Israel: Environment, Climate and Geography: Historic and Current Challenges and Successes that Impact Our Lives

> Dr. Tal Grinfas-David & Ms. Rachel Raz March 20, 2022



Plan for today

- State Building, State Keeping and Resilience A Brief History
- Understanding Climate Change as National Security Priority
- Modern Innovations in Transportation, Agriculture, Energy, Water, Waste Management and Eco System Development
- What Can We Do About It?

Why should we be teaching about Israel and climate change?



Tel Aviv: then and now

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1954 The Laying of a pipe as part of the National Water Carrier

Israel: A History of Overcoming Challenges



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Israel: A History of Overcoming Challenges







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The legacy of early pioneering efforts

Israel's adopted eucalyptus trees are the bee's knees

A countrywide plan to help pollination has increased Israel's honey output, and may be the answer for bee problems in the US

By JESSICA STEINBERG 🗸 | 11 September 2015, 3:32 pm | 💻

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The bell-shaped blooms of the Lemon Mallee eucalyptus help pollination to flourish. (Jessica Steinberg/Times of Israel)

Israel: A History of Overcoming Challenges

"Moses took us 40 years through the desert in order to bring us to the one spot in the Middle East that has no oil".

- Golda Meir







"It is the Negev that the creativity and pioneer vigor of Israel shall be tested."

-David Ben Gurion -



"I trust and feel sure in my heart that science will bring to this land both peace and a renewal of its youth, creating here the springs of a new spiritual and material life. [...] I speak of both science for its own sake and science as a means to an end."

Chaim Weizmann, Israel's first president was also a biochemist



יום הבולאות אפן ושפושים PHILATELY DAY

Israel: A History of Overcoming Challenges

"Ben Gurion believed that Science could compensate us for what Nature has denied us."

-Shimon Peres

"The future of Israel was not dependent on what the gentiles would say, but on what the Jews would do."





Shimon Peres Negev Nuclear Research Center

-Ben Gurion 1955

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A car drives in a flooded road in the northern Israeli city of Nahariyya, on a stormy winter day, on January 8, 2020. (Meir Vaknin/Flash90)



A tank covered in snow in the northern Golan Heights, on January 8, 2020 (Maor Kinsbursky/Flash90)



What are the projections?

https://ceobs.org/ecopeaceclimate-change-water-securityand-national-security-for-jordanpalestine-and-israel/

"The Middle East and North Africa (MENA) region is considered a climate hotspot due to its natural water scarcity, low levels of socioecological resilience, social tensions and political conflicts, and ongoing immigration crisis. Over the course of the century, Jordan, Palestine, and Israel are projected to experience an average temperature rise over the Mediterranean of ~1.4C to ~4C; a general decrease in precipitation of 25 percent regionally and up to 40 percent locally; a shift in rain seasons from winter and spring to autumn; a higher frequency and intensity of extreme weather events; as well as a growing rate of desertification. Despite the effects of climate change being already observable in the region, the three countries have yet to fully recognize the connection between the negative impact of climate change on their neighbors' national security, and the implications for their own national security. Based on this lack of understanding, Jordan, Israel, and Palestine have done little to develop a regional, integrated roadmap for climate related national security."



Home > Sections > Global Trends > Israel unveils tech-driven climate change plan ahead of COP26

Israel unveils tech-driven climate change plan ahead of COP26

By Mia Hunt on 26/10/2021 | Updated on 26/10/2021







Prime minister Bennett declared climate change a national security priority. "The climate crisis is one of the central topics on the global agenda," he said. "It concerns the lives of all of us, and also the lives of our children and grandchildren. We are obligated to deal with it in Israel; it is at the core of our being."

Benefits?

- Contextualize the conflict
- Create pride in and empathy for Jewish nationalism
- Prepare students for the jobs of the future
- Integration benefits problem solving and reflects the real world
- Send a message about the mission and values of the school
- Connect communities around common issues, problem solving together



OCTOBER 24, 2021, 10:00 AM

Israeli ornithologist flies to Dubai to promote greener farms

Ornithologist Yossi Leshem goes to Dubai Expo to encourage more countries to join the cross-border biological pest control project he started in 1983.

