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Preparing the World for Climate Change

By: Merav Ankori



Professor Ofira Ayalon

How can we maximize our preparedness for the challenges that the globe will face due to climate change? The [Israel Ministry of Environmental Protection](#) initiated the development of a Climate Change Information Center, and [Haifa University](#), along with the [Neaman Institute](#), the [Technion](#) and [Tel Aviv University](#) have been given the task of establishing it. The Center's objective is to be able to prepare for catastrophes and natural disasters in a way that greatly minimizes risk. The research findings are available internationally, and fundraising continues.

Israel is well known as a 'start-up nation' – with an entrepreneurial spirit which, in certain cases, is also found in its governmental activities. In fact it was the

Israeli government that came up with the idea to establish the Climate Change Information Center – an initiative which may well be instrumental in turning Israel into a strong global contender in regard to cleantech-related business opportunities. The Center will consolidate knowledge on the implications of all aspects of climate change and will keep the most up to date data on innovative technological solutions – information which can be exported around the world.

The [Israel Ministry of Environmental Protection](#) came up with the concept for the Center and outlined seven research areas in which knowledge should be collected and consolidated. The Center will ultimately be able to provide detailed reports on each of these key areas, with policy recommendations on what should be done in order to prepare for climate change in each area.

Haifa University won the tender for the development of the Center, issued by The Israel Ministry of Environmental Protection. The Center was established in March 1st 2011, with academic cooperation from [The Neaman Institute](#), the [Technion](#) and [Tel Aviv University](#). In charge of the Center's economic aspects is Chairman of the board Prof. Mordechai (Moti) Shechter, who is also head of natural resource & environmental management at the [University of Haifa](#). The Center's acting director is [Prof. Ofira Ayalon](#), senior researcher and coordinator of environmental policy projects at [The Neaman Institute](#) – she also holds the post of senior researcher at [Haifa University](#). [The Neaman Institute](#) has given its researchers access to a website where they can upload updated materials such as presentations etc., so that everyone is connected. Currently, due to budget issues, the website is only open to the heads of staffs and not to the general public, and so for the time being is not operating according to its desired purpose. Additional funding will make the Center's learnings available to all, making a real knowledge contribution to international preparation for climate change.

Within the Center, seven research teams are working in the following areas:

1. Climate

Team leader: Prof. Haim Kutiel, [University of Haifa](#)

The team's objective is to undertake historical research into different climate parameters, and attempt to predict what the future holds. This includes how to prepare for extreme events such as the heat waves Europe experienced in the summer of 2003, during which approximately 70,000 people died.

2. Water

Team leader: Prof. Nurit Kliot, [University of Haifa](#)

The team has discovered that the way to adapt to the changing patterns of rainfall is to increase the water inventory through conservation (technologies, advertising and education), and water and sewage leakage prevention. There are already Israeli technologies that deal with the leakage issue, and with water-sensitive green building (increasing the transfer of municipal drainage to underground water) – technologies that are able to increase the water inventory and minimize the need for water production from alternate sources “among other reasons – in order to conserve energy”, explains Ofira Ayalon.

3. Health

Team leader: Prof. Manfred Green, [University of Haifa](#)

Climate change will instigate the arrival of different species of disease-ridden pests, especially during heat or cold waves. Israel – ever prepared for war – can use the country's defense preparedness for the creation of a health system. There is a need to be equally well equipped to deal with emergency situations resulting from extreme climate-related events –such a model can then be exported internationally.

4. Biodiversity

Team leader: Prof. Marcelo Sternberg, [Tel Aviv University](#)

Biodiversity provides essential system services such as genetic resources, fishing, soil erosion prevention, pollination, and control over contaminants and different diseases. Renowned for expertise in the management of water, Israel also has extensive experience and worldwide recognition in this area.

5. Green Building

Team leader: Prof. Guedi Capeluto, Technion

Green building is a field which combines the ability to adapt to climate change, and reduce greenhouse gases. In Israel there is extensive knowledge regarding urban planning that takes both heat and dryness into consideration, a practice that conserves water and energy. Here too, Israel has introduced many impressive innovations.

6. Geostrategy

Team leader: Prof. Arnon Soffer, University of Haifa

This team collects information about “climate refugees”, who suffer from a lack of access to food (for example when a lack of rain affects agriculture and therefore food production), ways of establishing energy independence, utilizing lower levels/basements within living spaces (for ventilation and other reasons), as well as various other strategic issues that arise from climate characteristics.

7. Economy

Chairman Prof. Shechter is responsible for considering the costs and outcomes in each area in order to reach a point where policies can be formulated from the research. This content administration process prioritizes the areas for investment.

The [Israel Ministry of Environmental Protection](#) is attempting to find additional sources of funding in order to institutionalize the project, and export the Center's findings on hot global topics such as natural disasters, droughts and other calamities.

The knowledge is not only relevant to countries, but also to business sectors, such as the global insurance market, since there is a significant amount of money involved in climate related events. Hurricane Katrina, the floods in Bangkok and the cold wave in Europe are just some examples. Insurance companies need to be fully conversant with the latest information and technology – which can be promoted or even utilized mandatorily, in order to minimize the implications of climate harm. [Prof. Ayalon](#) adds that that in a practical sense



Sea level rising due to climate change, photo by Dr. Amir

“being fully prepared for climate change will decrease the need for premium payments to insurance companies”.

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A report summarizing the first stage of the Information Center's activities can be found in [Israel Ministry of Environmental Protection](#)'s website, as well as on [The Neaman Institute](#)'s website.