the service and textiles industry, meaning that very few women enter degree level jobs.

According to a 2008 USAID report, 'The Israeli occupation and *intifada* have combined to undermine economic growth (in the oPt)' (USAID, 2008). This means that the demand for Higher Education graduates in the Palestinian territory is low. In addition the demand for Higher Education Palestinian graduates in Israel is also low, because although they have sound economic growth; 'Israeli labour markets primarily hire Palestinians for low skill jobs that require minimal educational attainment' (USAID, 2008). Therefore, education is impacted by the opportunities available. There is therefore limited *relevance* for many Palestinians, in pursuing or obtaining a Higher Education degree.

**The effects of Israeli Occupation on Palestinian education:** Area C like other Palestinian areas in the West Bank is facing rising fuel prices and increasing poverty (One World South Asia, 2011). Many schools are far from residential localities and access to schools is becoming an increasing problem (PCHR, 2011). Further to this, there are over 500 Israeli measures (checkpoints, segregation point, and settlements) which restrict children's access to school; making children late for classes, stopping them on some days from receiving lessons and creating psychological problems for the children (i.e. humiliation, fear). In addition, an increasing number of incidents have been recorded in 2010 in which Palestinian students were prevented from accessing schools and had their safety compromised by Israeli security forces. Thirty-six such incidents were documented in the West Bank in 2010, purportedly involving security measures such as road closures searches, harassment or assaults at checkpoints by Israeli authorities and settlers (UN General Assembly Security Council, 2011). According to OCHA 15 schools received stop work or demolition orders since 2000. The total number of schools demolished or destroyed is debate however, one report claims that in the Gaza War, 280 of the 641 schools were damaged and 18 destroyed (Amnesty International, 2010).

In the past five years, the situation in the West Bank territories, with regards to suffering belligerent acts from Israel has decreased/stabilised, whereas in Gaza the situation has rapidly declined. This had had a severe and marked effect on both the access to and quality of education in Gaza. The situation in Gaza, much of it a result of Israeli belligerence, shows education to be in a far worse condition than any other area in the Palestinian territories; and with children making up 47% of the population in Gaza, it is critical that education is performing at its best there. Educational data from the PCBS confirms this, showing that between the years 2007-2010/11, in the Gaza region, class sizes were larger, overcrowding in schools was a far bigger problem, the number of students per teacher was greater and the number of schools available was less than in the West Bank (PCBS, 2011a).

In Operation Cast Lead or 'the Gaza War' of 2008/2009, it is estimated by the UN that **18** schools were entirely destroyed and a further 280 damaged (UN, 2009). The Al-Mezan human rights Centre reports that of these schools effected, **7** were deliberately attacked and **33** of the schools destroyed or damaged were UNRWA schools (Al-Mezan, 2010). Now, in 2011 these schools are unable to be rebuilt or refurbished as the Israeli blockade on Gaza restricts many building materials being imported into the region (Gishacentre for Legal Rights', 2010). Due to this, many schools suffer overcrowding and/or poor building quality. Further economic conditions in Gaza have contributed to the quality of education there. For example, electricity and fuel shortages in the region have greatly impacted both students ease of access to schools and their experiences when there. In terms of fuel shortages, they report that, 'since April 9th, 2008, the Israeli blockade on fuel supply to the Gaza strip has paralysed 50% of the educational sector' (Gisha, legal centre, 2009). Another important factor with regards to fulfilling the right to a good *quality* education is the quantity and quality of educational supplies and classroom equipment such as notebooks, computers, stationary, chairs, desks etc. All of these items however are restricted by the Israeli government and therefore do not find their way into Gaza (Amnesty International, 2010).

Restriction of movement in Gaza plays a huge role in student's ability to access education. In terms of accessing Higher Education outside of Gaza, at present, this is a

virtual impossibility for most Gazans (MAAN News Agency, 2009). The PNA education plan integrates education across all territories of the oPt and where some universities may teach some specialisations, others do not. The PNA planned for national education to be this way as due to the close physical proximity of the West Bank and Gaza, students could easily reach cities in either to conduct the specialised study of their choice (MoEHE, 2008) Education Development Strategic Plan 2008–2012: However, now, although no further away in distance, students from Gaza are unable to reach universities in the West Bank due to a series of restrictions put in place by the Israeli authorities, meaning that many cannot pursue the specialism's they desire to (Al- Mezan, 2010b). The report claims that; 'the arbitrary restrictions that Israel imposes on access to higher education within the oPt violates international law. It cannot be viewed as being *compatible with the nature of the right to education*, which loses its core content in the absence of the effective ability to access the educational institutions' (Al- Mezan, 2010b). Furthermore of the 49 Universities in the oPt, just 12 are in Gaza and lack many of the specialisms and teaching quality required for a sound teaching program (Gisha, 2011a).

Even in cases where education facilities are good and access is easy the impact of political violence will have a profound and marked psychological and emotional effect on the children in Gaza. This will in turn affect their educational performance. It is also noted here that the stage of impact at present in Gaza is one of post traumatic and traumatic stress. There are individuals suffering with the trauma of past events/attacks and those living in the current stress and uncertainty of war. In terms of this impact on educational attainment, in the Gaza offensive of 2008/9 it is estimated by the PCHR that the death toll reached 1,417; 313 of these were children, this being more than 1 in 5 of every person killed. PCHR further claims that 1606 children sustained injuries in the attacks (PCHR, 2011). Injury and death are also commonplace since the war with both adult and child deaths being recorded as recently as June of the month (Euro news, 2011). In addition, a grim report produced by Queens University Belfast claimed that Operation Cast Lead caused 98% of children in Gaza to suffer with war related psychological trauma(s) (Pringle, 2009).

#### **Areas of Concern:**

1. Difference in education standards between the West Bank and Gaza Strip.
2. High failure rates in both regions.
3. Lack of information about use of technology in classrooms and after learning
4. Increasing fuel costs, poverty and unemployment and their impact on education
5. Israeli occupation leading to restricted access to schools and psychological impact on students (fear, humiliation, poor educational performance).
6. Ineffective education in Area C.
7. Overcrowding in Gaza schools and UNWRA schools across both regions.
8. Discrepancy in Males/ Female literacy rates
9. Belligerence in Gaza leading to physical damage of schools and psychological damage of students.
10. Restricted access to Gaza meaning lack of opportunity to develop educational institutions in the region.



## **Key Recommendations**

1. National Statistical Databases to develop its method of data collection (increase range and scope of areas covered by indicators). Collect data from regions NGO's have reported suffer particular difficulties (i.e. Area C, areas near checkpoints and Gaza).
2. MoEHE to make transparent the steps they will take to ensure their five year policy on improving educational access and quality is successful.
3. Stop the restriction of goods into Gaza that will help improve education i.e. stop the ban on building materials, school books, chairs desks etc
4. For the MoEHE to focus on schooling standards in Gaza; to make a 'national standard' of educational attainment and ensure this is routinely followed up.
5. MoEHE to investigate why drop-out is occurring in schools across the oPt and to create National strategy to deal with increasing school attendance.
6. For the PCBS in partnership with local and national education initiatives, to find data on drop out and failure rates that covers specific region, governorates and municipalities. This will help create a clearer picture of region drop out and potential reasons for this.
7. For in-depth studies to be conducted (at the national level) regarding reasons for pupil failure. To examine classroom conditions, psychological condition of failing students, Israeli occupation effects on education
8. MoEHE to deal with the issues of over-crowding in schools
9. The MoEHE to review the national curriculum

## 5. The Health Sector in the occupied Palestinian territory

Health services are provided mainly by the Palestinian Ministry of Health (MoH), the private sector, Non-Governmental Organizations (NGOs), and the United Nations Relief and Works Agency (UNRWA). People get their health services from primary health care (PHC) clinics and hospitals. MoH bears the heaviest burden as it has the responsibility for ensuring equitable and affordable access to quality health services for all Palestinians. The MoH is also responsible for formulation of laws and regulations related to health issue.

**The Right to Health:** While many human rights are related to health, there are also specific provisions for it the International Covenant on Economic, Social and Cultural Rights (1966). The right to health is listed in a number of other international legal instruments, including the World Health Organization (WHO) Constitution, the Universal Declaration of Human Rights, the Convention on the Elimination of All Forms of Discrimination against Women, the Convention on the Rights of the Child and Article 25 of the United Nations (UN) Universal Declaration of Human Rights. International Covenant on Economic, Social and Cultural Rights, 1966: Article 12 *“The right of everyone to the enjoyment of the highest attainable standard of physical and mental health”*. WHO Constitution, 2007: *The enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction or race, religion, political belief, economic or social condition*

**Health Status:** There are a total of 706 PHC clinics in the oPt, 572 in the West Bank and 134 in the Gaza Strip. Thereby, the average ratio of persons per center is 5,734. In the West Bank there are 394 MoH PHC centers and 59 in the Gaza Strip. UNRWA operates 59 PHC centers, 41 in the West Bank and 18 scattered in 8 refugee camps in the Gaza Strip. The NGO sector operates 194 PHC centers and general clinics, 137 of them in the West Bank and 57 in the Gaza Strip (MoH, 2011). There are 76 hospitals in the oPt with 5,108 beds resulting in 13 beds per 10,000 of population. 51 hospitals are located in the West Bank and 25 in the Gaza Strip (MoH, 2011). The hospitals services are operated by MoH, NGOs, UNRWA and the private sector. Private and NGO hospitals make an important contribution to the provision of secondary and tertiary care services. Around 39.3% of the total hospital beds in 49 hospitals are managed by the NGOs and private sector. The tertiary care services are not available in the governmental facilities and thus are purchased by the MoH from the local private sector, East Jerusalem hospitals, and from some hospitals in the neighboring countries. According to the MoH figures in 2010, there was 21,881 staff working cross the governmental and non- governmental health sectors in the oPt. The rate of physicians in relation to the population was 20 physicians per 10,000 persons, whereas the rate of dentists was 5.2 per 10,000, 10 pharmacists per 10,000, and the rate of nurses and midwives for 10,000 of population were 17.3 and 1.4, respectively.

The Palestinian population is going through an epidemiological and demographic transition. Much suffering lies behind the standard health indicators. People often report being negatively affected by the conflict and the Israeli military occupation practices. These are contributory factors to the epidemic of chronic diseases.

<b>Main Health Indicators in 2007 and 2010</b>						
<b>Indicators</b>	<b>oPt</b>		<b>West Bank</b>		<b>Gaza Strip</b>	
	<b>2007</b>	<b>2010</b>	<b>2007</b>	<b>2010</b>	<b>2007</b>	<b>2010</b>
No. of Primary health Care Centers	665	706	532	572	133	134
No. of PHC centers of the MoH	414	453	356	394	58	59
No. of Hospitals	77	76	53	51	24	25
Hospitals per 100,000 population	2	1.9	2.3	2	1.7	1.6
Rate of Beds in the Hospitals	13.1	12.6	12.5	12.2	14.1	13.3
Life Expectancy	70.2	72.2	NA	NA	NA	NA
Fertility Rate	4.6	4.2	4.2	3.8	5.4	4.9
Mortality rate per 1000 population	1.6	2.65	2.6	2.69	NA	2.59

Source: MoH, 2008, 2009a, 2010a, and 2011

### **Limitations and Challenges facing the Palestinian Health Sector**

Israeli Occupation Impacts on Public Health: The overall conditions of health in the oPt have been heavily affected by the Israeli occupation. Health services are mainly affected by the Israeli practices against the Palestinians such as; the damages of infrastructure, curfews and closures, aggressions against health personnel, and attack against hospitals and health centers. The number of Palestinian deaths and injuries as a result of the Israeli Occupation is a terrible tragedy. From the beginning of the Second Intifada (in September 2000) to the end of December 2009, 7,198 Palestinians had been killed in the oPt (PCBS, 2010) and around 35,099 had been wounded until the end of December 2008 (PCBS, 2009). The construction of the Segregation Wall has also placed a heavy burden on the health status of the Palestinian population in the West Bank. The isolation and disintegration wrought by the Wall, together with the discriminatory Israeli checkpoint and permit systems, pose a systemic challenge to local and national health care services in the oPt. Between October 2000 and September 2008, the Israeli human rights organization "B'tselem" has reported 66 death cases in the oPt directly related to delay caused by the limited mobility (B'tselem, 2008).

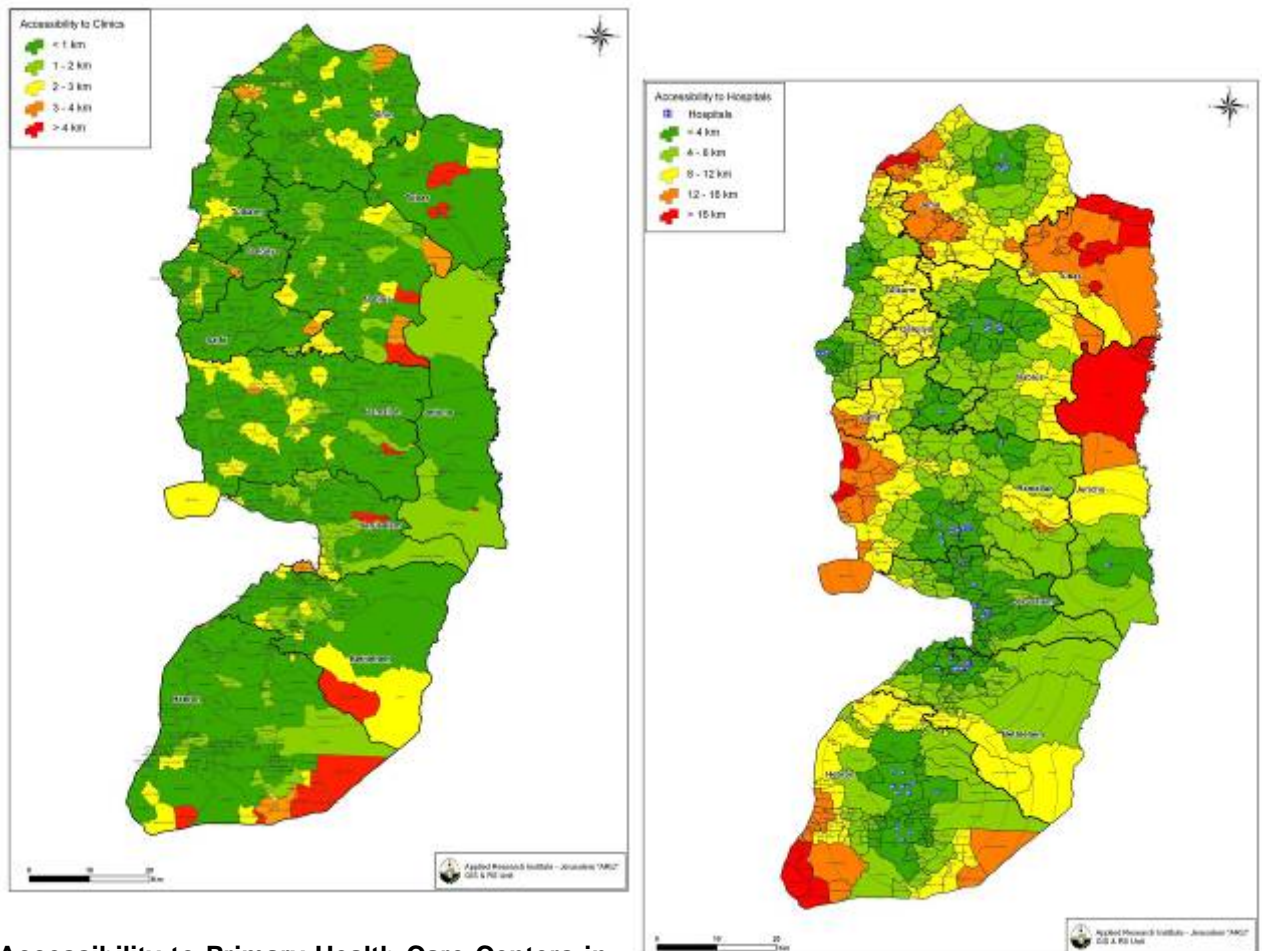
Inner Political Situation Impacts on the Right to Health in the Gaza Strip: The conflict of authorities between the two Palestinian governments in Gaza and Ramallah has negatively impacted the economic and social conditions of the Palestinian population in the Gaza Strip. In 2009 health services were negatively affected by a general strike organized by the public service employees in the Gaza Strip. In 2009, the Ramallah MoH ceased the referral of Palestinian patients to Israeli hospitals. Cancer patients in need of advanced medical treatment not available in the Gaza Strip found their treatments interrupted without any suitable medical alternatives. Moreover in 2009, the MoH in Gaza took control of the Department of Medical Referrals Abroad (DMRA). The effective operation of the DMRA in the Gaza was halted for more than one month. A number of patients from the Gaza Strip died as a result, while the health of hundreds of others deteriorated severely (PCHR, 2009).

