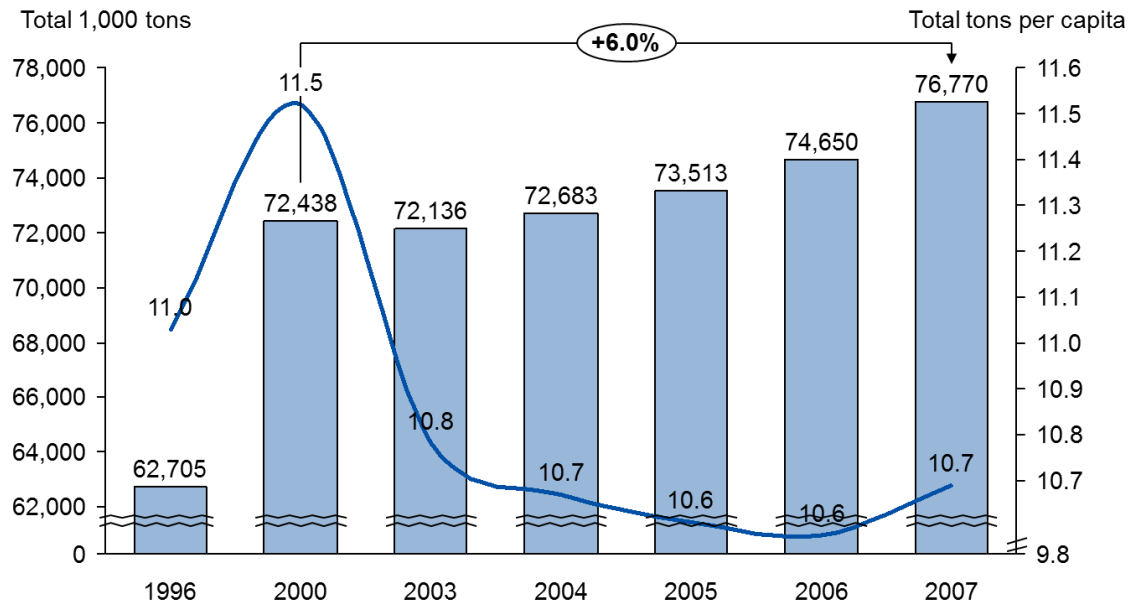


Climate change is a mirror of erroneous environmental management. International programs can promote mitigation measures.

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1	<p>Key words</p> <p>Climate Change, Israel, floods, storms, droughts, temperature increase, changes in environmental conditions, population increment, rise in living standards, country specific circumstances, water scarcity, land scarcity, emitters are energy and transport sector, fossil fuels, rise in sea levels, dramatic land loss, retreat of the coastline, rain will fall short, desertification, forest fires, low public awareness, formulate coherent Climate Change Policy, no binding commitments to reduce GHG, climate change mitigation, financial contribution, technology transfer, knowledge transfer, international cooperation</p>
2	<p>Introduction</p> <p>Climate change is a mirror of the erroneous environmental management by humanity. Currently we are disregarding basic laws of nature. While natural resources are finite, economic growth is thought to be infinite. Thereby we are carelessly overexploiting the natural resources and create harmful side effects for nearby populations. Climate change is no different. The first victims will be mainly citizens of developing countries, unable to buy themselves out from the consequences of extreme weather events, such as storms, floods and droughts. Climate change will remind us, for better or worse, how interconnected we are. As symptoms of climate change worsen, social tension and conflicts will rise. To be able to deal with those impacts on a global level, society and economy must become resilient.¹</p>
3	<p>Israel: The dimension of climate change</p> <p>Israel, located in the heart of the Middle East and characterized by arid and semi-arid climatic zones, will be severely affected by the consequences of global warming (Mensel 2012). There has been a noticeable change in temperature in the region already since the early 1970s. Moderate forecasts of the International Panel on Climate Change (IPCC) state an increase in average temperature of 1.5 degrees Celsius by 2020 and up to 5 degrees Celsius by the end of the century compared to the period between 1960-1990 (Israeli Ministry of Environmental Protection 2009:6). Significant changes in environmental conditions will have vast consequences for demographic and economic growth dynamics (Mensel 2012). Reliable figures for the emission of greenhouse gases (GHG) are available till 2008, indicating an emission increase of 6% since the turn of the millennia. The emissions have risen to 78 million tons of carbon dioxide equivalent² (Israeli Ministry of Environmental Protection 2009:4).</p>

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Figure: Emissions of Direct Greenhouse Gases in Israel (in tons)



Source: Israel Bureau of Statistics (cited in Israel Ministry of Environmental Protection 2009:4).

