ISRAEL COP 28

Israel's Climate Change Action Plan

המשרד להגנת הסביבה
الوزارة لحماية البيئة
Israel Ministry of Environmental Protection

STATE OF ISRAEL

MITIGATION | ADAPTATION | INNOVATION

MITIGATION

2030 targets

27%

reduction in GHG emissions **by 2030** (58 Mt CO_2eq), relative to 2015 (79 Mt CO_2eq)

2050 targets

Net-zero emissions target declared at COP26

100%

reduction in GHG emissions

NDC – Nationally Determined Contribution submitted to UNFCCC (July 2021)

2030 targets for implementation include emissions reduction:

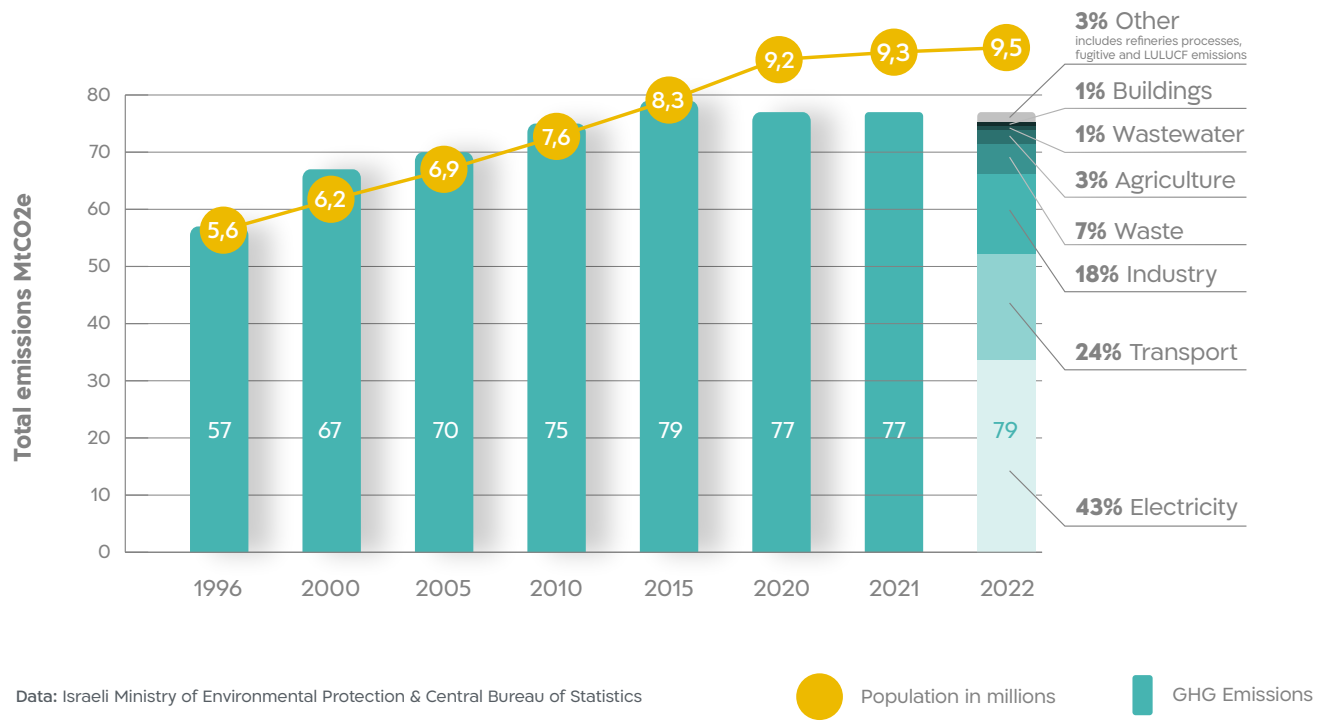
30% in electricity production

30% in industry sector

47% in solid waste

Reduce energy intensity of GDP to **122 MWh** per 1 million NIS GDP

Greenhouse Gas Emissions – current status



Data: Israeli Ministry of Environmental Protection & Central Bureau of Statistics

CO_2 is the main greenhouse gas emitted, accounting for over **83%** of all emissions (2021)

- Israel contributes about **0.2%** of global emissions
- Per capita emissions 2021 – 8.2 tCO_2e

Emissions by sector

Electricity production

Current status

76.9 TWh electricity production (2022)

- **52 TWh (68%)** from fossil gas
- **16.7 TWh (22%)** from coal
- **7.5 TWh (10%)** from renewable energy