Unethical Practices in the Health Care Sector: There are many forms of corruption in the public health system. These forms were categorized in accordance with the conference on Corruption and Good Governance in the Arab World in 2004. The conference revealed that the corruption in the oPt is reflected in a number of behaviors engaged in by those holding public office, which are: bribery, nepotism, favoritism, wasta, looting of public fund and blackmailing (AMAN, 2007). It was indicated that nepotism is the most popular form of corruption in the oPt.

### **Principal Failures and Violations to the Right to Health in the oPt**

**Discrimination:** The environmental situation and the health services provided in the urban areas of the oPt are considered good compared to rural areas, where most of the population lives. In the rural areas, the lack of sanitation and poor hygiene practices continue to compromise the health conditions in these areas. Moreover, the scarcity of hospitals, PHC centers and health care staff affects rural areas in inappropriate way, where only a quarter of children have access to a doctor.

**Accessibility:** In many cases, localities either do not have enough health care centers, or they do not have health centers at all. As a result many residents have to travel to other cities or localities in order to reach alternative health care centers.



**Accessibility to Primary Health Care Centers in West Bank**  
**Map: Accessibility to Hospitals in the in the West Bank**

**Good Governance:**

Transparency: It is very clear that there is no clear policy at the MoH institutions or health insurance institutions to promote health systems and to introduce them to the public. Patients learn their rights and duties and how to use the health services through personal experience or through knowing someone who has undergone a health problem and benefited from these services.

Accountability: The periodical reports which the different departments submit to the MoH, and the field visits conducted by the general administration to supervise and

monitor the work of hospitals and health centers are the main follow up process that the MoH depend on to evaluate and monitor the work of the MoH institutions and the health services providing. These mechanisms of accountability suffer from the lack of an independent follow up body because the MoH itself is the party that provides the services and at the same time the one that follow up the work of its institutions and departments.

**Key Recommendations:** It is important that the MoH has to strengthen coordination, collaboration and regulatory mechanisms and their enforcement and reduce duplication of effort between all the stakeholders in the health sector; MoH, UNRWA, NGOs, in order to improve the accessibility, quality and affordability of health services in the PHC centers and hospitals especially for the poor people.

- There is a need for better management in health facilities, especially hospitals, to improve the quality of service delivery, reduce inefficiencies and contain costs.
- Expand the categories of service providers in the health workforce (eg. community health workers and paramedics) and upgrade their capacity and skills as they play an important role in improving the health care services
- Public health structures and integrating fragmented health services should be strengthened to unify data reporting for a successive health and nutritional assessments.
- Primary health care through developing information and data collection strategy should be improved.
- National surveillance to identify disease trends and their associated risk factors should be conducted.
- Updating immunization programs, enhancing the capacity for the control and treatment of diseases, and developing psychosocial infirmities are necessities.
- Health education and information should be promoted.
- Restructuring the health insurance system and treatment abroad while enhancing transparency and accountability.
- Creating a social culture that rejects corruption practices and fights it through awareness campaigns, and supporting the public's access to information.

## 6. Palestinian Economy -Main Economic Indicators in the oPt

Economic rights and responsibilities of the Palestinian population in achieving sustainable environmental and economic development are inherently linked to the nature of its relationship with its neighbor, dominant economic partner and occupier; Israel. The important precursor for environmental protection and sustainable development is Palestinian control over the natural resources within its borders; an issue that has been made clear over the past decades, but has yet to materialize (Al-Naqib, 2003). The occupation has fragmented the continuity of the natural landscape, human capital accumulation and the physical infrastructure, and has severely limited the ability of the Palestinian National Authority (PNA) to implement a comprehensive and effective national strategy, or for the general public to become involved in carrying out sustainable environmental development.

**Current Economic Situation in the oPt: Macroeconomics:** The national GDP in the oPt has shown a yearly increase over the years from 2007-2010, and hence an increase in the GNI. Real GDP rose to US\$ 5,728million in 2010 with US\$ 4,381million in the West Bank and US\$ 1,347million in Gaza Strip (base year 2004) (PCBS, 2010i). There existed a wide divergence in output paths between Gaza Strip and the West Bank with Gaza's GDP per capita showing a downward trend from 2007 to 2009, as a result of the Israeli imposed blockade, and the West Bank's per capita growth steadily rising since 2007. Per capita GDP in the oPt increased by 15.3%, from US\$ 1,303 in 2007 to US\$ 1,502 in 2010, it was US\$ 1,925 in the West Bank, and US\$ 876 in the Gaza Strip, Per Capita GDP has increased over the period from 2007-2010 in the West Bank, while in Gaza Strip the case is completely different; per capita GDP has decreased over the same period. This is attributed to the Israeli siege and war over the Strip (PCBS, 2011i).

**Fiscal Balance:** Although the relative size of services has shrunk in the past years, it continues to dominate Palestinian economic activity, contributing US\$ 1,196 million to GDP in 2010. The next biggest sector was public administration and defense (US\$ 799million), followed by mining, manufacturing and utilities (US\$ 707million), and wholesale and retail trade (US\$ 635million) and construction (US\$ 526million) (PCBS 2011e). The participation of the internal trade sector in the oPt's GDP has increased from 13.0% in 2007 to 15.1% in 2009. The result of the economic surveys series in 2010 showed that the internal trade sector constituted the largest percentage of all establishments in the economic sectors, where it contributes to 59.8% in 2009 with 61,340 establishments (PCBS, 2010a).

**Labor Force:** The participation rate in labor force in the oPt during the period 2007-2010 ranged from 41.7% to 41.1% (PCBS, 201h). Over this period the West Bank always has higher participation rates in the labor force than in the Gaza Strip. The highest in the West Bank was registered in 2007 (44.1%) while for the Gaza Strip it was in 2008 (38.1%). During the same period the number of workers has increased by 7.7% from 691 thousands to 744 thousands (PCBS, 2011i). The unemployment rate in the West Bank and Gaza Strip has declined very slowly over the past two years after increasing in 2008, yet regional differences are marked. Unemployment rate in the West Bank declined from 17.7 in 2007 to 17.2 in 2010, although this rate has increased in 2008 to reach 19% but kept on decreasing after that (Figure 3.3.3). In Gaza Strip, unemployment jumped from 29.7% to reach its highest rate in 2008 at 40.6% declining to 37.8% in 2010 (PCBS, 2008b; 2009a; 2010b; 2011c). Unemployment rate among females was lower

than males in 2007 but recently the situation is opposite. In 2010, the unemployment rate among males and females were 23.1 and 26.8, respectively (PCBS, 2011c). The unemployment rate among females in Gaza Strip is way higher than that in the West Bank; in 2010 it was 47.8 in Gaza Strip and 19.7 in the West Bank (PCBS, 2011c). The distribution of employment by sector reveals that the private sector in the oPt is by far a more important employer than the public sector with 65.5% of employed persons working in the private sector in 2010. Regarding the distribution of the employed persons in the oPt by economic activity for 2010, the highest rate of employed persons is found in services and other branches with 38.3% of the employed persons working in this sector (PCBS, 2011c). The scarcity of job opportunities in the oPt is in large part the consequence of an undermined productive base. Diminished job opportunities have in turn pushed down wages a Palestinian can expect to get and can be seen to encourage workers to seek employment in Israel either legally or illegally in this economic context that drives many Palestinians to seek work in Israel despite the many difficulties. It is estimated that there are around 20,000 Palestinian permit holders employed in the settlements with an additional 10,000 who work there without permits. Additionally around 20,000 Palestinians work in Israel. This reality caused by the lack of alternatives involuntarily provokes settlements growth. (Avis, 2010).

**External Trade:** The Palestinian net trade balance has always recorded a deficit, as the imports have always exceeded exports. The changes of exports are minor compared to those in imports. The net trade balance for 2010 recorded a deficit of USD\$ 3,989.2 million, making an increase by 37.9% compared to 2007 (PCBS, 2008a & 2011). Because of Israel's non-recognition of many of third party trade agreements, its extensive movement, restriction of access and continuous control of Palestinian borders, crossing points and other outlets for Palestinian trade, the levels of trade in the oPt over the past 15 years have not increased, and in some cases have declined. This has directly resulted in a near total dependence on the Israeli market for Palestinian exports. Although Palestinian trade partners come from over 100 countries, Israeli market represented 73.6% of total value of imported commodities and over 87% of the total value of commodities were exported to Israel in 2009 (2011).

**Industrial sector:** The Palestinian industrial sector (manufacturing and mining) plays a significant role in the economic development of the oPt. The industrial sector includes more than 15,000 registered enterprises, with more than 81 thousand employed persons. The number of large industrial enterprises in the oPt is still very limited, with only about 100 of the manufacturing, mining and construction enterprises having a workforce of more than 100 employees (USAID & PFI, 2009).

**Tourism:** The number of operating tourism establishments increased 75% from 1,276 in 2007 to 5,258 in 2009 while employment in these establishments increased from 60% from 6,144 workers in 2007 to 15,576 in 2009. Compensation to workers amounted to US\$ 28.1 million in 2007, while value added was US\$ 203.4 million (PCBS, 2008e). In 2009, the value added from tourism in the oPt was US\$ 176.4 million of which US\$ 165.3 million in West Bank and US\$ 11.1 million in Gaza Strip (PCBS, 2010h)

**Expenditure and Prices:** The Consumer Price Index (CPI), reflected an increase of 17.1% in prices from 2007 to 2010 for the average period in the oPt (base year 2004) with the largest price rises in Gaza Strip, followed by Jerusalem and the West Bank (PCBS, 2011j). As with other price indices, food price index reflected an increase of 25%

**Good Governance in the Palestinian Economy:** The divide that has occurred in the political and geographical system between the two halves of the country has been accompanied by a lack of transparency and lack of free access to exchange of information. As a result, it has become difficult for citizens to create a basis for holding public official accountable. This situation has encouraged the monopolization of power and resources and the exclusion of certain people or groups from jobs in the public sector; causing as well instability for actual and future private investors. Several projects are working on improving good governance, but it is difficult because of a lack of interaction with other institutions, absence of a law that guarantees the right of access to information, and lack of agencies that specialize in fighting corruption.

**Key Recommendations:** The oPt is still totally dependent to Israel's economy, and has very little freedom to open new paths to diversify its economy in the trading field, mainly because of Israeli's control of Palestinian borders and crossing points. Israel's dependence in Palestine has reduced nearly 8% in the last years meaning that Palestine does not have the same opportunity to diversify the market and create a competitive business environment. It is important to recognize that the Paris Protocol is not working the way it is supposed to work and it should be re-evaluated with the new economic demands that the market has now a days, not the ones that existed during 1994 – 1999. Market and relationships have changed and so should the agreement adapt to new demands. No matter the intentions on making trade agreements with other countries, it is difficult to change the situation Palestine lives now according to relations with the exterior and trade diversification. New protocols need to be discussed and respected between Israel and Palestine in order to have different perspectives about the opportunities in the future. For these reasons is vital importance to re-establish.



## 7. Energy Sector in the occupied Palestinian territory

Energy is a fundamental prerequisite of every life. Energy gives personal comfort and mobility to people, and has an impact on the development of all sectors such as agriculture, industry, health, transport, etc, and thus it has an impact on the national economy and the environment. However, energy resources in the occupied Palestinian territory (oPt) are either dwindling or non-existent. The “*Right to adequate housing*” offers a clear reference for energy sector. According to the United Nations (UN) Committee monitoring the ICESCR, this right includes inter alia “sustainable access to ... energy for cooking, heating and lighting...”. Article number 25 of the Universal Declaration of Human Rights also guarantees the right to housing as part of the right to adequate standards of living.

The oPt has a very low production of energy, using wood, charcoal, olive cake and solar energy. Energy production in oPt was equal to 8,432.33 TJ in the year 2009 (PCBS, 2011a). Since this amount of produced energy is humble, the oPt is highly reliant on other countries for importing its energy requirements, as the oPt imports most of its primary energy requirements from Israel. The imported energy was equal to 44,274.92 TJ in the year 2009 (PCBS, 2011a). More than half of the total energy requirements in 2009 came from imported sources. The dependency on energy imports decreased from 95% of the total energy requirements in the 2007 to 84% by 2009. The decrease in this rate does not indicate that the oPt produces more energy but it is a possible explanation for its very low energy consumption compared with regional consumption rates

Energy consumption is considered the second aspect of the “energy tragedy” in oPt, whereas the first one is the energy production and import. Total energy requirements (Primary energy supply) reached 53,863.16 TJ in 2007(PCBS, 2009a) while in the year 2009 it decreased to 52,633.98 TJ (PCBS, 2011a).

<b>Summary Energy Balance in the oPt in Tera Joules</b>		
<b>Year</b>	<b>2007</b>	<b>2009</b>
<b>Total Energy Requirements <sup>1</sup></b>	<b>53,863.16</b>	<b>52,633.98</b>
Primary Production	8,831.18	8,432.33
Imports	45,020.89	44,274.92
<b>Energy Converted<sup>2</sup></b>	<b>-2,360.66</b>	<b>-2,757.75</b>
<b>Final Energy Consumption <sup>3</sup></b>	<b>35,900.34</b>	<b>41,098.46</b>
Industry and Construction	1,912.56	2,500.21
Transport	9,019.40	11,480.89
Households and Other Sectors	24,968.38	27,117.36

In the year 2009, the household sector represented the highest consumer amongst all sectors with 22,992 TJ (representing 56% of the total consumption). The transportation sector is the second greatest consumer of energy with 28% of the total consumption, while the service sector comes in the third place with 7%, followed by the industrial sector with 4%. This result approves the fact that oPt is not an industrial country. [Table below](#) shows the consumption of energy by sector in the year 2009 and 2007.

Consumption of Energy in the oPt by Sector in the Year 2007, 2009				
Sector	2007		2009	
	TJ	Percentage %	TJ	Percentage %
Industry	1,717.59	5	1,763.10	4
Construction	194.97	1	737.11	2
Transport	9,019.40	25	11,480.89	28
Households	21,807.53	61	22,991.98	56
Internal trade	986.88	3	1,015.63	2
Services	1,980.58	6	2,897.58	7
Agriculture and fishing	193.39	1	212.17	1
<b>Total</b>	<b>35,900.34</b>	<b>100%</b>	<b>41,098.46</b>	<b>100%</b>

Source: PCBS, 2009a & 2011a

**Petroleum Products Supply and Consumption:** The oPt totally depends on Israel for importing petroleum products (gas, kerosene, gasoline, diesel, oil, and LPG) through agreements between the GPC and private Israeli companies. Fuel in oPt is imported from Israel at a high cost. The quantities of imported petroleum products in oPt reached 29,936.34 TJ by 2009, while it was 33,543.11 TJ in 2007 (PCBS, 2011a). Figure below shows the trends in household consumption of fuel in West Bank and Gaza Strip in the years 2008, 2009 and 2010.

