

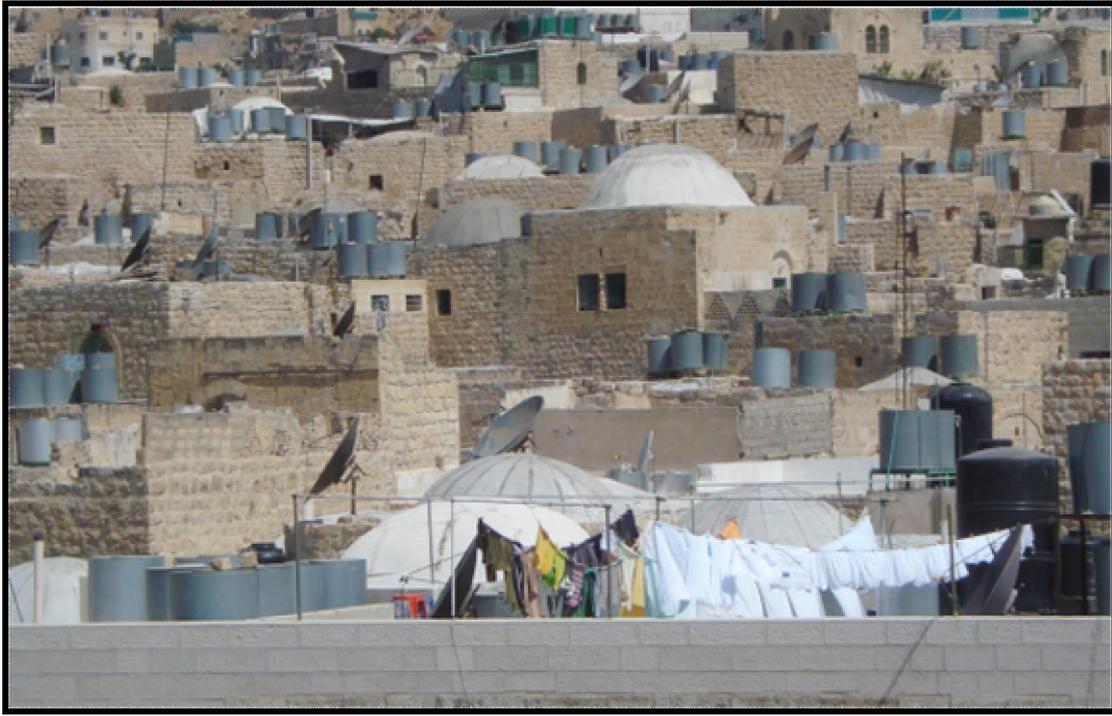


**Friends of the Earth**  
*Middle East*



**FoEME**

## *Palestinian Climate Change Policy*



*Source: Nikki Hodgson*

*by Nikki Hodgson and Emily Cushman*

**February 2010**

*\*NGO in special consultative status with the Economic and Social Council (ECOSOC) of the United Nations*

**Friends of the Earth-Middle East (FoEME)**

P.O.Box 9341, Amman 11191 Jordan  
Tel:+962-6-5866602/3, Fax:+962-6-5866604

85 Nahalat Benyamin St., Tel-Aviv 66102 Israel  
Tel:+972-3-5605383, Fax:+972-3-5604693

P.O. Box 844 Bethlehem, PA  
Tel:+972-2-2747948, Fax:+972-2-2745968

E-mail: [info@foeme.org](mailto:info@foeme.org) Website: [www.foeme.org](http://www.foeme.org)

## **Chapter 7**

### **Palestinian Actions**

In trying to govern a society facing the many major challenges that come with life under occupation, dealing with the seemingly nebulous concept of climate change is not the Palestinian National Authority's (PNA) number one priority. As an institution that lacks complete power and faces persistent political and financial strains, it is generally forced to focus on fulfilling the basic and immediate daily needs of the people. Nonetheless it is becoming increasingly clear to many at the government level that climate change poses some serious threats to an already tense Palestinian existence. By far the greatest concern in this regard is the potential impact on already scarce and politicized water resources. Drought would not only exacerbate the problem of providing residents with adequate water for drinking and other basic domestic needs, but it could deal a huge blow to the backbone of the Palestinian economy – agriculture. Additionally, if left unaddressed the impacts of climate change would most certainly compromise the ability of the PNA to achieve any of the Millennium Development Goals (MDGs).