In contrary to many other developed countries, whose greenhouse gas emissions decrease, Israel's emissions are expected to continue to increase under a "business as usual" scenario. The emission increase is largely triggered by the population increment, rise in living standards and country specific circumstances, such as water and land scarcity (Israeli Ministry of Environmental Protection 2009:3).

The main emitters are the energy and transport sector (power generation and fuel combustion). In Israel, electricity comes almost exclusively from fossil fuels, thus changes are needed (Mensel 2012).

Research predicts a continual increase in temperature, alongside further decrease in rainfall, leading to lower amounts and quality of drinking water, as well as increasing sea level due to the melting of the polar ice caps. For Israel a ten centimeter rise in sea level per decade, as predicted by scientists for the Mediterranean Sea, would mean a dramatic loss between 0.4 and 2 square kilometers of land and an unstoppable retreat of the coastline between 2 and 10 meters every decade (Mensel 2012). In addition, the likeability for floods will increase since relatively large volumes of rain will fall in short periods of time exceeding the soils capacity for absorption and carrying capacity of rivers and wadis³. Furthermore, there will be changes in flora and fauna for instance by desertification and forest fires.⁴

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4	<p>Challenges of rethinking mitigation</p> <p>However, a 2009 survey at Ben Gurion University indicated only low public awareness about climate change and its impacts on Israel. The respondent's majority placed climate change as least issue of concern in a long list of topics including security, water scarcity, national economy and others.⁵ The public expenditure for the Ministry of Environmental Protection was relatively low, as they received about 6 billion Israeli shekels for their two-year budget of 2011/2012. The amount corresponds to only a small fraction of the same year's budget of the Ministry of Defense (Mensel 2012). In addition, the responsibility for decision-making power is spread over a great number of ministries, such as the Ministry for Environmental Protection, Ministries of Agriculture and Rural Development, National Infrastructures, of Industry, Trade and Labor, of Construction and Housing and of Finance. To avoid this fragmentation the formulation of a coherent "climate change policy" would help (Mensel 2012).</p> <p>Even though Israel is one of the signatories of the Framework Convention on Climate Change and joined the Kyoto Protocol in 2004, the country is not part of the Annex I states of the Protocol. Thereby, binding commitments for the reduction of greenhouse gas emissions were not realized. It was only at the 2009 COP15 conference in Copenhagen, when Israel committed to the reduction of carbon emissions. At that time, president Shimon Peres⁶ declared the country would reduce 20% of the expected growth in Green House Gas emissions by 2020. Though the political decision-makers acquired an increasing awareness, a clear willingness to policy implementation remains to be proven.</p>
5	<p>A way for coping with climate change in Israel</p> <p>Financial contribution, technology and knowledge transfer, as well as international cooperation are key aspects in climate change mitigation. International cooperative programs, such as those of KKL-JNF, can promote mitigation measures involving afforestation, land reclamation, and water conservation. It is important to complete the national GHG inventory and to generate adequate information for policy formulation. To make local livelihood sustainable, it also needs qualified research, observation and education to raise public awareness, as well as greater corporation between government authorities.</p>
6	<p>Footnotes</p> <p>¹Further information on resilience can be found online at Heinrich-Böll-Stiftung: The Climate is Changing, so Should our Economy. A Perspective from Israel.</p>

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	<p>http://www.boell.org/web/136-Climate-is-Changing-so-Should-our-Economy-865.html (accessed August 23rd, 2013). This article was first published in the <i>Jerusalem Post</i>.</p> <p>²The unit “carbon dioxide equivalent” describes the greenhouse potential of climate damaging emissions.</p> <p>³The term wadi comes from Arabic and refers to a seasonally dry riverbed, like it is found in the Middle East.</p> <p>⁴In December 2010, a devastating forest fire hit Mount Carmel, killing 44 and destroying on third of its forest.</p> <p>⁵The article is available online: http://www.boell.de/ecology/society/ecology-society-climate-change-policy-israel-dsdoha2012-15869.html (accessed August 23rd, 2013). Its author, Maya Milrad-Givon, works for Paths to Sustainability Coalition, which is headed by Life and Environment, the Israeli Union of Environmental NGOs.</p> <p>⁶Shimon Peres is an Israeli statesman and the 9th president of Israel. In 1994, Peres won the Nobel Peace Prize together with Yitzhak Rabin and Yasser Arafat for the peace talks which produced the Oslo Accords.</p>
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