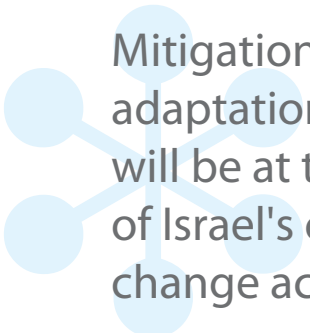




# A CLIMATE CHANGE PLAN FOR ISRAEL



## Mitigation and adaptation measures will be at the heart of Israel's climate change action plan

It is only apt that Israel's Cabinet approved an important environmental decision on the day its parliament celebrated World Environment Day in June 2009 – a decision to prepare a climate change plan for Israel. The decision followed an earlier resolution, on May 24, 2009, to establish a Ministerial Committee on Environmental Protection and Climate Change, headed by Environmental Protection Minister Gilad Erdan.

In accordance with the decision, a directors-general committee was established, headed by the director general of the Ministry of Environmental Protection, Dr. Yossi Inbar, and including the directors general of all relevant ministries. Its mission: to prepare a climate change policy for Israel and to formulate a national action plan which will include a plan for the reduction of greenhouse gas emissions (mitigation) and a plan on the country's preparedness and readiness for climate change (adaptation).

To facilitate the process, professional working groups on different fields of mitigation and adaptation have been set

up. The working groups on mitigation are charged with preparing scenarios and means for the reduction of greenhouse gas emissions, each in its particular field (e.g., energy, transport, agriculture, planning and building, etc.). The working groups will recommend national targets for greenhouse gas emissions reduction based on Israeli studies and the negotiations for a global agreement (post 2012). They will specify existing and proposed reduction measures, the reduction potential of each measure, the cost of implementation, recommendations for implementation, action plans and timetables.

Working groups on adaptation will concentrate on such areas as biodiversity, public health and water resources. They are charged with closing the gaps in existing knowledge on the impacts of climate change in Israel based on different scenarios, surveying available means for minimizing damage and vulnerability and identifying Israeli technology for dealing with climate change that may assist other countries.

### More on Climate Change in Israel

Global warming and the urgent need to reduce greenhouse gas emissions call for joint action by countries worldwide. In the Mediterranean Sea basin, even more than in other parts of the world, the impacts of climate change are reflected in warming and drying trends, on the one hand, and in an increase in extreme weather events (floods and heat waves), on the other

hand. Since these trends are associated with adverse impacts on the water sector, agricultural production, drainage systems, the energy sector, the coastal environment and more, adaptation and preparedness are prerequisites.

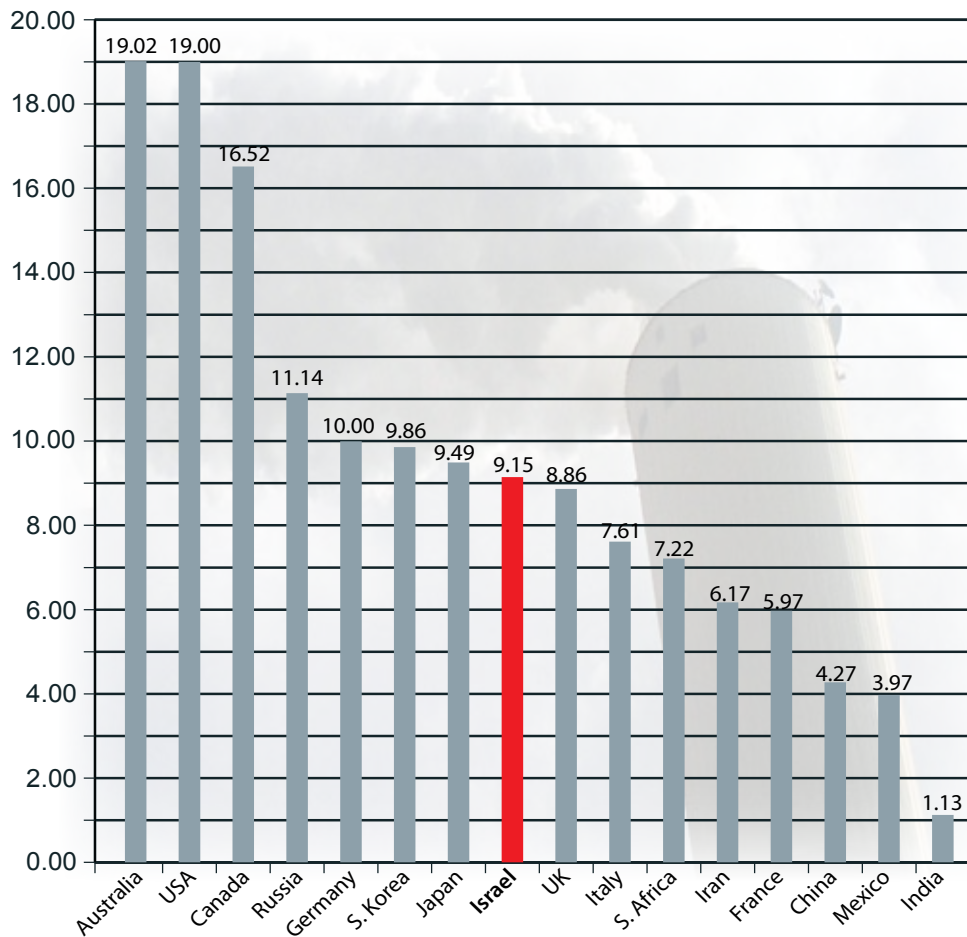
Although Israel was classified as a non-Annex I country (a developing economy) under the Climate Change Convention, a comparison of carbon dioxide emissions per capita between Israel and other European countries shows that Israel is not far behind some of the countries with developed economies which are listed in Annex I of the Convention. In order to quantify Israel's mitigation potential, the Ministry of Environmental Protection commissioned a study (prepared by Heifetz A. & Co. Economic Consultants) on options for greenhouse gas emissions reductions in Israel. The study points out that three sectors currently contribute some 95% of greenhouse gas emissions in Israel – the energy sector (including electricity production and transport), responsible for 83% of the emissions, the disposal of solid waste, responsible for 7% of the emissions, and industrial processes, especially cement and lime, which contribute 4% of the emissions. What's especially worrying is that the study anticipates a further rise in energy consumption and greenhouse gas emissions, with the forecast pointing to a 63% increase in greenhouse gas emissions in the year 2025, under a business-as-usual scenario, in relation to 2000. More than 90% of the emissions will come from the energy and transport sectors, with the