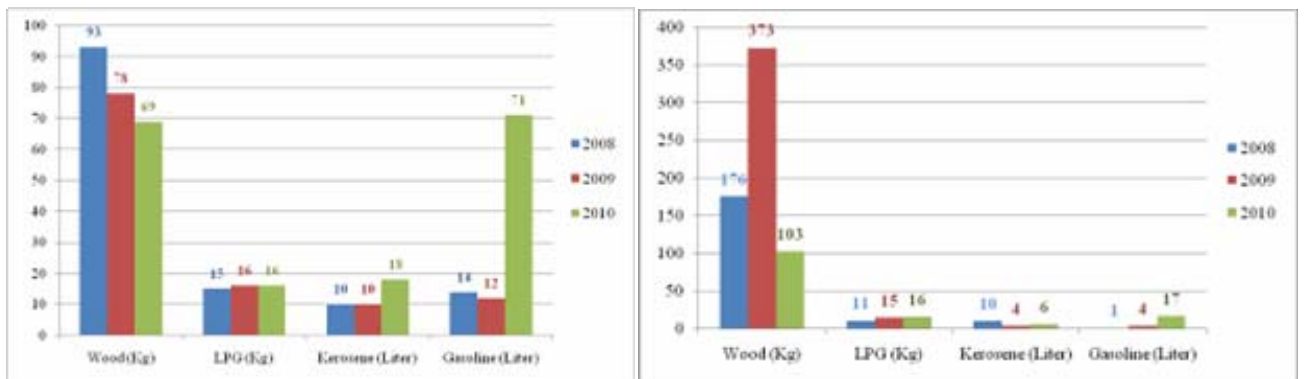


Figure: Household consumption of fuel in West Bank

Household consumption of fuel in Gaza Strip

**Electricity Supply and Demand:** Electricity is considered the main source of energy, whereby the vast majority of the oPt's electrical energy needs are imported. The only Palestinian electricity generation is from GPP, which started the operation of generating 140 MWh on 2002. It is noted however that this project received extensive damage as a result of Israeli air strikes in 2006. On the other hand, there are twenty power stations in Israel. GPP generates just about 10% of the electric power consumed in oPt, while the rest is imported from Israel, Jordan and Egypt. In reality, oPt is completely dependent on the Israeli Electric Company (IEC) for their electricity needs. The quantity of electricity purchased from the IEC in the year 2009 was equal to 3,783,000 MWh, which is 86% of the total purchased energy in the oPt. While 200,000 MWh of electricity was purchased from Jordan and Egypt. The cost of electricity is very high in the oPt and is the most expensive in all the countries in the Middle East. By July 2010, 99.8% of households in oPt were connected to the public electricity network. The average electricity consumption of a household (from the households that used electricity) in the oPt during July 2010, was 250 KWh, compared with 247 KWh in July 2009 (PCBS, 2010c).

**Renewable energy** resources are limited to solar energy for photovoltaic and thermal applications (mainly for water heating), and biomass (wood and agricultural waste) for cooking and heating in rural areas. The potential of wind energy is relatively small but not yet utilized in the oPt. The renewable energy production in the year 2009 contributed at 16% of the total energy requirements, while the rest was imported (PCBS, 2011a).

**Limitations and Challenges Facing the Energy Sector in oPt:** One of the most critical challenges facing the Palestinian energy sector and its development is the continued Israeli occupation. Many policies are followed by the Israelis to undermine the improvement of the energy sector, such as refusing or delaying licenses to establish connecting points with the IEC and refusing of construction electricity networks in Area C. In addition, the level of electrical services provided by the IEC is inadequate for the Palestinian demand with high prices. The supply of conventional energy including electricity and petroleum products and energy prices is completely controlled by the Israelis, causing energy shortages and the potential for future energy crises. In fact the Gaza Strip is currently suffering from fuel crises resulted from the restrictions that Israel has imposed on the transfer of fuel into the region. These restrictions are a tool of the Israeli policy of collective punishment against the residents of Gaza Strip – a policy which is illegal under international law. This policy is crippling the already fragile civil institutions in Gaza, and violates the *rights of Gaza residents to freedom of movement, right of access to health care and education, and the right to lead normal lives*. The policy has no legitimate security rationale (Gisha, 2008). Moreover, Israel is planning to steal the gas from Gaza's gas reserves, as the Israeli Infrastructure Ministry ordered the “Noble Energy” company to develop fields of natural gas. This is clear evidence on the Israeli violations against the Palestinians, as from legal standpoint the gas reserves belong to Palestinian. Thirty five localities (7%) out of 510 in the West Bank do not have access to electricity network, which means that more than 20,000 citizens are still suffering from the unavailability of electricity to lighten their houses and roads, or even meet their daily needs. The electricity prices are very high compared with other countries, and with the average income for the household, moreover the tariff is not unified. PENRA depends on buying power from Israel to supply it to the Palestinians. Any rise in electricity price in Israel will affect the electricity price in the oPt. GPC is the sole agency in the oPt responsible for importing, distributing, and setting prices for various petroleum products. This reality turned GPC into a monopolistic corporation that dictates and controls a very vital share of the energy market. As a monopolistic, GPC is not fully accountable or responsive to the needs and demands of Palestinians, because there are no other alternatives or service-providers.

**Key Recommendations:**

- Increase awareness of energy issues and energy conservation amongst relevant professionals, the general public and legislators.
- Develop the legal and legislative instruments related to energy,
- Develop a comprehensive national strategy for the energy sector in the oPt within a specific framework includes legislation and scientific recommendations.
- Conduct an awareness campaign regarding the energy crisis to support the idea of using alternatives energy resources.
- Support and improve the utilization of solar power.

## 8. Legal Context of Biodiversity Protection and Utilization in the oPt

**Background:** The concept of environment as a basic human right encompasses a respect for the right of other species to survive on the planet. There are anywhere between 5 and 50 million species of plants, animals, and microorganisms sharing the earth, and each has a value of its own, a role to play in a vast, complex web of interdependent connections. (Kothari, A., Patel, A., 2006). This range of species, the habitats they live in, and the internal genetic diversity they display, is called 'biological diversity' or 'biodiversity.' Such diversity is part of humans' daily lives and livelihoods, constituting resources upon which families, communities, nations and future generations depend. Its loss, therefore, is part of the erosion of environmental human rights. The conservation of biodiversity and natural resources affects, and is in turn affected by, the realization of human rights. (Campese, J.,Sunderland, T. et-al, 2009).

**International Biodiversity Legislative Framework:** A rapid growth is brought in the number and scope of international legal instruments and institutions relating to the conservation of biodiversity. (Boer, Ben, 2002). The Multilateral Environmental Agreements (MEAs)/conventions of prime importance to biodiversity conservation including: Convention on Wetlands of International Importance (Ramsar) (1971), Convention on International Trade in Endangered Species (CITES) (1973), Convention on the Conservation of Migratory Species of Wild Animals (CMS) (1979), World Charter for Nature (1982), Convention on the Conservation of Biological Diversity (CBD) (1992), United Nations Convention on the Law of the Sea (1994), Protection of the Marine Environment from Land-based Activities (GPA-Marine) (1995), the Cartagena Protocol on Biosafety (2002), The United Nations forum on Forests (2001). The International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) (2004), Nagoya Protocol on Access & Benefit Sharing (ABS) (2010).

**National and Regional Biodiversity legislative framework:** The Palestinian status under International Law is a specific one, given observer status only and some additional rights at the United Nations, but is neither a full member of the UN nor a party to multilateral environmental agreements so far. ([http://ecologic.eu/download/vortrag/2010/Gerstetter\\_TAIEX\\_Ramallah\\_29March10.pdf](http://ecologic.eu/download/vortrag/2010/Gerstetter_TAIEX_Ramallah_29March10.pdf)). All the same, Palestine has been "deemed associated with a state that has ratified international conventions"(MoA, 2005). This recognition has enabled the Palestinians to actively participate in almost all of the activities of international agencies and bodies like any other state. However, there are set of agreements and legal instruments that are abide to the biodiversity conservation at regional and international levels. Of the Palestinian relevant regional agreements are the Euro-Mediterranean Partnership (<http://eeas.europa.eu/euromed>), MEDUSA regional network for the "Identification, Conservation and Use of Wild Plants in the Mediterranean Region", and the Arab Forum for Environment and Development (AFED) (<http://www.afedonline.org>). The Palestinian National authority (PNA) ministries, in accordance to Oslo I and II accords, prepared relevant policies, strategies and laws falling within their authorities. The Palestinian Environmental Quality Authority (EQA) issued the Environmental Law in 1999, (finalized in 2003), the Palestinian Environmental Strategy (1999), Sectoral Environmental Strategy (2010), the National Biodiversity Strategy and Action Plan (1999), and the Gaza Coastal and Marine Environment Protection and Management

Action Plan. The Ministry of Agriculture also finalized Agricultural law (2003), Forest Policy, Strategic Options, and Scenarios and the Palestinian Agro-biodiversity strategy, (2005). The Palestinian National Biodiversity and Agro-biodiversity strategies and action plans are considered the basic legislations for the Biodiversity in the oPt.

However, it is worth mentioning that the national policies relevant to biodiversity conservation and environmental protection lack the adequate coverage of policies that cover integrated aspects of mainstreaming biodiversity conservation. Such aspects could be regulations related to species –specific and habitat-specific protection, natural heritage -specific and whether they meet with the international standards. In addition, specific regulatory tools and incentives to promote and reward conservation of the above-mentioned aspects are not well formulated within the national policies.

**Diversity of Natural Biota in the oPt:** The oPt is known for its great wealth of biodiversity resources in terms of the number of species, ecosystems, and landscapes surviving there. Palestine's biodiversity (including viruses) comprises about 3% of the global biodiversity. The oPt inhabits 2076 species, whereby 1959 species in 115 families are growing in the West Bank and 1290 species in 105 families are growing in Gaza strip. The most dominant families in the oPt are the Papilionaceae, Compositae and Graminae. There are up to 102 endemic species of 28 families inhabit the oPt; forming 5% of total species in the oPt (ARIJ-BFS, 2007a). The oPt also has a vast variety of wildlife, since it is home for six main different groups of fauna comprised of birds (427 species), mammals (92 species), reptiles (81 species), amphibians (7 species), fish (297 species), and invertebrates (30,904 species) (ARIJ-BFS, 2007b). The covered forested areas in the West Bank and the Gaza Strip, compromise 78.3 km<sup>2</sup> (ARIJ-GIS, 2011) and 1.76 km<sup>2</sup> respectively (ARIJ-GIS, 2006). Forests cover approximately 1.38% of the total area of the West Bank and 0.48% of the Gaza Strip<sup>3</sup>. Nature reserves in West Bank, on the other hand comprises of 703 km<sup>2</sup> (12.4% of total area in the West Bank). Management of Nature Reserves and Natural Parks located in “Area B” was transferred to the Palestinian Authority, Ministry of Agriculture (ARIJ-GIS, 2008).

**Biodiversity Challenges towards Sustainability:** Biodiversity is under threat from a variety of pressures, which are further worsened by the ongoing conflict including: unplanned urban expansion, unorganized establishment of industrial factories, overgrazing, over-exploitation, overfishing, over-fragmentation, deforestation and unplanned forestry activities, desertification and drought, invasive alien species, pollution and contaminants, excessive use of pesticides and chemicals, accidental mortality, hunting, climatic and environmental changes. This is in addition to the political issues including the division of Palestinian accessible areas, land confiscation, and expansion of the Israeli segregation wall. The lack of legislation, lack and enforcement and lack of research are other constraint in biodiversity conservation and management actions. Such factors are causing direct changes in plant and animal species composition, distribution and density and thus the loss of such valuable heritage.

As a result, common floral and faunal species are under a serious threat of becoming rare and very rare species disappearing altogether. Over the last 40 years, up to 636

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<sup>3</sup> The designated forested area in the West Bank and the Gaza Strip forms a larger area than covered forested areas, in which the designated forests covered 229.6 km<sup>2</sup>, and 2 km<sup>2</sup> respectively according to ARIJ-GIS Land Use/Land Cover analysis 2007.

species (of 2076 recorded plant species growing in the oPt) were found endangered of which 90 species are very rare from (ARIJ-BFS, 2007a). Around 22 terrestrial animal species are under the threat of extinction. They include 5 species of mammals, 5 species of the Palestinian Herpetofauna, and 12 species of birds (PCBS, 2005). Also, around 56 Mediterranean fish species (26% of the total fish fauna of Gaza Strip) is considered to be threatened (Ali, 2002).

**Suggested Biodiversity Planning Law and Policy Elements:** There is a need for a comprehensive review and development of Palestinian policy and legislation pertaining to PGRs utilization and conservation, incorporating standards of accreditation, intellectual property rights, indigenous knowledge, training and research. Laws concerning controlled collection systems, controlled processing systems, controlled trade systems, and licensing systems (including patents, protection of indigenous knowledge and benefit share) are crucial. Another challenge for biodiversity policy development includes the strong need for cross-sector national policy coordination. There could otherwise be a risk that priorities expressed for the biodiversity sector differ from other government priorities. Accordingly, better coordination should be ensured amongst the different stakeholders, in order to assess and set up the policies and laws concerning the biodiversity sector, as networking and coordination would support the enforcement of conservation and management laws in a comprehensive manner which ensures a responsible act from all stakeholders.

The BSAPP should be updated and harmonized with international and regional conventions, and should also be developed into action plan to orient the upcoming projects towards fulfilling the actual needs of biodiversity sector. Implementation follow-up of interventions listed for the sectoral environmental strategy. Palestinian national legislation is also needed to protect the traditional resource knowledge rights of local villagers and farmers as well as the rights of sovereignty over their cultural and genetic property. On the research front, it will be necessary to strengthen taxonomic and systematic research, ecology, habitats and wildlife population studies, indigenous genetic resources, and popular knowledge assessments.

Palestinian decision makers need to adopt integrated approach towards policy making across that relate to IPRS (Intellectual Property Rights), the CBD, the TRIPs, and UNESCO agreements; to fulfill the Palestinian international obligations towards international agreements and conventions. The oPt; as a member of UNESCO, should specifically include the UNESCO standards and regulation of natural heritage sites' conservation and management into its legislations especially those related to biodiversity, landscape, agro-biodiversity, land reclamation, etc.

## 9. Right to Access Water in the oPt

For more than 44 years the Palestinians have been denied from their water rights and the Palestinian's right to equitable and reasonable utilization of shared water resources has been violated by the Israeli occupation. Moreover, Palestinians' have been denied their right to access and utilize their water share as a riparian of the Jordan River System

**The Right to Water:** The right to access water is a fundamental human right that has been addressed in several international and regional treaties and conventions, and in the national policies and laws of some States. In 2002, the United Nations' (UN) Committee on Economic, Social and Cultural Rights (CESCR), with the adoption of General Comment No. 15, recognized the right to water, and provided States with the corresponding obligations and guidelines to this Right.