That said the concept of climate change has emerged in the most recent Palestinian Reform and Development Plan (PRDP), which outlines the government's key budgetary priorities for the 2008-2010 timeframe. The PRDP was presented to the international community in December 2007 at the Paris donors' conference, where it received strong support, reflected in the record level of pledges -- \$7.7 billion for the three-year period.<sup>1</sup> While there is no reason to doubt that there are genuine concerns over the potential impacts of climate change, it is likely that the PNA also recognizes the potential benefits of using such a buzzword in its fundraising efforts with the international community, and addressing climate change impacts could help the PNA to achieve its other development goals. Various Palestinian ministries are also putting climate change on their agendas. The Environmental Quality Authority (EQA), for example, is spearheading the effort to generate a climate change risk and vulnerability assessment report/adaptation strategy for Palestine, entitled "Climate Change Adaptation Strategy for the Occupied Palestinian Territory" and funded by the United Nations Development Programme's (UNDP) Programme of Assistance to the Palestinian People (PAPP). The hope is that the general ideas presented in this comprehensive report and adaptation strategy will translate into a concrete action plan for Palestine sometime in the near future.

This chapter will summarize the first steps made by the PNA to face the climate crisis. Due to the limitations of the PNA's administrative capabilities, the implementation of climate change policy is difficult at best. The EQA states as much in their climate change strategy report, indicating that as a result of its limited legislative capabilities, the PNA is dependent on Israel and other international powers "to assist in reducing the vulnerability

---

<sup>1</sup> Awad, N. W. (2008, October 28). *An Economic Snapshot of Palestine and the PRDP*  
Retrieved from <http://miftah.org/Display.cfm?DocId=18042&CategoryId=21>

of the Palestinians to the impacts of climate change on food, water, and health.”<sup>2</sup> With an absence of governmental initiative, local authorities and NGOs must also promote certain actions.

#### **a. The Environmental Quality Authority: the PNA’s Preparations for Global Climate Change**

The EQA is spearheading efforts to develop and implement climate change policy at the national level. To this effect, the EQA, in conjunction with UNDP-PAPP, recently developed a Climate Change Adaptation Strategy Report for Palestine. The goal of the adaptation strategy is to “identify the most effective means by which the PNA can enhance the capacity of the Palestinians to cope with current and future climate hazards.”<sup>3</sup> In the first stage of this process, the EQA and UNDP held meetings with stakeholders (ministries and NGOs) to get a sense of the major issues at hand. They then invited a larger group of 70-75 stakeholders to participate in discussion workshops, after which a series of reports were generated. The ideas from these reports were incorporated into the larger document, which is presently under review within the EQA and among various other stakeholders. As expected, the focus is on the relationship between climate change and water scarcity and the consequent impacts on agriculture. It addresses the short-term adjustments, or “coping mechanisms,” as well as the long-term adaptation strategies, while exploring three of the most vulnerable areas of Palestinian society – the Bedouin communities around Hebron, Jordan Valley villages and residents of the Gaza Strip – as case studies.

In terms of adaptation measures, the EQA is also part of the steering committee for The Applied Research Institute of Jerusalem (ARIJ)’s Climate Change and Food Security program. When asked if the EQA intended to employ *mitigation* strategies in addition to *adaptation* strategies, Nedal Katbeh-Bader, Deputy Director General in Environmental Resources at the EQA, was quick to point out that “it is well known that [Palestinians] are not a great producer of climate change.”<sup>4</sup> Nevertheless, he did say that the EQA had engaged in “scattered efforts” over the years, helping develop donor-funded projects like a wind turbine at a hospital in Hebron and wind and solar power for 27 homes in a village near Hebron.

Two branches of the government anticipating significant impacts as a result of climate change are the Palestinian Water Authority (PWA) and the Ministry of Agriculture. Projections indicate that a decrease in precipitation and significant increases in

---

<sup>2</sup> Environmental Quality Authority (EQA) 2009; Climate Change Adaptation Strategy for the Occupied Palestinian Territory. Report of Consultants to the UNDP/PAPP initiative: *Climate Change Adaptation Strategy and Programme of Action for the Palestinian National Authority*

<sup>3</sup> Ibid

<sup>4</sup> Interview with Nedal Katbeh-Bader – Deputy Director General/Environmental Resources at the Environmental Quality Authority (EQA); Conducted by Emily Cushman; April 9, 2009; Ramallah

temperature will likely lead to increased food and water insecurity in the region. The major impacts of climate change on agriculture in Palestine, as identified by the EQA Climate Change Adaptation Strategy Report, include: more frequent droughts and increased desertification; changes in economic viability of crops; increased crop water requirements, decline in grazing ranges and stocks; and higher food prices.<sup>5</sup>