By Abigail Klein Leichman



OCTOBER 24, 2021, 9:20 AM

Israeli innovators working on solutions to climate crisis

New report shows 1,200 Israeli companies already in the climatetech sector, with fastest growth in alternative proteins and green construction.

By Abigail Klein Leichman



OCTOBER 20, 2021, 10:30 AM

Can your new green invention really help Planet Earth?

PLANETech's digital tool lets startups measure how much their technology would reduce greenhouse gas emissions over five years.

By Abigail Klein Leichman

A sample of articles from israel21C.org

The top 12 ways Israel is feeding the world

From drip irrigation to hardier seeds, Israeli innovations help fill hungry bellies everywhere, particularly in the developing world.

By Abigail Klein Leichman | MAY 21, 2019, 8:19 AM



CENTER FOR ISRAEL

Tal-Ya's trays catch every drop of dew. Photo: courtesy

https://www.israel21c.org/10-israeli-startups-that-are-electrifying-transportation/



Solar Energy



- Arava Power Yosi Abramovitz
- Arava Insttitue
- <u>https://youtu.be/ZUvzDatBfeY</u> (Tikun Olam in Ruanda)

Water







<u>Let There Be Water — Seth M. Siegel</u> (sethmsiegel.com)

Israel's solution for a water-starved world | Seth M. Siegel | TEDxTelAvivSalon - YouTube

What is the story of Israeli innovation?

https://israeled.org/technology/



Key Enduring Understandings

- 1. Israel's <u>scarcity of resources</u> has fostered an Israeli culture of innovation and adaptation, making it able not only to survive but to thrive and share its successes with the world.
- 2. Israel is known around the world as "<u>The Start-Up Nation</u>" due to its many successes in innovation, which have impacted its security, economy, transportation, environment; as a result, Israel's relationships with others has strengthened in recent years.
- 3. The State of Israel and the Startup Nation address the short-term and long-term needs of the Jewish people and the world beyond, allowing the state to live its <u>Jewish values</u>, such as Tikkun Olam (repairing the world).
- 4. Israel's <u>leadership and government</u> have supported and fostered mindsets that challenge the status quo, look for more efficient solutions, buck the system, and explore new options that enable the viability and stability of the state's future.



https://ehp.niehs.nih.gov/doi/abs/10.1289/isee.2021.O-TO-011

Urban resilience: assessing climate vulnerabilities and risk perceptions in the city of Haifa, Israel

- Wildfires, floods, heatwaves, cold spells
- No national budget or guidelines exist for climate adaptation at the city level or in hospitals
- Low socio-economic neighborhoods are most at risk
- Build on preparedness for war and fire!

University of Haifa to launch international climate change faculty

University of Haifa announces NIS 50 million gift from Peter and Gyongyver Kadas to support an international faculty initiative for global climate change.

Israel National News / 10.01.22 / 14:05

Haifa University University Of Haifa Climate Change



Haifa University

7INN

Breakout Groups

Tal – Strategies for teaching about climate change and what students of all ages can do about it

 Rachel – Creating a school trip that celebrates learning about Israel's innovations around climate change

Conclusion

- What lessons from Israel can we bring to our school communities about the environment and what can we do about it?
 - What careers and areas of interest will you pursue to make Tikkun Olam part of your life?
 - How will you appreciate what you have and how will you adopt a mindset of resilience that overcomes challenges?
 - What can you do to make your school more eco-friendly? What can you do to make your holidays and Yoms more eco-friendly?
 - Can you campaign for change? Can you influence your local representatives to enact better policies for your community and the world?
 - How can we emerge from the pandemic stronger and better than before?
 - How can you teach younger learners about your experiences and learning from Israel to get them excited about change?
 - How will your students become social media content creators that spotlight Israel's accomplishments?

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