**United Nations Water Conference, 1977:** *all peoples, whatever their stage of development and their social and economic conditions, have the right to have access to drinking water in quantities and of a quality equal to their basic needs* **United Nations General Comment No.15, 2002:***The human right to water entitles everyone to sufficient, safe, acceptable, physically accessible and affordable water for personal and domestic uses.* **Palestinian Water Law No. 3, 2002:** *Every person shall have the right to obtain his needs of water of a suitable quality for his use, and every official or private institution that provides water services must take the necessary steps to insure this right and to make the necessary plans for developing these services* **General Assembly resolution number 64/292, 2010:** *Recognizes the right to safe and clean drinking water and sanitation as a human right that is essential for the full enjoyment of life and all human rights*

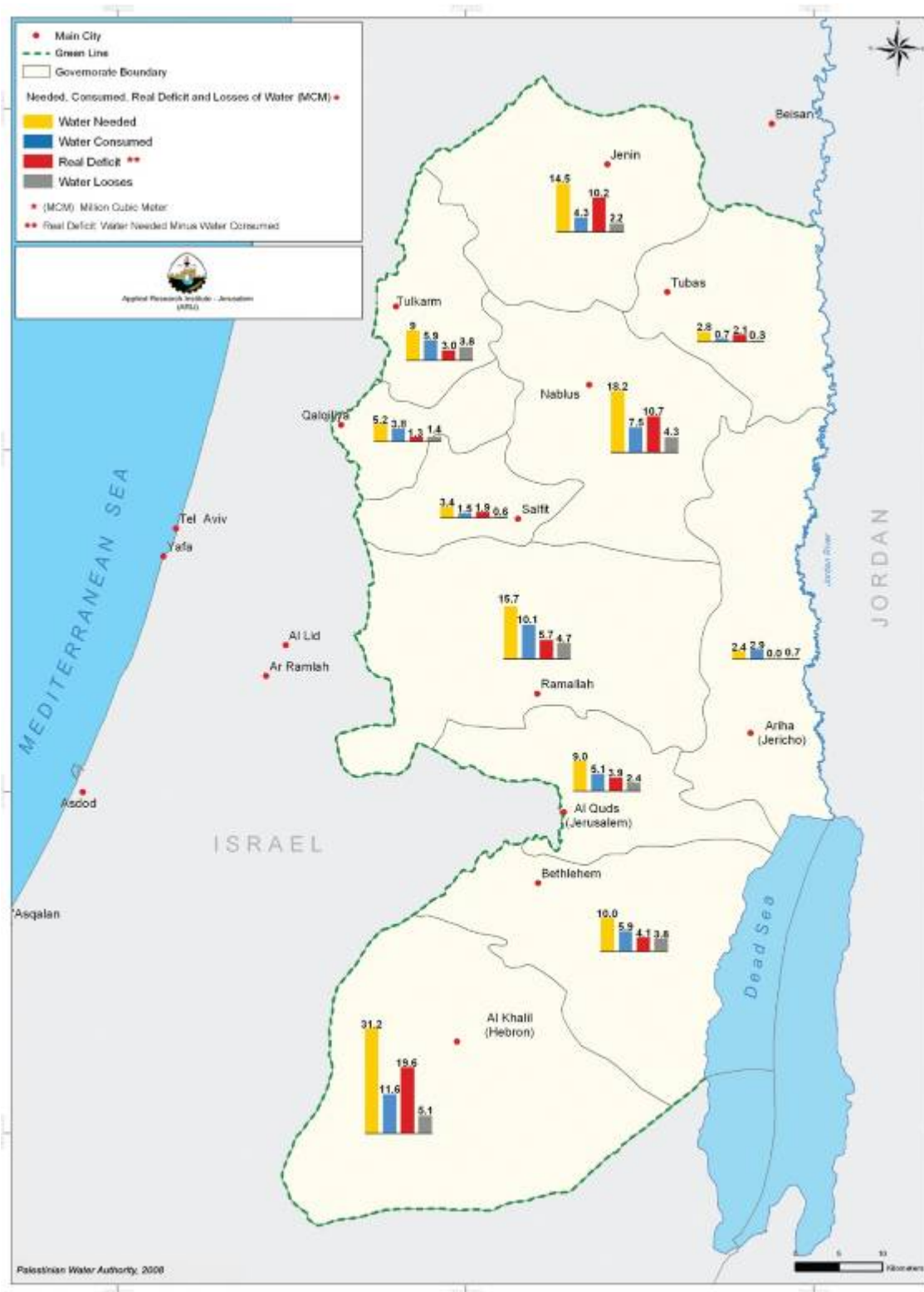
**Water Resources and Access to water in the oPt:** Transboundary water resources shared between the oPt and Israel consist of groundwater resources; the West Bank's Aquifer System and the Coastal Aquifer, in addition to the Jordan River System. Israel controls almost all Palestinian water resources and is exploiting around 89% of the available water; leaving only 11% to the Palestinians (PWA, 2011c). Moreover, since 1967 Palestinians' have been denied their right to access and utilize their water share as a riparian of the Jordan River System. Israel practices are violating the principle of the permanent and full sovereignty, over natural resources, of peoples under foreign occupation. Over the last decade, the overall Palestinian abstraction for the West Bank Aquifer System has been declining. The total abstraction dropped from 138 MCM in 1999 (World Bank, 2009) to 93 MCM in 2009. In recent years the Gaza Coastal Aquifer had been over pumped at the rate of more than 155 MCM annually, at a rate of around 300% of the safe yield, resulting in lowering the groundwater table below sea level and hence saline water intrusion in many areas. In the West Bank more than 77% of the communities are connected to the water network, with the population of these communities representing more than 92% of the West Bank's total population (PWA database, 2011). It should be noted that the coverage in the connected communities may only be partial. The remaining communities are unconnected to any form of water networks and are completely dependent upon water tankers, which are filled from various networked sources, and on rainwater collection system; in addition to agricultural wells. The network coverage in Gaza Strip is better where 98% of the Strip's population is connected to the network.

In 2009, a total of 86.5 MCM water was supplied to the Palestinian communities in West Bank. The average supply rate was 107 l/c/d. In Gaza Strip, a total of 96.4 MCM water was supplied to the Palestinian communities with an average supply rate of 175 l/c/d. The consumption rate in 2008 was 73 l/c/d in the West Bank and in 2009 it was 98 l/c/d in Gaza Strip, where in both cases it is lower than what is recommended by the World Health Organization, of 100 l/c/d as a minimum standard of water consumption. In the West Bank the quality of domestic water is generally considered acceptable. The quality of water is of a major concern for the unserved communities in Jordan Valley and Hebron areas, along-with the eastern slopes of Bethlehem(WASH, 2011a). The biological contamination places a public health hazard to the Palestinian communities in the West Bank. According to the Ministry of Health (2010), the percentage of the West Bank inhabitants that were infected with waterborne diseases in 2007/2008 was 3.6%. The problem of water quality in Gaza Strip is one of the most serious challenges facing the Palestinian water sector. Between 90-95% of Gaza's groundwater is polluted and falls short of the accepted international guidelines for potable water (PWA, 2011b).

<b>Table Supplied, consumed and lost water, and supply and consumption rate by governorate in the Gaza Strip, 2009</b>						
<b>Governorate</b>	<b>Population</b>	<b>Supplied Water (MCM)</b>	<b>Average Supply Rate (l/c/d)</b>	<b>Water Consumed (MCM)</b>	<b>Water Losses (MCM)</b>	<b>Consumption Rate (l/c/d)</b>
North Gaza	291,758	23.51	221	11.52	11.99	108
Gaza	526,793	33.8	176	22.31	11.49	116
Deir El-Balah	219,336	14.43	180	7.79	6.64	97
Khan Younis	287,511	16.61	158	9.14	7.47	87
Rafah	185,570	8.09	119	4.61	3.48	68
<b>Total</b>	<b>1,510,968</b>	<b>96.44</b>	<b>175</b>	<b>54.01</b>	<b>42.43</b>	<b>98</b>

Source: PWA, 2010a





Map : Water Needed, Consumed, Real Deicit and Losses in MCM by governorate in the West Bank, 2008

## **Challenges facing the Palestinian Water Sector**

**Constrains stemming from the Israeli Occupation:** The main challenge that hinders Palestinian water sector's sustainable development is the political situation which prohibits Palestinians from obtaining full sovereignty and control over their water resources in the oPt.

Article 40 of Oslo II Agreement, through the JWC, gives the Israeli occupation full control over the Palestinian water resources in the West Bank. The JWC is preventing the implementation of many development projects, by rejecting, canceling or suspending them, which inhibits the progress of sector development in the West Bank. According to World Bank, of 417 Palestinian projects submitted to the JWC during 1996-2008, only 236 projects were approved, whilst 22 projects were rejected and 143 projects are still waiting JWC approval (World Bank, 2009).

The construction of the illegal Segregation Wall has further decreased the Palestinian access to their water resources in the West Bank. By the completion of the Wall, 29 Palestinian wells and 32 Palestinian springs will be isolated in the Western Segregation Zone, in addition to 165 Palestinian Wells and 53 Palestinian springs in the Eastern Segregation Zone.

The Israeli military and settlers have, and still are destroying the Palestinian's water structures. Recently there has been a significant increase on these demolitions. According to Water Sanitation and Hygiene Cluster database, and monthly situation reports, the total number of water structures' demolitions recorded in the West Bank since June 2009 is 102 demolitions. Usually the demolitions are accompanied with other measures that aim at restricting access to areas served with water facilities and hence, eliminating the presence of Palestinians from particular areas with special interest to the Israelis. Since June 2007, The Israeli Siege on the Gaza Strip has played a major role in depleting the water resources and restricting development of the water sector, and hence, violating the right to water in the Strip. The shortage of fuel in Gaza Strip further has negative impact on the consistency of water supply in the Strip.

**Fragmentation in the Institutional Structure and Legal Framework in the Water Sector:** The water sector in the oPt suffers from fragmented institutional and legal framework, which hinders developing the sector and managing and maintaining water resources and infrastructures. The administration in the water sector can be described as non-coordinated in their efforts and approach. This has resulted in the absence of clear regulations to follow, and hence, the inability of the PWA to carry out its functions and role. In addition, there is no clear legislative policy which is able to establish separation of authorities between the PWA, the ministries and other institutions. This has led to overlapping in mandates and powers, mainly in terms of issuing water licenses

**Poor Management:** The fragmented management of water in the West Bank, the presence of NGOs working in the field of infrastructure development, and the absence of formal coordination to avoid duplication or improvement of funds' usage caused complications in developing the water supply sector and in managing and maintaining the infrastructure. Generally the work between the PWA and NGO's remains competitive more than cooperative (Klawitter and Barghouti, 2006).The performance of

the water utilities is weak, especially where the water losses are amongst the highest in the region.

**Drought:** In the oPt, years of below average rainfall i.e. drought, are more frequent than years of above average rainfall. The rainy season 2010-2011 has registered just 73% of the average annual rainfall in the West Bank and only 66% of the average rainfall in Gaza Strip (MoA, 2011)

A decreased amount of rainfall means a decreased amount of groundwater recharge, and hence, an increased water scarcity. The increase in water scarcity will result in an increase in the water demand's competition between all the different sectors; domestic, agricultural, and industrial. Not only water availability will be affected, the quality of water will also be affected and deteriorated.

### Failures and violations to the right to access water

**Discrimination:** The discrimination in providing the water supply is observable when comparing the daily water consumption between the Palestinians and the illegal Israeli settlers in the West Bank. This is a violation of Article 27 of the Fourth Geneva Convention of 1949 that prohibits an occupying power from discriminating between protected residents of an occupied territory. The average supply rate of the settlers is more than 350 l/c/d, while Palestinians in the rural communities in the West Bank survive on less than the average of 73 l/c/d; in some cases the per capita water use may not exceed 20 liters per day. From the Palestinian side, the PNA is obliged to provide the Palestinian citizens with sufficient quantities of safe and clean water for their daily use at affordable costs. The difference in the daily water supply and consumption within the West Bank's localities is significant.

Per capita daily consumption in some of the Jordan Valley's settlements and the nearby Palestinian villages			
Israeli Settlement	l/c/d	Nearby Palestinian village	l/c/d
Ro'i	431	Al-Hadidiya	20
Beka'ot	406	Al-Hadidiya	20
Arganan	411	A-Zubeidat	82
Niran	433	Al-A'uja	82

Source: B'tselem, 2011

**Water Affordability:** The PWA was not able to fulfill its responsibility in adopting a unified tariff system for all the communities in the oPt until late November 2011. Before that the tariff used to vary from one governorate to another and even between localities within the same governorate.

Generally, the water prices from the water supply network are provided at affordable prices. But due to the economic crises and the low income of the Palestinian people, expenditure on water often exceeds 5% of the household income. The reduced access to affordable water resources, resulted from the Israeli practices has forced the population in some communities to travel long distances, sometimes for more than 4 hours, to get water legally or illegal from private connections. These practices resulted in reducing the affordability of water, where in some cases about 25% of the monthly income is paid for water, and this percentage reaches 40% in other cases like in Al-Malih community in Tubas Governorate (Amnesty International, 2009; CoHRE, 2008).

**Poor Governance in the Palestinian Water Sector:** The presence of the Israeli occupation hinders the development of good water governance in the oPt. But this is not the only factor that affects the efficiency of water governance. The absence of the role of the NWC has led to lack of transparency in the PWA operations, in addition there is a lack of accountability in managing the water sector in the oPt, especially the technical problems. Another factor effecting good governance is the fact that many bodies (municipalities) manage this sector; these bodies are not capable of conducting good governance and lack institutional expertise on the technical, financial, investment, and management levels. Corruption, political and tribal nepotism and favoritism in providing water services are also key factors that hinders the good governance in the water sector

Moreover, the PWA is not capable of monitoring and controlling the water abuses in the West Bank. This is due to the lack of Palestinian control over in Areas C and B where many abuses occur. The PWA monitoring over the abuses of the main water pipelines and water resources and water thefts in Area A is also weak.

**Key Recommendations:** Since the signing of Oslo II Agreement, where Israel had recognized the unidentified Palestinian water rights, and in the absence of the Permanent Status Negotiation, the issue of the Palestinian water rights hasn't been solved. As a result, there is high and urgent necessity of Israeli-Palestinian negotiations over the water rights of the Palestinian people who suffer from severe water shortages as a result of discrimination and unfair allocation of transboundary water resources between Israel and the oPt.

To solve the water shortages in the oPt it is not enough to obtain the Palestinian water rights; adopting an integrated water resources management approach in addition to the creation of non-conventional water resources are two major factors in solving this problem and are necessary to ease the suffering of the Palestinian people who suffer from sever water shortage. Regarding the water sector legal and institutional aspects, it is imperative that all the Palestinian water related laws, by-laws, and regulations should be reviewed and revised in order to separate the authorities, functions, and responsibilities of the different bodies involved in the water sector. It is also important to activate the NWC to function as was intended in the Water Law No.3 of 2003, and to activate the role of the PWA and its functions. To achieve sustainability in the water sector, the above mentioned should be joined with integrity, transparency, accountability, and equity in managing the sector.

## 10. Sanitation and Wastewater Management in the oPt

One fifth of the world's population, or 1.2 billion people, live in areas of water scarcity, and this is projected to increase to 3 billion by 2025 as water stress and populations increase (UNEP & UN Habitat, 2010). There is no option but to consider wastewater as part of the solution. To be successful and sustainable, wastewater management must be an integral part of rural and urban development planning, across all sectors.