rest coming from industrial processes (4%) and waste (5%). In order to change this trend, Israel must reduce greenhouse gas emissions in all relevant sectors.

At the same time, the study quantifies Israel's mitigation potential by identifying potential abatement mitigation measures, which include, *inter alia*, energy related building codes, greater efficiency of electricity appliances, five percent reduction in electricity consumption, promotion of solar and wind energy, efficient lighting and reduction in vehicle mileage. Assuming that all measures are implemented, the study estimates a potential reduction of some 32 million tons of CO<sub>2</sub> equivalent in 2025 (about 26% of emissions) in comparison to 2000. At present, an additional study is being carried out by the Samuel Neaman Institute for Advanced Studies in Science and Technology for a cost-benefit analysis of these and additional potential mitigation measures. In parallel, the ministry commissioned a study from McKinsey and Company for the preparation of a carbon abatement cost curve for Israel that quantifies a range of measures across sectors. The quantification will have two elements - quantity of carbon abated and cost of abatement per lever.

CO<sub>2</sub> per capita emissions in major countries and in Israel in 2006 (millions of tons)



Source: International Energy Agency

As Israel prepares for the Climate Change Conference to be held in Copenhagen in December 2009, it remains committed to taking on the challenge of implementing mitigation and adaptation measures which will benefit both the country, on a national level, and the global environment, on an international level. The preparation of a climate change plan for Israel is expected to reduce local air pollution while boosting the Israeli economy, by increasing the number of people employed in the cleantech sector in Israel and by developing and transferring new technologies which will contribute to the global effort against climate change.

Anticipated Growth in Greenhouse Gas Emissions until 2025 under a Business as Usual Scenario

Years	2000	2006	2010	2015	2020	2025
<b>Emissions (carbon dioxide equivalent/thousand tons)</b>	72,436	76,499	76,824	89,868	106,870	118,003
<b>Emissions increase rate</b>	100%	105%	106%	124%	148%	163%
<b>Population (thousands)</b>	6,366	7,117	7,542	8,115	8,688	9,262
<b>Emissions per capita (tons per capita)</b>	11.4	10.7	10.2	11.1	12.3	12.7

Source: Heifetz study (Israel)





### **Establishing a Voluntary Mechanism for an Accounting and Reporting System of Greenhouse Gas Emissions in Israel**

On February 13-14, 2008, an international workshop on establishing a voluntary mechanism for a greenhouse gas registry and reporting system was convened in Israel. The workshop was organized by the Air Quality and Climate Change Division of the Ministry of Environmental Protection in cooperation with the Manufacturers Association of Israel and the German Federal Ministry of Environment, Nature Conservation and Nuclear Safety.

#### **The aims of the workshop included:**

- To examine the significance of greenhouse gas accounting and reporting;
- To improve the capacity of Israeli companies to take part in emissions trade mechanisms;
- To identify projects for reducing emissions in industry;
- To examine possibilities for cooperation between Israel and Annex I countries, including Germany;
- To improve the capability of Israeli industry to take part in international agreements such as the post-Kyoto agreements (after 2012).

#### **In order to achieve the aims of the workshop, the following were presented:**

- An Israeli initiative on the establishment of a voluntary system for reporting greenhouse gases within the framework of Israel's preparedness for the post-Kyoto agreements.
- International tools and standards for calculating and registering emissions.
- An overall survey of the carbon and CDM market in Israel.
- Israeli technologies for the reduction of greenhouse gas emissions.



Stack of Ashkelon power plant/Photo: Ilan Malester

Subsequent to the workshop, a professional work team was established in Israel, with representatives of the relevant ministries, the private sector, local government and the general public. With the aid of the Neaman Institute, which is currently preparing reporting protocols and methodologies on behalf of the Ministry of Environmental Protection, a pilot project of the greenhouse gas registry is scheduled to begin in 2010. The accounting and reporting mechanism is expected to serve as an important tool in the management of Israel's greenhouse gas emissions and will help it meet its obligations within the framework of the post-Kyoto agreements, including the possibility of emissions trading.

### **Clean Development Mechanism in Israel**

The Clean Development Mechanism (CDM) allows emission-reduction projects in developing countries to earn certified emission reduction (CER) credits, each equivalent to one ton of CO<sub>2</sub>. These CERs can be traded and sold, and used by industrialized countries to meet some of their emission reduction targets under the Kyoto Protocol.

Projects must qualify through a rigorous and public registration and issuance process designed to ensure real, measurable and verifiable emission reductions that are additional to what would have occurred without the project.

- By the summer of 2009, more than 40 projects were presented for approval to Israel's Designated National Authority for the CDM in the areas of waste, agriculture, fuel switch, energy and industrial efficiency.
- 16 CDM projects have been registered with the United Nations with the expected average annual CERs from registered projects expected to reach 1,848,879 tons.
- CERs issued by Israel to date have reached 100,727 tons.