Consultations with the Ministry of Agriculture during the development of the Climate



*Palestinian boy measuring water allotment for his family's agricultural plot. Source: Nikki Hodgson*

Change Strategy Report, illuminated the need for capacity-building efforts within the Ministry, in addition to an inter-ministerial planning framework and technical committee specifically aimed at addressing and minimizing the impacts of drought and desertification on the agricultural sector in Palestine. Specific actions outlined in the EQA report include: routine monitoring of crop evapotranspiration rates, rainfall, and soil moisture; incorporation of a climate risk management capacity in the proposed strengthening of the General Directorate for Planning and Policy; the development of drought minimization and management guidelines in support of the National Committee to Combat Desertification; and improved agricultural outreach and extension services.

The PWA was quick to point out that they struggle more with water shortage than water scarcity, indicating that climate change will exacerbate the effects of Israel's current monopoly on regional water sources. In light of this, the PWA is particularly concerned about the increasing frequency of drought in the region, and its principle strategy in adapting to the effects of climate change has been to develop a drought preparedness plan. A monitoring program has been established in conjunction with the Palestinian Meteorological Office (PMO) to monitor the decline in aquifer levels and the dryness of springs and wells. This program includes distributing rain gauges and collecting data on the flow of the springs. The PWA is focusing its efforts to reduce the effects of water shortage on those communities served by the Israeli network, areas near the separation wall, and Area C communities. In order to mitigate the

---

<sup>5</sup> Environmental Quality Authority (EQA). 2009. Climate Change Adaptation Strategy for the Occupied Palestinian Territory. Report of Consultants to the UNDP/PAPP initiative: *Climate Change Adaptation Strategy and Programme of Action for the Palestinian National Authority.*

effects of water shortage on these communities, filling points have been established, water tankers brought in, and supporting NGOs have been working to develop more efficient rainwater harvesting systems. However, the PWA considers these actions to fall under the category of crisis management.

Long-term adaptation measures include: construction of harvesting structures; floodwater capture; reallocation of freshwater used for agriculture and more reliance on using recycled water for irrigation; small-scale wastewater treatment; public awareness and outreach efforts; and desalination plants. Representatives of the PWA also mentioned the need to address the frequent delays experienced as a result of the current Joint Water Committee (JWC) permitting process, which severely inhibits the ability of the PWA to develop and maintain more effective water infrastructure in both the West Bank and Gaza.

Another point of concern is the potential impact of decreased precipitation and sea level rise on the coastal aquifer in Gaza. Over-pumping of groundwater in addition to saltwater intrusion could severely affect the communities who rely almost exclusively on the coastal aquifer for their water needs. The PWA, Coastal Management Water Utility and local municipalities have taken a few measures to help mitigate the effects of water pollution such as mixing sources of safe and unsafe water in order provide water that is at a *marginally safer quality level*. Additionally farmers have shifted agricultural production to crops, such as dates, which are able to tolerate water with a higher salinity level.<sup>6</sup>

## **b. Energy Efficiency Program**

While agencies like the PWA and the Ministry of Agriculture are focusing primarily on adaptation strategies, The Palestinian Energy Authority (PEA) is a branch of the national government attempting to address climate change specifically from the mitigation side. The Palestinian Energy and Environment Research Center (PEC) was appointed as the focal point for renewable energy and energy efficiency (RE&EE) applications in Palestine under the umbrella of the PEA. These two organizations have formulated a 5-year national master plan for developing renewable energy resources and increasing energy efficiency in Palestine, two goals which they see as having “crucial effects on the general economy, the environment, and the energy security of the country.”<sup>7</sup> The plan aims for an increase of renewable energy in Palestine’s energy balance to a full 20% of the total by investing in solar energy and biofuel from solid waste to power 8.5% of buildings.

Furthermore, the plan aims at improving the energy efficiency in the building and industrial sectors in the hope of reducing their imported energy consumption by 1.6 %. It is expected that the plan will cut emissions of CO<sub>2</sub> by 106,475 tons.