The right to water and sanitation has been recognized by 178 countries out of 192 United Nations members. International law recognizes *the right to safe and clean drinking water and sanitation as a human right that is essential for the full enjoyment of life and all human rights* (UN General Assembly, 2010b). This recognition was stated in at least one international resolution or declaration; including the *United Nations General Assembly (UN) in 2010, the First Africa-South America Summit in 2006, the First Asia-Pacific Water Summit in 2007, the Third South Asian Conference on Sanitation in 2008, and the session of the Human Rights Council in September 2010.*

With the establishment of the Palestinian Water Authority (PWA), after the Oslo II Accords in 1995, the PWA has become the main institution and regulatory body that leads and manages the wastewater sector in the oPt. The major Palestinian legislative instruments in relevance to wastewater are as following 1) *National Sector Strategy for Water and Wastewater in Palestine (2011 – 2013)*, 2) *water law, 2002*, 3) *Palestinian Environmental Law, 1998*, 4) *Water Management Strategy, 1998*, and 5) *Palestinian Environmental Strategy (PES), 2000*. On the other hand, a mutual recognition of the need to protect the environment and utilize natural resources on a sustainable basis was reached between the Palestinians and Israelis during peace negotiations. In reference to Article 12 of the Oslo II agreement, both parties agreed to cooperate and share the responsibility of preventing damage to the environment. The existing peace agreements do not go beyond temporary solutions for emerging crises nor do they create a sustainable and permanent solution. Further, these agreements were concluded in an unjust and inequitable manner.

**Analysis of the Current Status of the Wastewater Sector in the oPt:** The status of wastewater management in the oPt is characterized by: 1) Poor wastewater infrastructure, 2) Insufficient wastewater treatment, 3) Non-existence of treated wastewater reuse schemes, 4) Unsafe disposal of untreated and partially treated wastewater, 5) Discharge of raw wastewater from the illegal Israeli Settlements into the environment, 6) Lack of development due to the Israeli Occupation practices that have obstructed the sustainable management of the sector, 7) Weak institutional capacities and weak legal framework, 8) Lack of coordination between relevant institutions, 9) Lack of public awareness on the importance of wastewater treatment and reuse.

The current management practices for the wastewater sector in the oPt are mostly limited to the collection of wastewater by sewage networks and cesspits. Furthermore, wastewater treatment facilities are restricted to a few localities in the oPt. The lack of enough and appropriate infrastructure for the wastewater collection and treatment has been the limiting factor in the development of the wastewater sector. The total volume of wastewater generated in the oPt in the year 2010 was estimated at approximately 95 to 100 Million Cubic Meters (MCM). An increase in the connection coverage of



Collected wastewater if not treated, it is disposed into the environment. According to ARIJ's 2010 field survey, and in accordance with 2009 data from the Palestinian Central Bureau of Statistics, the most common disposal method for wastewater in the West Bank remains cesspits. Only 6.33% (2.836 MCM) of the generated wastewater in the West Bank is treated in centralized and collective wastewater treatment plants located in the West Bank, the remaining is discharged untreated into the environment; part of which is being treated by Israeli treatment plants located inside Israel.

In the West Bank there are five centralized wastewater treatment plants (WWTPs), 13 collective wastewater treatment systems, and 180 existing onsite wastewater treatments systems dispersed over the West Bank. The existing centralized WWTPs in the West bank are: Al-Bireh, Ramallah, and Tulkarm; Jenin and Nablus are expected to start operating soon. In the Gaza Strip there are another group of centralized wastewater treatment plants namely; BeitLahyia wastewater treatment plant, Gaza and Rafah. Concerning Khan Younis currently utilizes a temporary basin to achieve partial treatment.

**Limitations and challenges facing the Palestinian wastewater sector:** The existing improper management of wastewater poses a severe environmental threat in terms of its capacity which deteriorates nature and biodiversity, as well as groundwater quality. It also poses serious public health risks represented by the spread of diseases arising from the contamination of food, water, air, and soil. Improving wastewater management is one of the greatest challenges facing environmental planners in the oPt.

- **Lack of legal instruments & Enforcement:** Environmental enforcement in the oPt has often been regarded as weak and ineffective, particularly due to the Israeli occupation. The neglect of the Israeli occupation to the environmental sector for decades, the economical difficulties that the PNA went through, and rapid population growth, made the wastewater collection and treatment infrastructures incapable of giving real solutions; thus making the enforcement of the law in many cases almost impossible.
- **Wastewater Management:** The existing improper management of wastewater poses a severe environmental threat in terms. Improving wastewater management is one of the greatest challenges facing environmental planners in the oPt.
- **Political Situation:** Coordination between Israelis and Palestinians on wastewater issues has been absent. In effect, during the period of occupation Palestinians have had limited control over these issues.
- **Israeli practices,** become limiting factor for the achievement of sustainability and development of the wastewater sector. Palestinians object to the Israeli settlements and industrial zones in the oPt both because they are illegal and because they threaten the sustainability of Palestinian natural resources and the environment. The domestic wastewater generated annually by the 580,000 Israeli colonists living in the West Bank including East Jerusalem amounts to 54 MCM per year. Thus, the wastewater generated by Israeli colonists exceeds that generated by Palestinians living in the West Bank which is 47.3 MCM per year. This excess is explained by the higher levels of affluence enjoyed by the Israelis: they consume more water for domestic purposes. Most Israeli colonies are sited on hill tops and they often allow the generated wastewater to run untreated into nearby wadis and Palestinian agricultural lands which results in the pollution of these lands.

**Key Recommendations:** Despite that the sewage collection coverage has been increased in the last few years in the oPt, there is still a lot of work to be done. The sewage collection systems in the absence of available wastewater treatment infrastructure used to transport the problem rather than solving it. As stated earlier, neither the available sewage collection networks nor the available wastewater treatment infrastructure can prevent damages caused to the Palestinian environment and population. The worse part of the wastewater sector in the oPt, is wastewater treatment; where the available infrastructures are not enough and the limited existing infrastructure face many difficulties in most cases, among them are: sustainability, overloaded working conditions and lack of experienced staff. Furthermore, Israeli practices in the oPt are in many cases an additional challenge to the wastewater sector. Wastewater knows no boundaries and so raw wastewater irresponsibly released by either Palestinian communities or Israeli settlements, ultimately affects the shared water sources and the environment. Limited rural development, poor capacity building, weak economy, poverty, poor health and sanitation conditions, environment deterioration, occupation and complex political situation, low enforcement of the law and limited control over the territory are the main dominant limiting characteristics in the oPt. Quick results should not be expected unless the political and economic status of the country changes dramatically in a positive direction. Both Israel and the PNA should agree on accepting common criteria and principles, recognizing that each of the nations on an international watercourse has a right to water and sanitation. Mechanism of joint cooperation has to be established. The new agreements should, therefore ensure each the obligation to cooperate, including adequate coordination.

Based on the available existing water resources and the projected needs for development it is believed that there will always be a regional shortage. Utilizing non-conventional water resources will be the closest alternative, this release the importance of converting the generated wastewater from a threat to the environment, to a real alternative solution to face the current water crisis. Adopted reforms at national level shall be able to overcome challenges and guarantee sustainability to the sector. A good management approach together with an efficient legal framework and a powerful enforcement, can contribute in developing the sector. Enhancing the capacity of the Palestinian staff working in this field is essential at this critical stage. Wise investments in the wastewater management can generate significant returns. The Palestinian NGOs and other grass-root organizations can play an important role supporting the PNA in facing the current situation and helping in achieving a sustainable developed sector. Solutions shall be socially and culturally appropriate, as well as economically and environmentally viable. Meeting the wastewater challenge is not a luxury but a prudent, practical and transformative action. The wastewater sector, if well managed can pass from being a threat to both the environment and public health, to a valuable resource that can promote the economy wheel through the generation of green employment contributing in reducing poverty, improving food security, health and therefore economy. Treated wastewater also represents a water resource that can be utilized to combat desertification in the oPt. Reuse of wastewater for irrigation, shall form a vital component of the Palestine's future water strategy.



## 11. Palestinian Agriculture Sector

Agriculture is one of the most important economic pillars in Palestine, as well as being considered an integral part of its history, culture and identity. Agriculture has become a symbol for the Palestinian people to protect their lands from confiscation, and it is the sector that hosts the refugee laborers from other sectors during political conflicts and economic crisis.

Since its establishment, the Palestinian National Authority (PNA) has developed several developmental plans for the agricultural sector. Some of them were formulated using a developmental framework, whilst others were developed as contingency and emergency plans and strategies. Always, the created plans and strategies face problems in implementing and/ or achieving their goals. Additionally, the allocated budgets and resources were limited which affected the performance of the Ministry as well as the sector. The most important plan was the recent National Development Plan for the years 2011-2013 with stated vision of, “Establishing the State and Building our Future”, where the agricultural sector has been defined as agriculture and rural development sector, and the allocated budgets (of total development expenditures) for the years 2011, 2012 and 2013 reached \$34.2, \$60.7, and \$83.0 million, respectively. Furthermore, the developed agriculture sector strategy “a shared vision” 2011 – 2013 is considered to be the most mature strategy developed by the Ministry since the year 1999. The main concern is to focus more on supporting subsistence agriculture, small farmers and focus on the high level of informal labor force employed in this sector. It is worth mentioning that the allocated budgets by government and/ or donors for the agricultural sector are very limited and do not respond to the real needs of this vital sector. For example of the total expenditures in all sectors, donors have spent less than 1% in support of the Palestinian agricultural sector. Even through the ‘Consolidated Appeal Process (CAP)’, the agricultural sector didn’t manage to get more than 22% of the sector appealed budget for the year 2010.

The results of the recent (2010) agricultural survey, done by PCBS and MoA, showed that the total area of agricultural land in the oPt is 1,207,061 dunums, of which 1,105,146 dunums in the West Bank and 101,915 in the Gaza Strip. This refers to the followed surveying method which was mainly based on calculating the physical agricultural ownerships of economically feasible size. Compared to the year 2008 the total agricultural area was 1.854 million dunums. This change is due to the fact that PCBS and MoA had surveyed the actual agricultural lands and dismissed the fragmented small size agricultural ownerships which are dominated in the urban areas and in certain areas where springs are located.

Water availability to the agricultural sector is estimated to 150 million cubic meters (mcm) per year, and constitutes 45% of the total water used to distribute to 70 mcm in the West Bank and 80 mcm in the Gaza Strip. Groundwater wells are the main water source for irrigation in the Gaza Strip. In the West Bank, irrigation water is supplied by groundwater wells and springs, and Israel confiscates 82% of Palestinian groundwater in the West Bank. Currently, irrigated agriculture covers approximately 12% of cultivated lands in the oPt and uses about two thirds of Palestinian water resources whilst contributing a gross output of around \$500 million annually. Overall, agriculture contributes 25% of exports, and the sector is the third largest employer: formal employment in the sector in 2005 was estimated at 117,000 people.

Due to over pumping of ground water in Gaza Strip water quality reduced significantly and the agricultural yield affected significantly. Also, the destruction of about 370 agricultural wells by the Israeli aggressions on the Gaza Strip also affected the quality and quantity of pumped water, in addition to the closure of the borders causes significant losses for agricultural sector. Thus, the quality of water become so low due to the over pumping and cause water salinization. Despite the scarcity in water resources in oPt, the available resources are not efficiently used due to the over irrigation and existing old damaged irrigation networks. Also, the investments in wastewater treatment have been blocked due to limited financing resources and restrictions imposed by the occupation on establishing wastewater treatments, especially in area C.

The diversified eco-systems of Palestine give it the uniqueness to diversify its produced crops as well as the production calendar. Currently up to 105 main crop types are cultivated, including; 38 types of fruit trees and 37 types of vegetable crops, and 30 types of field crops and grain in addition to the different types of cut flowers. Olive tree areas are dominant amongst the planted fruit crops, making up 81.1% of the total fruit trees cultivated area, whilst 75.5% of the vegetables area is located in the West Bank while 24.8% of the vegetables area located in Gaza Strip. The total area of the protected vegetables reached 45.3 thousand dunums and forming about 24.3% of the total vegetables area in the oPt. The main vegetables growing are cucumbers, squash and tomatoes, respectively. Regarding the field crops cultivations, the total cultivated area with field crops in the year 2007/2008 reached 495.9 thousand dunums. Wheat is the main planted crop and covers 46.3% of the field crops area in the oPt followed by barley with 21.7%.

The total value of the agriculture production in the oPt, for the agricultural year 2007/2008, reached 1,366.6 million \$USD divided between 60.9% for plant production (44.4% from West bank and 16.5% from Gaza Strip) and 39.1% for livestock production (31.2% from West Bank and 7.9% from Gaza strip). The total production cost reached 490.4 million \$USD of which 37.2% for plant production and 62.8% for livestock production. The highest costs of agro-production inputs are feed 46.0% followed by fertilizers with 9.6%, veterinary medicines with 7.7%, pesticide with 7.3% and water and electricity with 7.0%. Accordingly, the total added value for the agricultural sector reached 876.2 million \$USD distributed between 71.2% in the West Bank and 28.8% in Gaza Strip with a total contribution of 649.8 million \$USD by plant production sector (74.2%) and 226.4 million \$USD contributed by the livestock sector (25.8%).

In 2007, the agricultural sector had contributed to 16.1% of the total employment in Palestine, with a total number of 103 thousand workers, whilst later in 2008, the employment in agriculture was estimated at 14.2%. In the years 2008 and 2009 the labor force in agricultural sector formed 15.7% and 14.2% in the West Bank and 10.7% and 6.4% of the Gaza Strip total labor force, respectively. Furthermore, the agricultural products formed about 23% of the total exported products from Palestine in the year 2007. In addition to the high number of informal employed workers, especially women. It is worth mentioning, that 42% of the Palestinians in the West bank and 17% in Gaza strip have been earning from the agricultural sector are a major supplementary income (MoA, 2009).

Agricultural inputs are one of the sensitive factors affecting the feasibility and the sustainability of the agricultural sector as their prices keep increased. For example, such expenses increased in the year 2009 at a rate of 5.7% from the previous year. Furthermore, the recent agricultural survey conducted by the PCBS and MoA for the year 2010 showed there were 292,031 employees in agricultural holdings (livestock and Plants) in the oPt of which 94.6% are unpaid family members and only 5.4% permanent employees during the agricultural year 2009/2010. This fact reflects the reality of the Palestinian agricultural sector is a family based sector where most of its activities are subsistence activities, while the agro-business activities are limited.

The value contribution of agricultural sector to the Palestinian GDP remained varied between 387.9 and 588.7 million \$USD in the years 2000-2007 with exception of the year 2008 where it was at 876,181 million \$USD. This showed that the growth in the agricultural sector is very limited and the allocated support by the Palestinian authority and donors is limited compared to other sectors. Also, the contribution of the agricultural sector compared to other sectors has started decreasing from 12.1% of the total GDP in the oPt in the year 1998 to 5.5 in the year 2009. This showed that the growth in the agricultural sector is very limited and the allocated support by the Palestinian authority and donors is limited compared to other sectors. Local agricultural production achieves self-sufficiency in many vegetables (including: tomatoes, cucumbers, eggplants, squash, beans, cabbages, cauliflowers etc), while only some fruit production (including: olives, grapes and plums), poultry and eggs. By contrast, the self sufficiency of red meat does not exceed 75% and of the milk and dairy production doesn't cover more than 70% of actual consumption, and 85-90% of the wheat requirement is imported, depending on actual rainfall each year. In the case of livestock concentrates, only some 5% of that used in Palestine are produced locally.

**Limitations and challenges:** The agricultural sector faces several obstacles and limitations which affect its development and improvement. The main obstacle is the occupation practices: with the agricultural sector being main targeted sector by Israeli occupation. Since 1967 more than 2.5 million trees have been uprooted since 1967 (with estimated value of 55.3 million USD); the continuous blockade of Gaza has had a marked impact on agricultural activities; inaccessibility to the rangelands; impose restrictions on the movement of agricultural commodities, inputs and restriction the farmers access to their lands. Furthermore, land confiscation, the damaging of agricultural infrastructure and facilities; controlling the movement of agro-commodities between the Palestinian areas and abroad; fighting the Palestinian farmers through filling the Palestinian markets with Israeli commodities while the Palestinian agro-production in its peak; controlling water resources and taking up to 82% of Palestinian ground water; supporting the settlements products to compete and affect the Palestinian agriculture; isolating the Palestinian land by the segregation wall (184,899 dunums of agricultural lands are isolated by the Segregation Wall); and limiting fisherman's access the to the Gaza Sea all gravely affect the agricultural sector.

