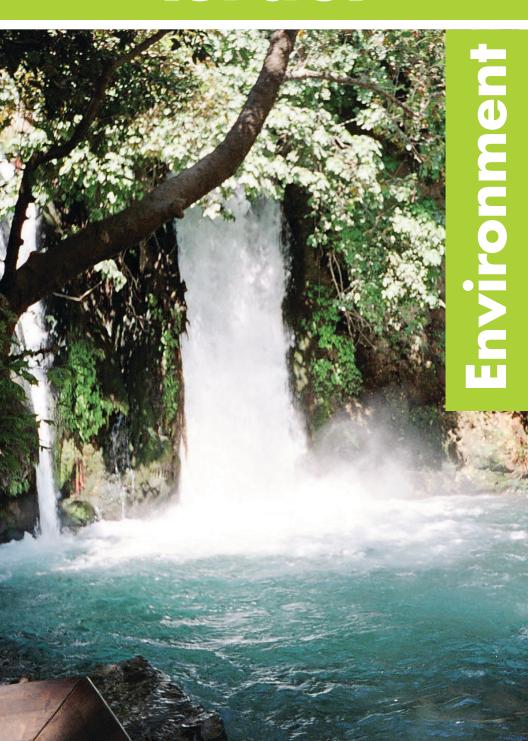
Israel



Israel: Turning Challenges Into Opportunities

Israel's story is about an indigenous people overcoming 1,900 years of oppression to achieve freedom in their ancestral home. But the challenges didn't end when the Jewish state was established in 1948.

For over 70 years, Israel has had to contend with a severe lack of water, energy, and other natural resources. By developing innovative solutions to their harsh circumstances, Israelis have become world leaders in water conservation, renewable energy, and sustainable agriculture.

Today, Israel uses its technology and know-how to help people all over the world overcome some of their most pressing environmental challenges.









Water Conservation

Recognizing its severe lack of water resources early on, Israel has become the "Silicon Valley" of water conservation technology.

- Israel treats 92 percent of its wastewater and reuses 75 percent in agriculture, the highest rate in the world.
- Tel Aviv-based company Netafim pioneered the use of drip irrigation in agriculture. Drip irrigation helps conserve water, improves crop yields, and helps protect the environment.
- Through the use of innovative irrigation techniques, Israeli farms have increased water efficiency to 90 percent, compared to 64 percent with traditional irrigation.

Desalination

Desalination is the process of converting salt water into fresh water. Since the 1960s, Israel has been a global leader in desalination technology.

- Israel began its desalination efforts in the 1960s with the invention of desalination.
- The Israeli city of Ashkelon is home to the largest desalination plant in the world. It produces water at \$0.50 per cubic meter, cheaper than any comparable facility.
- In 2004 Israel relied entirely on groundwater. Now, over 50 percent of Israel's water supply is comprised of desalinated or recycled water.
- Israel has helped build a massive desalination plant in Carlsbad, California, to help the state overcome a severe drought.













Above: Solel solar panels

Alternative Energy

Israel is a world leader in the development of alternative energy sources.

- Israel-based Solel has operated a field of solar panels in California's Mojave Desert since the 1980s, reducing U.S. dependence on oil by 2 million barrels per day.
- Israeli startup Phinergy has invented a battery that can power vehicles using only air and water. Cars running on this battery are scheduled to appear on the market in 2017.
- Using bacteria that "eat" petroleum, PetroBioClean helps clean up oil spills on land and sea.
- In 2016 Israel joined the Paris climate agreement to dramatically reduce carbon emissions. Israel's efforts include building the tallest solar energy tower in the world.







Above: Liman* and the savannization of the desert.

Combating Desertification

Israel is committed to the early Zionist goal of "making the desert bloom," both at home and abroad, in dozens of developing countries facing growing desertification.

- Israel is one of two countries in the world in which deserts are shrinking rather than expanding.
- The Negev desert is home to the Jacob Blaustein Institute for Desert Research. Students from around the world study Israeli methods of preserving drylands.
- In 2007 Israel and Nigeria initiated a \$17 billion joint project to reverse desertification and create 2 million agricultural jobs.
- In 2012 Israel hosted its fourth annual International Conference on Desertification. The conference was co-sponsored by the UN.

^{*}A liman is a group of trees planted in desert depressions so winter floodwaters and runoff can fill them naturally and irrigate the trees.

Reforestation

Israel's first prime minister, David Ben-Gurion, once declared, "I do not know if there is a more fruitful enterprise whose results are so useful as the planting of trees." Israel is a global leader in reforestation and nature preservation.

- Israel is one of the few countries that had more trees at the beginning of the 21st century than it had at the beginning of the 20th century.
- The Jewish National Fund (JNF) has planted more than 240 million trees in Israel, including 12,500 acres of forest every year.
- Israel has over 150 nature reserves and 65 national parks established throughout the country.
- Tu B'Shevat, the "New Year of the Trees," is a popular Israeli holiday.
 Children and adults celebrate by planting trees throughout the country.

Below: Afforestation of Galilee and volunteers planting trees in northern Israel.











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