---

<sup>6</sup> Ibid

<sup>7</sup> PEA/PEC National Master Plan for Renewable Energy and Energy Efficiency

The key components of the plan are<sup>8</sup>:

- Adaptation and implementation of national regulations and energy norms for RE&EE that facilitate investment in clean and efficient technologies and lead to lower energy bills and more environmental protection.
- Development and implementation of national programs and projects for best utilization of RE and energy conservation in residential, commercial, industrial and power production sectors.
- Upgrade local market to support clean and efficient technology through evaluation of available technology in addition to the establishment of standards to raise the level of quality.
- Awareness dissemination, know-how transfer and upgrading of technical capacities for new and efficient technologies
- Creation of suitable scientific and technological research & testing facilities that support research and investment in renewable resources and clean technology.
- Contribution to regional efforts and global initiatives to tackle climate change.

According to the EQA report, other projects under consideration include a 100MW concentrated solar power plant for Jericho and a solar-powered desalination plant in Gaza. However, the PNA has yet to adopt any specific policies or regulations regarding RE&EE and the PEA/PEC are still seeking financial and technical support to assist in the implementation process of this master plan.

Another ministry tackling climate change from the mitigation side is the Ministry of Transportation. In a speech given at workshop held at Birzeit University to mark World Environment Day, the Deputy Minister of Transportation, Dr. Ali Sha'th, confirmed that the Ministry of Transportation is working to control sources of pollution stemming from the transportation sector through required smog checks, modernization of public transportation and heavy equipment, and the development and implementation of technical requirements to ensure the efficiency of all vehicles. He added that the Ministry is also working jointly with the World Bank to provide an environmentally friendly fuel to be used for transportation in Palestine.<sup>9</sup>

---

<sup>8</sup> Ibid.

<sup>9</sup> Birzeit University (2009, July 14). *A Workshop to Mark World Environment Day* Retrieved from <http://www.birzeit.edu/academics/arts/geography/news/20010/news>



### c. Aid Agencies and International Coordination

According to the PRDP, “under every foreseeable scenario, the short-term viability of the Palestinian economy will be driven by aid.”<sup>10</sup> Consequently aid agencies have a tremendous amount of influence on Palestinian policy, including climate change policy. The impacts of climate change on food and water security will likely compromise the ability of the PNA to achieve any of the Millennium Development Goals (MDGs) by 2015 which is of concern to the international community as well as the PNA.

The United Nations Office for the Coordination of Humanitarian Affairs (OCHA), for example, is campaigning to bring more attention to the humanitarian implications of climate change, particularly where disaster preparedness is concerned.<sup>11</sup> While the UNDP and the Italian Development Cooperation Agency are assisting in the development of a drought early warning system for Palestine which will improve data collection on rainfall and soil moisture and provide a more scientific basis for minimizing the risk of drought and desertification.<sup>12</sup>

### d. Environmental Organizations Activity

In many areas of the world a lack of a federal response has prompted local governments and communities to take action. A meeting with the Ministry of Local Governments confirmed that there is little to no action being taken at the local level by municipalities. Consequently there is an enormous amount of room for NGOs to take the lead in promoting both climate change action and sustainable development policy.



<sup>10</sup> Awad, N. W. (2008, October 28). *An Economic Snapshot of Palestine and the PRDP*. Retrieved from <http://miftah.org/Display.cfm?DocId=18042&CategoryId=21>

<sup>11</sup> OCHA 2008; *Climate Change: Coping with the Humanitarian Impact*. Retrieved from <http://ochaonline.un.org/News/InFocus/ClimateChangeHumanitarianImpact/tabid/5099/language/en-US/Default.aspx>

<sup>12</sup> Environmental Quality Authority (EQA) 2009; *Climate Change Adaptation Strategy for the Occupied Palestinian Territory: Report of Consultants to the UNDP/PAPP initiative: Climate Change Adaptation Strategy and Programme of Action for the Palestinian National Authority*.

Producing this Climate Change Resource Guide is one of the many types of activities initiated by non-government environmental organizations. NGOs draw the attention of policy makers towards the importance of coping with climate change and developing a proactive climate policy in the Palestinian Territory. Friends of the Earth Middle East (FoEME), in particular, participates in joint activities with other regional environmental organizations and attends international climate change conventions. During the 13<sup>th</sup> Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC COP13), FoEME published a document stating the expected impacts of climate change on human societies and economies. The report presents security implications on political stability in the region, which is not very stable to begin with.

Another organization working to promote sustainable development in the Middle East is COMET (Community, Energy, and Technology in the Middle East), which assists in installing solar panels and wind turbines for Palestinians. Through sustainable energy development, the project aims to socially and economically empower Palestinian communities in the Hebron region.