Gaza's Farmers have been unable to recover from the continuous Israeli Attacks (especially, the Cast Led War on Gaza) and closure, the agricultural employees reduced by 60% in Gaza and the loss of the agricultural sector reached USD 180 million in one year as direct damages to agricultural assets. Other constraints on the agricultural sector include; the land fragmentation which has reduced the feasibility of agricultural holdings; poor planning, resources management and optimization of natural resources;

over use of agricultural chemicals; lack of applied agro-research; poor extension services; poor cooperation among different stakeholders; very poor funding for such important sector (1% of donors fund and 7% of the government budget). In addition no clear and feasible production calendar exists; demand-supply chain is not in existence, agro-production-marketing databases are not formulated; food bill studies about self-sufficiency and gap in food production are not assessed etc. Furthermore, the adoption of new technologies is limited and poor; the blockage of Gaza is killing the agricultural sector, especially the agri-business activities; over grazing due to limited access to the rangelands is prevalent, there is a current lack support to the agricultural informal labor force which comprises the major labor in this sector; and the role of agro-women is neglected and the focus on developing the role of women in agricultural sector is minor. Furthermore, the natural crisis, especially the drought, low rainfall, low water resources, wind storm and frost are affecting the status of the agricultural sector; the absence of the national crisis funding box to compensate the farmers for their losses.

**Key Recommendation:** To develop the Palestinian agricultural sector several actions, procedures and steps should be taken on the ground to make a difference and create a sustainable and developmental agricultural sector, starting from planning level. The Palestinian Governmental bodies should give more attention and support to the agricultural sector through not only developing good frameworks, and strategies but also backing these up with a real commitment to transfer them into reality. In addition, due to the continuous constraints and restrictions imposed by the Israeli occupation on this important sector and its farmers, the government should give its priority to protect this sector by using its connections to international agencies and foreign friend countries to give more support to protect the Palestinian agriculture and to encourage donors to give priority to support this sector. Furthermore, an increase in the currently allocated budget for this sector is required and creating a national crisis compensation financial-box is a must. Furthermore, protecting small farmers and supporting their subsistence agriculture and protecting the agro-products of small farmers; empowering rural women; encouraging agricultural research and the adoption of feasible technologies; creating a national database and information system about agro-production-consumption balances; creating a feasible agro-production calendar; improving the marketing and exportation systems; and revising the currently signed agro-agreements and replacing them with more feasible ones. On national level, providing suitable agro-infrastructure; establishing agro-support industries; and protecting Palestinian agro-genetic resources. On marketing level, increasing the added value of the Palestinians agro-products locally and abroad; and controlling the entrance of Israeli agro-commodities to the Palestinian markets especially those are produced in Palestine. Finally, Cooperation among different stakeholders should be empowered and to become more efficient to avoid duplication and maximize the benefit of farmers and the sector.

## 12. Rights to Food Security in the oPt

**Background:** Food is one of the most basic needs for human survival and access to it is a human right (Smith, & Subandoro, 2007). Adequate food provision is recognized as an essential component in both individual human and national/international development, being set out as the first of the eight Millennium Development Goals (MDGs); ‘eradicate extreme poverty and hunger (UNDP, 2011). Since 2000, rising food prices have contributed to increasing the number of food insecure people from 857 million to 1.02 billion in 2009, reversing slow but consistent progress in reducing the world’s hungry (FAO/WFP, 2009a). The most severe cases of food insecurity are occurring in the Arab world. It is currently estimated that over 31 million Arabs are classified as hungry; this being almost 10% of the population (Karam, 2010).

**International Food Security Actions:** This right to food and food security is recognized in international legal instruments and includes the right to be free from hunger. International law recognizes that everyone has the fundamental right to be free from hunger, and access to food with dignity. The human right to adequate food and food security has been recognized in different international instruments, most notably the following conventions and summits: *The Grains Trade Convention* (1995), *The World Food Summit* (1996 and 2002), *The Food Aid Convention* (FAC) (1999), *The Millennium Summit* (2000), *World Summit on Food Security* (2009), *Summit for the World’s Regions on Food Security* (2010), *The 2010 MDG Summit*. Several other conferences were conducted at global level mostly related are: *The World Food Conference* (1974), *Sustainable Food Security for All by 2020*.

**Food Security National Legal Instruments:** The PNA has implemented effective policies and ensured service delivery at national and local levels. The PNA is committed to combating poverty and to enable all Palestinians, men and women, to secure their sustainable means of living through productive work by undertaking decisive procedures (<http://www.mop-gov.ps>). The major Palestinian legislative instruments in relevance to food security and poverty are as following: *National Poverty Report* (2005), *National Food Security Strategy* (NFSS) (2005), *The Palestinian Reform and Development Plan* (PRDP) 2008-2010, *Palestinian National Authority Aid effectiveness Action Plan* (2008-2010), *National Nutrition Policy for Palestine* (2008-2010), *The Palestinian Early Recovery and Reconstruction Plan for Gaza* (2009-2010), *The Millennium Development Goals* (MDGs): *Statistical Report* (2009), *Social Safety Net Reform* (2010), *National Food Safety Initiative* (NFSI) (2010), *From Shared Vision to Action Plan – Agricultural* (2011-2013). Not forgetting that there are number of Civil Society organizations that work in the field of food security including ARIJ, UWAC, ESDC, LRC, IR, etc. and other set of international stakeholders including WFP, FAO, UNICEF, UNRWA, UNDP, WHO, CIDA, ACF, AECID, ICRC, Oxfam, SCC, ACTED, CARE international, etc.

The national instruments mainly describe the drivers and cases behind poverty and food security status in the oPt; suggesting options to create a better socio-economic, agriculture, education and health conditions to support the Palestinian livelihood in an attempt to alleviate poverty and to increase food security at household level. However, the Palestinians has no comprehensive law, strategy, or plan that tackle specifically the issues of food security, and rights to adequate food in a comprehensive Palestinian contexts where all causes, drivers and dilemmas of food security-adequacy are

addressed. All existing relevant strategies and plans are not updated taking into consideration that significant changes took place on the political, economical and social bases at both national and international levels during the last five to ten years period.

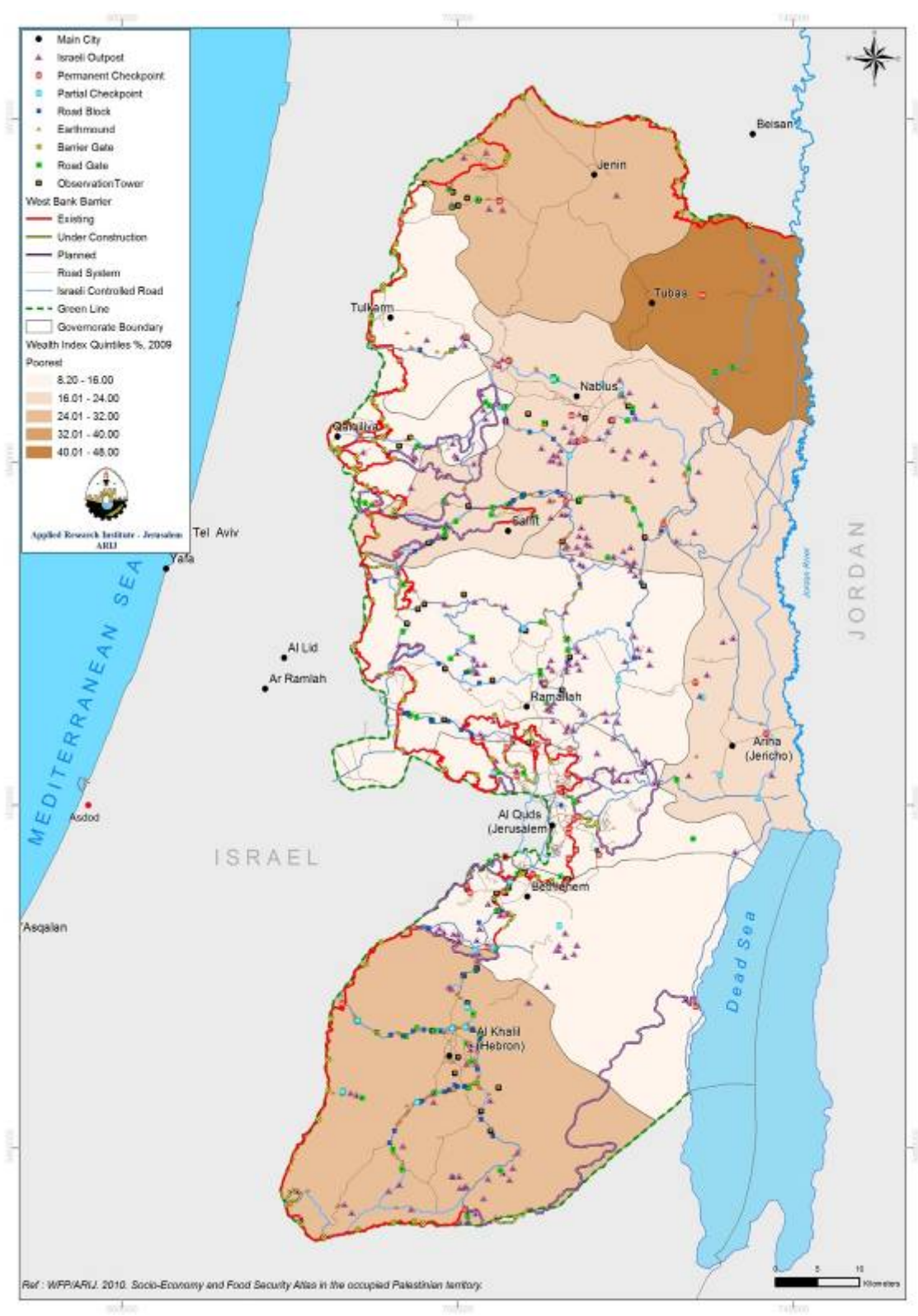
**Food Security and Poverty Status in the oPt:** In the year 2010, it is estimated that 1.43 million people in the oPt are food insecure (forming 33% of household members) (WFP/FAO/PCBS, 2011). Up to 550,176 food insecure persons are estimated in the West Bank (22%) and 829,954 are estimated in the Gaza Strip (52%). By contrast, almost half of the households in the West Bank are food secure compared to less than one fifth of the Gaza households (WFP/FAO/PCBS, 2011). Food insecurity levels are significantly higher among refugee households at 27%, those living in the seam zone at 40% (WFP/FAO/PCBS, 2011), and herding communities in Area C at 55% (WFP/UNRWA, 2011). On the other hand, 26% of the Palestinians in the oPt lived in poverty in the year 2010. The poverty rate was 18% in the West Bank, but was much higher in Gaza at 38% (PCBS, 2010b).

The resilience of Palestinian households to the continuous degradation of their food security situation can be attributed to a significant extent to the efficacy of their coping mechanisms. By the first half of 2010, 16% of Palestinian households reported a decrease in expenditure levels. Of this group, 89% reported that the decrease in expenditures was on food (WFP/FAO/PCBS, 2011). The most commonly used strategy for households is to defer the payment of utility bills (43%), to purchase food on credit (42%), consume lower quality food (29%) and consume lower quantities of food (32%) (WFP/FAO/PCBS, 2011). Most of the adopted strategies have a permanent cost on lives and livelihoods, through poorer health and nutritional status, excessive indebtedness and loss of future opportunities for higher skills and better paid jobs.

**Food Security Dilemmas in the oPt:** Palestinians are experiencing a dramatic decline in their living standards and a regression of the economy due to internal and external movement restrictions, limited control over natural resources, restricted access to local and international markets, low rates of economic production and limited access of Palestinian laborers to working opportunities. The food insecurity in the oPt<sup>4</sup> is a result of problem of economic access to food and essential non-food items resulting from the lack of income-earning possibilities for Palestinian households. Other dimensions of food security, including food availability and food consumption, are generally less problematic. Yet, current availability of food on the market could be hampered given the volatility of the peace process and the high dependency on Israeli and international markets (WFP/FAO/PCBS, 2011). Of main food security and poverty causes are soaring food prices, high food imports, restrictions on Palestinian exports, heavy reliance of food aid, distorted market channels, restrictions in Palestinian economy, limited access to working opportunities, difficulties in agricultural and food production and planning, physical restrictions and political impact, high growth rate, population density, dependency ration, poor environmental conditions, growing resource scarcity and poor national strategy and planning.

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<sup>4</sup>The oPt is placed in the lower middle-income group of countries in terms of Human Development and MDG attainment (UNDP: 2010), and is categorized as a 'developing nation' by all major socio-economic data-sets (Mahjoub, A: 2010)



**Map: Poorest Index and Israeli Physical Restrictions**

### **Suggested Food Security Planning Policy and Response Elements in the oPt:**

Legislations and enforcement of regulations in all sectors are vital elements to ensure effective implementation of measures and plans most notably poverty and food security alleviation. Legal protection is a necessary step for the realization of the right to food as a right. The oPt should update the food security strategy and accordingly draft right to food, food security, nutrition security or food sovereignty laws to alleviate food security and poverty levels. Palestine should also adopt the international guidelines to fulfill the legislative aspect at the government level including the legislative obligations and framework. Another new development that should be considered is sectoral legislation that gives effect to the right to food in different ways. In addition policy makers should strengthen, update, or replace existing legislation in the field of agriculture, environment and health that would complement and support food security laws. Palestinian decision makers should enshrine the right to food in their constitutions and institute specific legislative measures to implement this right.

The updating and drafting of rights to food within a Palestinian context should consider: creating policies set on updated data, involving of all decision makers and policy planners (all relevant ministries) in the utilization of data and resultant creation of policy, focusing on gender inclusion (where appropriate) in all policy planning, focusing on a range of drivers and causes behind poverty (i.e. social, cultural, effects of occupation) integrated in policy –making; creating national policy that for the first time integrates different government sectors; social economic, educational, health, environment to create a united front towards poverty alleviation and national sustainable development. Accordingly, several responses should be accomplished in a Palestinian context so as to fulfill the international guidelines for building legislative instruments in the field of food security in the oPt. Summary of the suggested responses that should be considered in the Palestinian case to fulfill rights to food is as following.

- Food security assessment: assessments are conducted using accepted methods to understand the type, degree and extent of food insecurity, to identify those most affected and to define the most appropriate response.
- Humanitarian assistance: Palestinians have a right to humanitarian food assistance that ensures their survival and upholds their dignity, and as far as possible prevents the erosion of their assets and builds resilience
- Nutritional needs: Ensure the nutritional needs of the affected Palestinians, including those most at risk, are met, where the food items provided are appropriate and acceptable to recipients so that they can be used efficiently and effectively at the household level.
- Livelihood promotion: The promotion of livelihoods through protected and supported primary production mechanisms, and income generating activities is another priority response at Palestinian case. Enhance production activities Safety nets, Stabilizing Food Prices.



### 13. Solid Waste Management in the oPt

Handling and disposal of solid wastes are regarded as an urgent need for societies, especially because providing attainable standard of life is recognized as a human right. This is well defined in the *International Covenant on Economic, Social and Cultural Right (1966)*. This right is explicit in article 11(1) - the right to an adequate standard of living, and article 12- the right to the highest attainable standard of health.

For the Palestinian case, and according to the international humanitarian and human rights law, it is the responsibility of the Israeli occupation to ensure the well-being and safety of Palestinians. Principle 1 of the Rio Declaration of the UN Conference on Environment and Development employed language of human rights law, the second pillar of sustainable development states that, "*human beings are at the centre of concern for sustainable development*" and that they are, "*entitled to a healthy and productive life in harmony and nature*". Furthermore, the 1972 Stockholm Declaration on the Human Environment recognized the link between human rights and environmental protection stating that "[m] *has the fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits a life of dignity and well-being*". Furthermore, the UN General Assembly, in its 1994 Resolution 45/94, had already recognized "*that all individuals are entitled to live in an environment adequate for their health and well-being*". However, Israel has never recognized Palestinians' rights and solid waste management seldom got the attention it deserved by the Israeli occupation.

In the occupied Palestinian territory (oPt) and according to article 15 of the Palestinian Local Authorities Law no. 1 of 1997, solid waste management is the responsibility of the local authorities within their boundaries. Consequently, the Ministry of Local Government (MoLG) which has the overall responsibility for the relevant functions of local authorities including planning and provision of services is the primary body managing such responsibility in the oPt. However, and on the national scale other ministries share environmental responsibilities with it. It is worthy to remark that the Palestinian Authority has supported this sector where real efforts were directed to improve the situation and to decrease the adverse effects resulted from the mismanagement of these waste. For example, joint councils for solid waste management were established, and recently in 2008 a National Strategy for Solid Waste Management (NSSWM) was issued which aims at setting the development path for the Palestinian solid waste management (SWM) until 2014.

**Current Status of Solid Waste in the oPt:** In 2010 about 1.37 million ton of solid waste was generated in the oPt. Whereas, the average per capita solid waste generation rate was about 0.91 kg/day which is similar to the rates in other developing countries but humble when compared with developed countries. Furthermore, household wastes accounts for about 45-50% of the total generated solid wastes and Hazardous materials are to some extent present in all of these wastes, although such materials are only a significant component of industrial and hospital wastes. There is virtually no separation of hazardous waste in the oPt, except for some limited treatment of infectious waste. Waste generation and its management are influenced by political, legal, socio-cultural, environmental, economic factors and available resources. These factors have interrelationships that are usually complex in waste management systems. The current situation in the oPt has greatly influenced the waste generation rate. In this regard, the waste generation in the oPt varies according to the community classification i.e urban or

rural, 1.05 kg/capita/day and 0.7 kg/capita/day respectively. The highest rate was found in the urban communities or the main cities, which could be attributed to the higher living standards and economic activities compared to the rural communities.

The generated wastes are mostly driven from municipal waste which fundamentally comes from households (about 50%). Food waste or organic fraction represents the major part of the generated wastes, and it accounts for almost 60% of the generated SW. The remaining part consists of paper, carton cardboard, plastic, glass, metals, wood and other waste. The availability of high organic fraction provides the ability to recycle such part through biological treatments including composting and anaerobic digestion.

Nowadays, about 85 % and 100% of the households receive solid waste collection service in the West Bank and Gaza Strip respectively. Although the solid waste service is available, the collection frequency in some communities is considered inadequate such that waste piles or litters could be formed. Solid waste collection services are mainly (74%) the responsibility of the local authorities (municipality, village council and or joint council); however, in some localities private contractors or other entities are responsible for the collection process. Local authorities levy charges on the served people as solid waste management fees and this forms part of the solid waste management cost recovery policy. However, the fees does not cover the total services cost (marginal contribution) and thereby the authorities normally suffer from providing this service especially with unstable economical situation and high rate of unemployment (23.7%), which resulted in the accumulation of debts. The situation is similar in almost all local authorities where 100% collection rate is far from being achieved. In the refugee camps, the UNRWA carry out this duty using its own equipment and management approach, and normally uses disposal sites of the local authorities. Solid waste from homes, institutions, shops, etc, is usually collected manually with plastic bags and transported to the steel containers ranging in capacity between 800- 1000 liters or dumpsters with capacities ranging between 5-6 cubic meters distributed in the cities and towns to be later transported by compactors or trucks to the dumping site or the transfer station which form part of the collection system. This is for main cities and big towns, but for small villages, the service is different as there are neither containers nor compactor for waste collection. People in these communities use door to door manual collection and tractors to collect the wastes once a week in most cases.

Dumping of solid waste in open, uncontrolled, unmonitored sites is the dominant method of waste management in the majority of local authorities in the oPt. It is estimated that more than 160 random dumpsites are distributed in the oPt where none of them was constructed or follow the environmental considerations. Normally, burning is used as a standard practice for waste volume reduction in these dumpsites regardless of the negative impacts resulted from this behavior. Worthy to remark that the number of dumpsites has been increased after the break down of the second Intifada due to the imposed restriction of the movement. For example in 2001 there was 137 dump sites in the oPt, and more than 183 by 2006. However, the construction of new central projects like Zahrit El finjan has reduced these random dump sites.

In attempt to reduce the problems associated with the numerous uncontrolled dump sites, the PNA through the MoLG has encouraged the formation of Joint councils for SWM. Also, the PNA in collaboration with different donors has recently implemented

some regional projects through construction sanitary landfills, but actually still need more efforts and projects to resolve this issue. Sanitary landfill methods have been introduced to minimize the adverse effects of solid wastes disposal (NSSWM 2010-2014). Zahrit El-Finjan sanitary landfill in Jenin, which is currently in operation, has yielded positive results in comparison with previous conditions. It is worthy to point out that about 85 open and uncontrolled dumpsites in Jenin and Tubas were closed and rehabilitated after operating this project, and this provided freeing up of 1,200 dunums of rehabilitated land which can be used for other purposes. Furthermore, two sanitary landfills have been planned which are Al Maniya and Ramoun. Al-Maniya which has been designed to serve the southern part of West Bank, mainly Hebron and Bethlehem governorates, and will replace the current Yatta unsanitary dumpsite and others. On the other hand, Ramoun project will serve all communities in Ramallah and Al-Bireh Governorate.

**Hazardous waste:** Actually, the Israeli occupation controls the Palestinian life, and this is reflected in the development of several industries. In this context, hazardous wastes are mainly generated from health care centers. The available data shows that the generated medical waste in the oPt in 2009 was 1,202 ton/month, whereas 31% of the health care centers completely separate their medical wastes from waste stream, and the majority (69%) partially separate their waste. Hazardous (including medical and industrial) waste are finally disposed in the local Authorities dumping sites. The employed practices of hazardous waste management are similar to those used for ordinary waste. These practices are unsatisfactory, and do not meet the standards recommended by WHO or international bodies such as EPA. According to the WHO regulation, waste generated from health care centers have to be contained and safe transported for treatment or final disposal site. However, it is important to highlight that highly radioactive waste from the Dimona Nuclear Facility (Israeli facility) has been dumped in the oPt, which has resulted in spreading of various diseases like cancer.

**Israeli practices and solid waste management in the oPt:** There is no doubt that the Israeli activities, including disposal of hazardous waste and wastewater in the oPt, causes serious environmental problems and those, in turn, result in grave harm to human beings. Large amounts of dangerous materials and wastes are buried and thrown in the Palestinian agricultural land, which means that these wastes pollute the soil and groundwater that the Palestinian use. Additionally, solid wastes from settlements and industrial zones within these settlements are disposed of in the Palestinian land. More than 50 locations are used as dumping sites, which expose the Palestinian territory to the dangers of these wastes (PCBS, 2009). In fact, information about the real quantities and composition of these wastes is not clear as Palestinians have no access to such information. Evidence shows that much of the waste is being disposed of on Palestinian land and dumping sites. The solid waste generated in West Jerusalem, for example, is transferred to the Abu Dis dumping site. Additionally, wastes generated from industrial zones in these settlements are also disposed of in the Palestinian land. It is estimated that at least 200 factories are located within these industrial zones (PCBS, 2009). However, Aluminum, leather-tanning, textile-dyeing, batteries, fibreglass, plastics and other chemicals are among the major industries within these settlements. Wastes generated from these industries contain toxic elements, such as aluminum, chromium, lead, zinc and nickel. For example, the aluminum industry which is found in many Israeli settlements produces aluminum and acidic waste. Electroplating produces nickel, chrome and acidic waste. The battery industry produces lead in its wastewater. All of

these inorganic substances are considered hazardous to health if accumulated in the human body. Finally one must add to this the fact that nuclear waste from Dimona was dumped in the Palestinian Hebron area and also in the Gaza Strip east of the Al Bareij refugee camp and the town of Deir El Balah (Eyre, 2010).

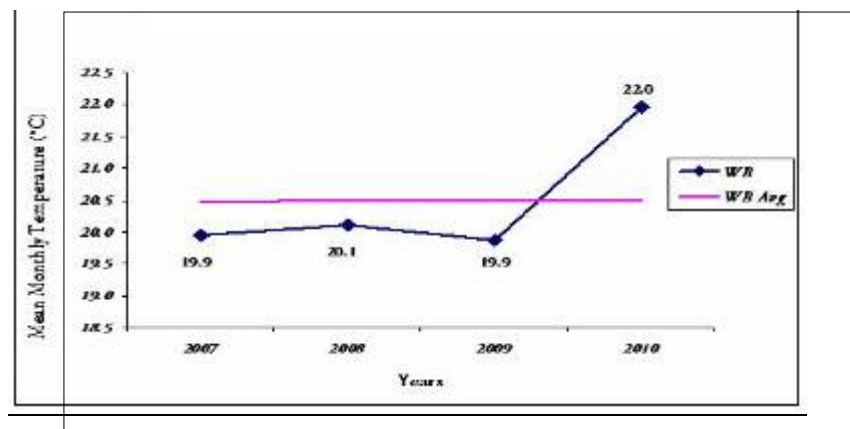
**Key Recommendations:** The solid waste situation remains far from satisfactory, and environmentally sound solid waste management still need more efforts and funds. In this regard, more funds and central projects are needed along with an integrated plan to comprehensively improve the situation to be in accordance with the UNEP report in 1999. Also, General awareness levels regarding knowledge about environmental problems should be increased amongst civil society so as to guarantee adequate participation of the public, and this point forms a major and crucial point for the success of any future project. It is recommended to adapt a comprehensive waste management plan, which basically depends on the following points:

- Avoidance and reduction: this strategy prevents wastes from ever being formed in the first place.
- Recycling/resource recovery/waste-to-energy (R3 WE) recycling and reuse of materials, the recovery of certain wastes for reuse (known as resource recovery) and the conversion of certain types of waste into useful energy such as heat, electricity, and hot water are strategies which recover and offset costs for overall waste management.
- Treatment: when waste can't be prevented or minimized through reuse or recycling, then we need to pursue strategies aimed at reducing volume and/or toxicity. Treatment technologies are process that focus on stabilization of wastes, reducing toxicity, reducing volume before ultimate disposal, or in some cases creating limited-use-by-products.
- Disposal: the only other strategy available is disposal. Waste disposal practices are integrated into the environmental management strategies of all municipalities, are integral to all manufacturing operation, and quite often is the least desirable strategy and one that can be directly addressed by waste minimization and P2 (Pollution Prevention) practices.

## 14. Climate Change

Climate change refers to long-term fluctuations in temperature, precipitation, wind, and other elements of the Earth's climate system (Beaulant et al., 2008). It is recognized as a major issue of global concern with serious and long-term challenges that have the potential to affect every part of the globe; including the occupied Palestinian territory (oPt). Climate varies naturally on all timescales; as a result of changes climate elements; which is ranging from decades to millions of years. However, human influences, including industrial zones and activities and urbanization, along with Israeli destructive practices are thought to be bringing about a rapid change in the climate, due to massive emissions of greenhouse gases.

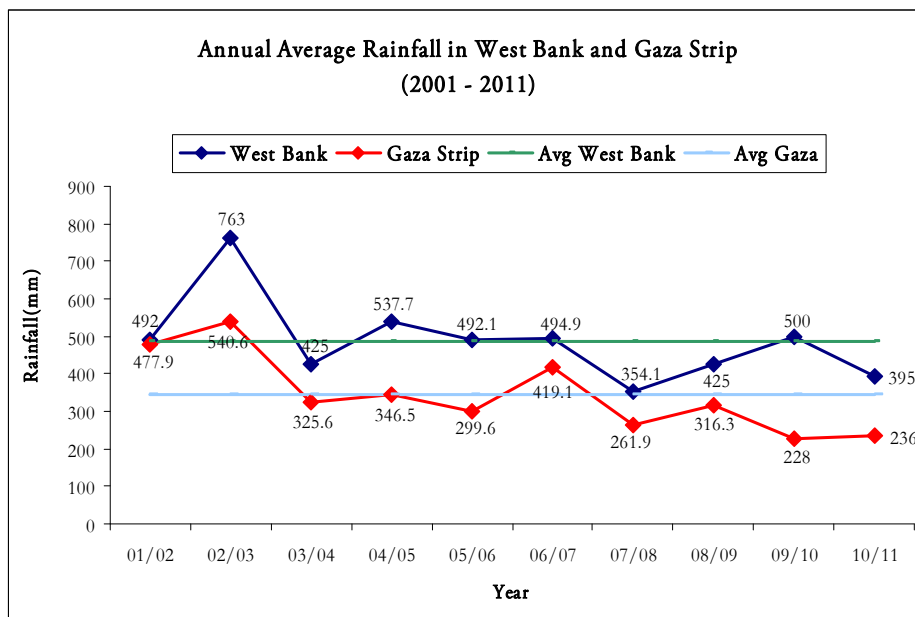
Weather Events in the oPt: Extreme weather events, such as droughts which have noticeably increased in the oPt, particularly in the southern and eastern slopes of the West Bank. Eighty seven percent of the cultivated land is dedicated to rain fed agriculture and 33% of the entire landmass is used as pastureland for grazing (ARIJ, 2007). The total area of hyper arid, arid and climates comprises about 35% of the land area of the West Bank. Consequently, drought increases the vulnerability of rural people (rain-fed farmers and livestock herders) whose coping strategies are already exhausted due to the deterioration of economic situation, high food prices and the closure regime since the second Intifada. Drought is expected to become more frequent, more intense and less predictable as a consequence of climate change (ARIJ, 2007). Moreover, the autumns of 1999 and 2010 across the oPt were worse than any year, which increased the drought to a critical value (ARIJ WERD, 2011). The increase in temperature during the 20th Century was obvious according to the Palestinian Central Bureau of Statistics. That increase was by no means uniform during the last decade, with the year 2010 being the warmest in the 125 years (PMD database, 2011). It is noted that there is no metrological information about Gaza, because of the damages caused by the Israeli occupation in 2007 to the metrological stations.