A significant regional project is the GLOWA Jordan River Project, which involves forty research teams made up of scientists and stakeholders from Germany, Israel, Jordan, and Palestine. The aim of this project is to identify the potential impact of climate change and land use change on the region's water resources. Palestinian organizations involved in this project are: The Biological Department of Al Quds University; Water and Environmental Studies Institute (WESI); Biodiversity & Environmental Research Center (BERC); House of Water and Environment (HWE); Palestine Hydrology Group (PHG); Association for Integrated Rural Development (ARID); the Ministry of Agriculture; Palestinian Water Authority (PWA); and the University of Bethlehem.<sup>13</sup> The hope is that the scientific data gleaned from this study will aid policy makers in developing effective and appropriate climate change policy to help mitigate and adapt to the impacts on regional water resources.

#### **e. Obstacles and Recommendations**

The primary obstacles to implementing effective climate change policy in Palestine are the occupation and a lack of cohesion between various government agencies at both national and local levels. In light of these obstacles the following actions are recommended:

#### **Recommendations:**

##### Emphasis on low-technology solutions

Given that the EQA adaptation strategy report stressed the difficulty of implementing appropriate and effective adaptation measures within the context of occupation, for the time being, efforts should be focused on developing and implementing creative low-technology solutions that require minimal infrastructure so as to best avoid the obstacles

---

<sup>13</sup> GLOWA JR (2009). *GLOWA Jordan River Project*; Retrieved from <http://www.glowa-jordan-river.de/>

brought on by the extensive permitting processes of the Civil Administration. The more widespread use of grey water for irrigation, environmental outreach programs, and small-scale solar panel installation are examples of low-technology solutions that could be more effectively implemented within the West Bank and Gaza.

#### Special attention to unintended consequences of adaptation and mitigation measures

In an area where vulnerability is already an issue, adaptation and mitigation measures must be carefully considered to prevent unintended consequences. For example, a heavy reliance on desalination plants to ease water shortage could lead to the exchange of water problems for energy problems.

#### Continue to focus on capacity building

The EQA has already pointed out the necessity of developing a cohesive strategic plan that places emphasis on increasing the collaborative efforts of the various government agencies. Focusing on capacity building within the PNA will help to identify overlap between various plans and thereby increase efficiency. For example, having the Ministry of Agriculture, the PWA, and the National Committee to Combat Desertification pool resources to *collaboratively* develop a drought-preparedness plan that utilizes the expertise of each agency would complement the existing drought-preparedness plans the agencies already have, and also help to increase efficiency and effectiveness in mitigating the effects of drought on all sectors.

#### Improve the efficiency of the permit granting processes

Given the difficulty of the Joint Water Committee (JWC) permitting process and the current Israeli monopoly on shared water resources, the development of necessary water infrastructure in Palestine is repeatedly delayed, further exacerbating the impacts of drought. The incorporation of a fast-track permitting system could help to avoid extended delays of the permits necessary to develop and update needed infrastructure.

#### Create a Regional Adaptation Strategy

It is worth looking into the development of a regional climate change adaptation strategy for the Levant. Such a strategy would not replace national efforts or existing regional initiatives, but would help identify overlap between strategies and help the region to better adapt to impacts on shared resources. The interdependence forced upon the region by the transboundary nature of its resources means that isolated resource management strategies are often impractical and inefficient. Regional collaboration can help reduce adaptation and mitigation costs in addition to increasing the efficiency and effectiveness of national programs. As Brown and Crawford state, “Clearly the challenge of climate change is one that is beyond the capacity of any one country to tackle. Ultimately, its shared developmental and security implications will be best resolved through cooperation at a myriad of levels: cooperation to develop comprehensive international strategies to manage migration, to share the most innovative approaches for adaptation, to administer shared resources and to cope with insecurity.”<sup>14</sup>

---

<sup>14</sup> Brown, O., & Crawford, A. (2009); *Rising Temperatures, Rising Tensions: Climate change and the risk of violent conflict in the Middle East*. Winnipeg: International Institute for Sustainable Development (IISD).