Annual Mean Monthly Temperature in the West Bank

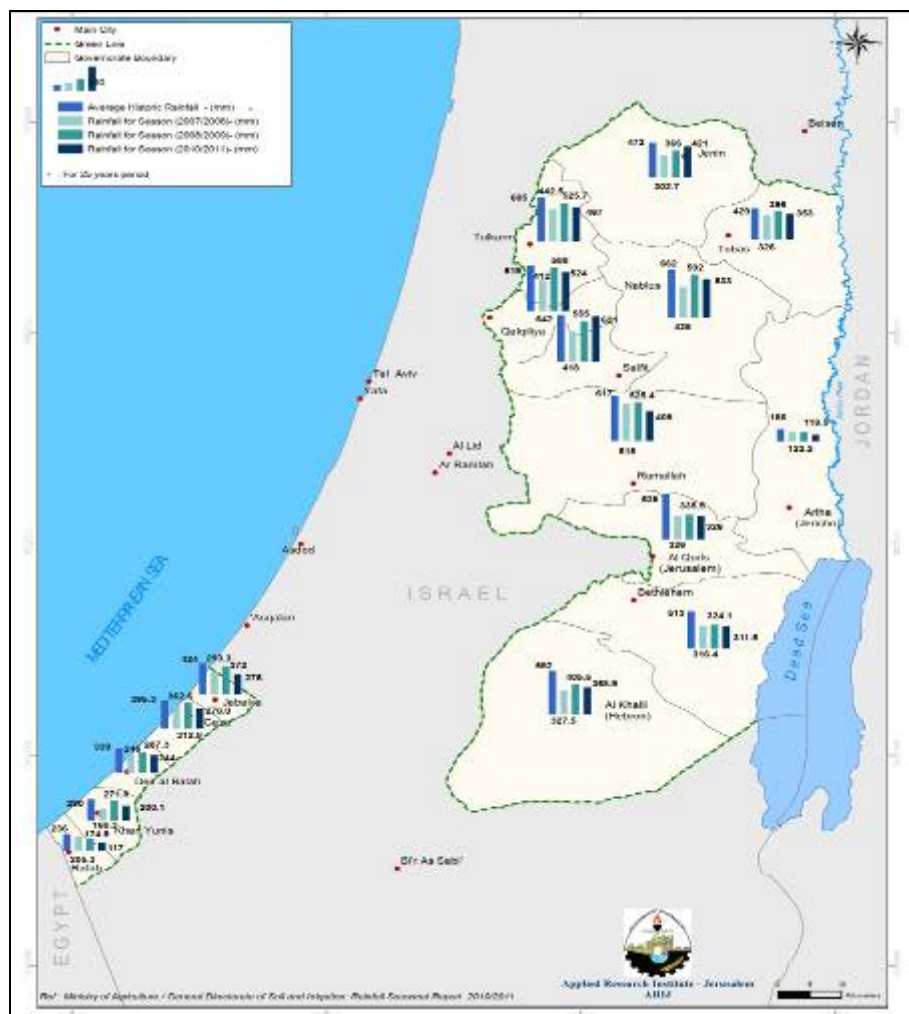
The oPt which is one of the natural areas in the western Mediterranean basin was vulnerable during recent years to low rainfall. The rainfall in the West Bank for the rainy seasons during 2007 - 2011 was between 354 mm and 500 mm (MoA database, 2011) compared to an average historical yearly rainfall of 532 mm (MoA, 2011). The

impact of such climate change on Palestinian Agriculture is especially high owing to already existing water scarcity in the region and dependency of Palestinian agricultural on rainfall. The same climatic conditions are affecting the Gaza Strip governorates, where the amount of rainfall for the rainy seasons during 2007 – 2011 was between 228 mm and 316 mm (MoA, 2011). This amount is less than the historical average rainfall which is 358.5 mm (MoA, 2011). Variations in the amount of rainfall from one year to another in both the West Bank and Gaza Strip during the past years are noted from Figure below, showing that rainfall is increasing in one year and decreasing in another. During the period from 2007 to 2011, a significant decrease in the amount of rainfall in the West Bank and Gaza Strip has been noted in the rainy season 2007/2008. In the rainy season 2008/2019 the average amount of rainfall has increased in the West Bank and Gaza Strip, but still it was below the average. The rainy season 2009/2010 had registered the highest rainfall in the West Bank (500 mm), while in Gaza Strip it registered the lowest rainfall (228 mm). In the season 2010/2011 rainfall has decreased significantly in the West Bank, where the average was 395 mm which constitutes only about 74% of the average annual rainfall in the West Bank. In the Gaza Strip, the rainfall for the same season maintained almost the same level compared with the previous rainy season and was 236 mm, which constitutes about 66% of the average annual rainfall (MoA, 2011). The Palestinian Water Scarcity Task Force (WSTF) has reported that, at the end of the rainy seasons (2009-2010 and 2010-2011), the rainfall registered 72 % of the historical average expected so far in the season in the West Bank; with regional variance in precipitation highlighting the concern with the continued shortfall in rainfall as the winter season comes to an end.



**The annual average rainfall for the West Bank and Gaza Strip for the rainy seasons 2001-2011**

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**Map: Average annual rainfall in West Bank and Gaza Strip (2007-2011)**

**Climate change and human rights:** It is obvious that projected climate change-related effects threaten the effective enjoyment of a range of human rights. For example, the right to safe and adequate water and food, the right to health and adequate housing. Equally, the human rights perspective brings into focus that climate change is set to hit the poorest countries and communities the hardest (MacInnis, 2008). The United Nations (UN) Human Rights Council recognized this in its resolution 7/23 “*Human rights and climate change*” (28 March 2008), expressing concern that climate change “*poses an immediate and far-reaching threat to people and communities around the world*” and requesting the UN Office of the High Commissioner of Human Rights (OHCHR) to prepare a study on the relationship between climate change and human rights. The Council adopted resolution 10/4 in March 2009, which states, “*Human rights and climate change*” and notes that “*climate change-related impacts have a range of implications, both direct and indirect, for the effective enjoyment of human rights ...*” It further recognizes that the effects of climate change, “*will be felt most highly by those segments of the population who are already in a vulnerable situation*”, recognizes that “*effective international cooperation to enable the full, effective and sustained implementation of the United Nations Framework Convention on Climate Change (UNFCCC) is important in order to support national efforts for the realization of human rights implicated by climate change-related impacts*”, and affirms that “*human rights*

*obligations and commitments have the potential to inform and strengthen international and national policy-making in the area of climate change”.*

**Climate change adaptation planning in the oPt:** Regional climate change implications for the oPt over the next 50 years are expected to consist of; a decrease in annual average precipitation, an increasing incidence of drought, and increase in extreme climatic events. A number of key areas are negatively affecting human and economic development in the oPt such as water resources, agriculture and food security, public health, and tragedy risk reduction (UNDP/PAPP, 2009a). Civil society, private, and governmental sectors should be involved in the Climate Change Palestinian Adaptation Programme of Action by setting general plans and policies which can be addressed with a significant climate change impacts. The PNA is currently denied to work a political authority regarding the management of climate risk, due to the Israel occupation (UNDP/PAPP, 2009b). Climate change adaptation scheme for the oPt 2008-2009 reflects a national capacity-building, regarding climate change adaptation (UNDP Environment and Energy Group, 2008), involving: 1) Enhancing capacity of developing countries to design and implement policies to integrate adaptation into domestic plans, budgetary and fiscal policies, investments and practices, 2) Helping countries identify prioritize and implement short-term ‘no regrets’ adaptation responses, 3) Helping countries mobilize additional sources of funding for implementing adaptation responses, and 4) Developing a national Climate Change Adaptation Strategy

**Weaknesses and Limitations in Climate Change Planning:**

- Limited legal frameworks for disaster risk reduction, which are response-led rather than preventative.
- Underdevelopment of policies for disaster preparedness, mitigation, and emergency response.
- Weak capacity in disaster management and rescue operations.
- Lack of capacity and training in disaster risk management and policy implementation at government level (national and local).Weakness or lack of studies on climate change
- Lack of coordination between central and the local level authorities in disaster management activities.
- Limitations in using high technologies and devices used to monitor climate change issues.
- Scattered data (if exists) in different institutes and government and not easy to get it.
- Media coverage of climate change – both mitigation and adaptation.
- Low level of awareness of aspects of the environment, especially those related to climate change.
- The belief that the problem of climate changes of global character and is not processed locally.

**Key Recommendations:** There is a need for new legislation as well the effective application of existing water laws, development of an Environmental Information System (EIS) for better future planning, development of regional climate change adaptation programmes, in addition to the Climate Change Adaptation Strategy which was developed by Mason and others (2009) adopts the concept of climate vulnerability, defined as combined biophysical vulnerability and social vulnerability. It is also essential to review previous work in all sectors to make sure that the climate change adaptation effort is not a duplication of other previous work.



## **15. The economic cost of the Israeli occupation**

Throughout the Israeli military occupation of the Palestinian territory, a systematic policy has been followed to exploit the Palestinian resources and properties. Actually, this occupation has been characterized by enormous damages, destruction and loss of the Palestinian life and properties, which without doubt has imposed a huge price tag to the Palestinian economy. The imposed Israeli measures and activities have prevented Palestinians from accessing much of their land and from exploiting most of their natural resources; it isolates the Palestinians from global markets, and fragments their territory into small, badly connected, “cantons”. These facts have been recently highlighted also by international economic organizations, including the World Bank, UNCTAD and the IMF. These reports were able to demonstrate parts of the damages inflicted by such occupation. However, a detailed and comprehensive quantification of the losses resulted from this occupation still needed.

It is well known that many of the restrictions have been in place since the start of the occupation in 1967, reflecting an unchanged colonial attitude of Israel, which aims to exploit Palestinian natural resources (including land, water and mining resources) for its own economic benefits. This “exploitative” policy has been coupled by the desire of Israel to prevent any Palestinian competition with Israeli economic interests. This has been (and still is) reflected in a series of Israeli obstacles related to customs, transportation and infrastructure which have prevented the development of a competitive Palestinian tradable sector and of Palestinian trade with non-Israeli partners. At present, these restrictions have deepened further and despite not being able to quantify all the costs, the obtained estimations for 2010 were almost equal to the value of the entire Palestinian economy. It was found that the total costs imposed by the Israeli occupation on the Palestinian economy which we have been able to measure was USD 6.897 billion in 2010, a staggering 84.9% of the total estimated Palestinian GDP. In other words, had the Palestinians not been subjected to the Israeli occupation, their economy would have been almost double in size than it is today.

For quantifying purpose, the inflicted damages were classified as direct and indirect ones, and their corresponding costs were arranged according to this classification as shown in Table below. In this regard, direct costs are referring to those directly borne by the Palestinian economy due to Israeli restrictions; these include higher costs of electricity, water, and the movements of goods and people, whereas indirect costs are those concern the foregone revenues from production that have yet to be realized, due to the restrictions imposed by the occupation and they form the major part of the costs of occupation. These revenues would have materialised had Palestine been a free and sovereign country. Examples of the indirect costs include the value added from the extraction of minerals and salts in the Dead Sea, and the royalties from the development of the offshore marine gas field of Gaza. We limit the estimation of indirect costs to sectors such as natural resource exploitation, so that we can confidently quantify the opportunity cost of not developing any economic activities.

### Costs of the Israeli occupation on the Palestinian economy, USD '000 and % of GDP (2010)

	Cost ('000 USD)	%GDP
Gaza blockade	<b>1,908,751</b>	<b>23.5%</b>
Indirect costs of water restrictions	<b>1,903,082</b>	<b>23.4%</b>
Value Added from irrigation	1,219,667	15.0%
Jordan Valley agriculture	663,415	8.2%
Health costs from water	20,000	0.2%
Natural resources	<b>1,837,738</b>	<b>22.6%</b>
Dead Sea salts and minerals	1,102,869	13.6%
Value added from quarries	574,869	7.1%
Gas marine reserve	160,000	2.0%
Direct utility costs	<b>492,788</b>	<b>6.1%</b>
Direct electricity costs	440,876	5.4%
Direct water costs	51,912	0.6%
Intl. Trade restrictions	<b>288,364</b>	<b>3.5%</b>
Dual use (excl agriculture)	120,000	1.5%
Dual use agriculture	141,972	1.7%
Cost of trading	26,392	0.3%
Movement restrictions	<b>184,517</b>	<b>2.3%</b>
Dead Sea tourism	<b>143,578</b>	<b>1.8%</b>
Uprooted trees	<b>138,030</b>	<b>1.7%</b>
<b>Direct costs</b>	<b>3,012,451</b>	<b>37.1%</b>
<b>Indirect costs</b>	<b>3,884,398</b>	<b>47.8%</b>
<b>TOTAL</b>	<b>6,896,849</b>	<b>84.9%</b>
<b>Fiscal costs</b>	<b>1,795,685</b>	
<i>Memo item</i>		
Nominal Palestinian GDP (2010)	8,124,000	

Source: Authors' elaborations on various sources

This quantification is likely to be an under-estimation of the true costs of the occupation, as we have made the choice to quantify only those costs for which reliable and relatively precise estimations could be provided. For example, probable missed revenues from not developing certain industries due to the import restrictions imposed by Israel in our estimation are not included. Furthermore, we have not been able to quantify the many different costs of the occupation because, in many cases, a lack of data prevents us from finding a reliable quantification of the costs. However, and as the shown in the above table, the majority of these costs does not have any relationship with security concerns but rather come from the heavy restrictions imposed on the Palestinians in the access to their own natural resources, many of which are exploited by Israel itself, including water, minerals, salts, stones and land. Over USD 4.5 billion per year, a full 56% of GDP, is the cost (in terms of both foregone revenues and higher costs of raw materials) for the Palestinians for not being able to access their own resources.

Obviously, the huge costs of the Gaza blockade are determined by a myriad of Israeli restrictions, including the almost complete closure to international trade, the disruption caused to the electricity production, the limited access to the sea resources and the

continued shelling of infrastructure. These restrictions have led to the collapse of the economy, whose growth path has diverged from that of the West Bank since 2006. The restrictions on access to water (in the West Bank) and on access to natural resources deprive the Palestinians of enormous sources of revenues associated with the economic activities based on these natural resources. These include the expansion of irrigated agriculture, the extraction of salts and minerals from the Dead Sea, which is off limits to the Palestinians while is carried out by Israeli and settlers' companies alike, the mining of much of the gravel and stone available in the West Bank, most of which is used by Israel, and the development of the Gaza offshore gas field. Similarly the lack of access to the Dead Sea has made the development of a high potential Palestinian tourism industry along its shores impossible.

Other losses imposed by the occupation include the extra costs of electricity and water provision faced by the Palestinians, who are dependent on Israeli supplies for such provision due to the restrictions imposed on the electricity generation and on the access to water, the costs imposed by the restrictions on exports and imports, which translate into unavailability of inputs and higher production costs, the costs associated with the barriers to the movement of goods and people within the West Bank, and the destruction of productive assets, particularly the uprooting of trees. Despite the magnitude of the estimated losses, these are likely to be a severe under-estimation of the real costs imposed by the occupation on the Palestinian economy, as we have not been able to measure all the different costs of the occupation due to a lack of data. For example the prohibition to import goods such as lathe machines, which are essential inputs in the machinery production, has most probably stifled the development of the whole Palestinian manufacturing sector. However in the absence of an estimation of the potential size of the sector in the absence of such restrictions, it is not possible to quantify their costs. Not only does the occupation maintains the Palestinian economy small but it also hinders Palestinian fiscal balance by reducing its fiscal revenues in two ways: directly, by preventing an efficient collection of taxes mainly due to the prohibition of the PNA to operate at the international borders; and indirectly, by artificially reducing the size of the Palestinian economy (as we have seen so far) and therefore its tax revenues' base. We estimate that the direct fiscal costs of the occupation amount to USD 406 million per year while the indirect fiscal costs total USD 1.389 billion per year. This implies that without the occupation, the Palestinian Authority would run a healthy fiscal surplus without the need of donors' aid, and would be able to substantially expand fiscal expenditure to spur further social and economic development. Although the estimation of the costs have resulted huge values, it is worthy to mention that various major costs were not included in this work and these include the following: 1) Costs associated with obstacles to the international movement of people;<sup>5</sup> 2) Loss of investments in Area "C" due to building restrictions; 3) Indirect losses from import restrictions in industry and ITC ("dual use items" list); 4) Indirect losses from restrictions on telecommunications; 5) Losses from the construction of the wall, especially in terms of severing economic links between the Palestinians in Israel and the West Bank; and 6) Losses from restrictions to the East Jerusalem market; especially for pharmaceuticals and telecommunications.

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<sup>5</sup> Estimates could have been based on the total number of potential investors' visas rejected multiplied by the potential value of each investor. However it is has not been possible to estimate the value of the latter.



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