### More action taken at the local level

As mentioned earlier, there has been little action taken by local municipalities in addressing the impacts of climate change. The absence of national legislation is an opportunity for local leaders to step in and move things forward both within their communities and throughout the region as a whole. This is particularly apt in an area where there is often difficulty in implementing national environmental legislation to effectively address local environmental problems. Local leaders are in a better position to identify the needs of their communities and implement appropriate adaptation measures. Many communities within the West Bank and Gaza have sister cities<sup>15</sup> in other areas of the world. This might be an excellent opportunity to further strengthen alliances with communities around the world who might be able to offer both advice and funding in addressing climate change impacts at the local level.

### **f. Conclusions:**

The potential impacts of climate change on water resources and economic development could result in big problems for an area already suffering from a lack of food and water security. And while the political situation makes the implementation of climate change policy a difficult task, it is imperative to focus on addressing adaptation measures within the context of the occupation rather than focusing exclusively on the difficulties of implementing more standardized approaches. In no other area is the need for original and creative solutions more indispensable. Effectively undertaking climate change adaptation with such limited administrative and legislative capabilities is a challenge, but there is nonetheless room to implement low-technology solutions--such as the more widespread implementation of grey water systems and conservation education programs --while still addressing the more immediate public health and disaster management issues outlined in the EQA report. The fact that climate change has emerged in the most recent Palestinian Reform and Development Plan (PRDP) is a positive sign, and the development and implementation of practical and tangible steps toward adaptation for each sector will help to ensure that climate change adaptation is integrated into all development and environmental policies. This can help support development outcomes and may assist the PNA in achieving its other development goals. Increasing capacity building and attaining collaboration between government agencies, NGOs, and the international community are the necessary first steps in developing a successful strategy for adapting to the impacts of climate change on our shared natural resources.



<sup>15</sup> [http://en.wikipedia.org/wiki/Sister\\_cities](http://en.wikipedia.org/wiki/Sister_cities)

## References

Awad, N. W. (2008, October 28). *An Economic Snapshot of Palestine and the PRDP*. Retrieved from

<http://miftah.org/Display.cfm?DocId=18042&CategoryId=21>

Birzeit University (2009, July 14). *A Workshop to Mark World Environment Day*. Retrieved from

<http://www.birzeit.edu/academics/arts/geography/news/20010/news>

Brown, O., & Crawford, A. (2009). *Rising Temperatures, Rising Tensions: Climate change and the risk of violent conflict in the Middle East*. Winnipeg: International Institute for Sustainable Development (IISD).

Council on Foreign Relations. (1995, September 28). *Oslo II Accords (Interim Agreement on the West Bank and the Gaza Strip)* Retrieved from

[http://www.cfr.org/publication/9676/oslo\\_ii\\_accords\\_interim\\_agreement\\_on\\_the\\_west\\_bank\\_and\\_the\\_gaza\\_strip.html](http://www.cfr.org/publication/9676/oslo_ii_accords_interim_agreement_on_the_west_bank_and_the_gaza_strip.html)

Environmental Quality Authority (EQA). 2009. Climate Change Adaptation Strategy for the Occupied Palestinian Territory. Report of Consultants to the UNDP/PAPP initiative: *Climate Change Adaptation Strategy and Programme of Action for the Palestinian National Authority*.

GLOWA JR (2009). *GLOWA Jordan River Project*. Retrieved from <http://www.glowa-jordan-river.de/>

Interview with Nedal Katbeh-Bader – Deputy Director General/Environmental Resources at the Environmental Quality Authority (EQA). Conducted by Emily Cushman. April 9, 2009. Ramallah.

Interview with Deeb Abdel-Ghafour – Director of Water Resources Development Department. Palestinian Water Authority (PWA). Conducted by Nikki Hodgson. July 30, 2009. Ramallah.

OCHA. 2008. *Climate Change: Coping with the Humanitarian Impact*. Retrieved from

<http://ochaonline.un.org/News/InFocus/ClimateChangeHumanitarianImpact/tabid/5099/language/en-US/Default.aspx>

Palestinian Energy Authority (PEA) & Palestinian Energy and Environment Research Center (PEC). *National Master Plan for Renewable Energy and Energy Efficiency*. Unpublished document.

Palestinian National Authority (PNA). 2008. *Palestinian Reform and Development Plan 2008-2010*. Retrieved from [http://www.mop.gov.ps/web\\_files/issues\\_file/PRDP-en.pdf](http://www.mop.gov.ps/web_files/issues_file/PRDP-en.pdf)

UNDP/PAPP. (2009). *Terms of Reference for Climate Change Adaptation Expert*. Retrieved from [www.undp.ps/en/aboutundp/forms.html](http://www.undp.ps/en/aboutundp/forms.html)