Target

- 20% renewable energy for electricity generation by 2025
- End of coal use by 2026
- Energy efficiency

Implementation

- Development of grid, storage, dual land use
- Shutting down of one coal power plant and conversion of the remaining ones to natural gas
- Provide energy efficiency grants for industry and local authorities
- Promotion of agreed-upon measures for energy storage
- National Plan for dual land use for PV renewable energy

Government decisions

* 171 — Transition to a Low Carbon Economy, 2021
* 208 — Transition to Green Energy, 2021
* 465 — Promotion of Renewable Energy in Electricity Sector, 2022
* 1855 - Steps to strengthen the government's ability to meet the renewable energy goals, 2022

Transportation

Current status

Gasoline and diesel vehicles — main source of GHG emissions
Diesel vehicles — main source of air pollutants
Density per kilometer (congestion) is **3.5 times higher** than OECD average

Target

- 95% reduction of GHG emissions from new cars by 2030 (relative to 2020)
- 50% of heavy vehicles (trucks, buses) will be zero emissions by 2030; 100% by 2050
- 50% of travel from sustainable transport in 2030
- 15% reduction in private car mileage relative to BAU

Implementation

- Grants for purchase of zero emission buses
- Development of mass transport infrastructure
- Distribution of charging infrastructure
- Electrification of passenger train

Government decision

* 542 – Promotion of Clean Low-Carbon Transport, 2021
* 208 - Transition to Green Energy, 2021
* 181 - Transition to Electric or Alternative Fuels-based Transportation, 2023

Industry

Current status

Main emissions sources:
Fossil fuel consumption, industrial production processes, Fgas

Target

- Transition to green refrigerants
- Reduction of fossil fuel consumption
- Circular economy and reduction of resource consumption

Implementation

- Regulations for air conditioner and cooling system installers and services
- Investments in energy efficiency and transitioning to clean energy sources
- Support program for reuse of waste as raw material (industrial symbiosis)
- Regulations in line with Kigali Amendment to Montreal Protocol (in force 2022)

Government decision

* 541 - Update of National Plan for Energy Efficiency and Reduction of GHG Emissions, 2022

Waste

Current status

78%	14%	6%	2%
landfilling	organic treatment	recycling	RDF

Main emissions sources:
Landfilling of Municipal Solid Waste

Target

- Zero landfilling of municipal solid waste by 2050
- 12% reduction at source for municipal waste by 2030
- 54% recycling from municipal solid waste by 2030

Implementation

- Ban on landfilling untreated solid waste and untreated organic waste
- Externalities to be embedded in landfill levies by 2030
- Funding for reduction of household municipal waste
- Mandatory standards for the use of treated waste
- NIS 2.4 billion (~ $646M) for separation facilities and treatment of organic waste

Government decision

* 1282 – National Plan for the Prevention and Reduction of Air Pollution and Greenhouse Gas Emissions – implementation plan, 2022

Cities and Buildings

Target

- Mandatory construction of solar installations in new buildings
- Urban renewal — 30% of designated housing units by 2030

Implementation

- Apply mandatory green building standard for all new buildings, from 2022
- Define mandatory zero-emission energy structure and apply in all new buildings
- Prepare policy documents and approve national masterplans

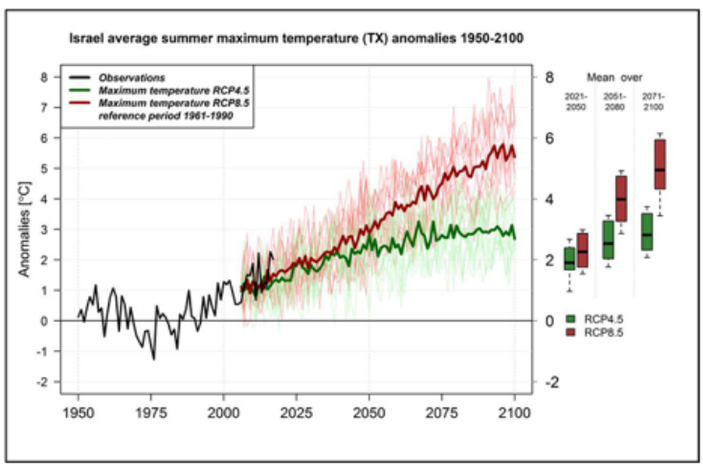
Government decision

* 1282 – National Plan for the Prevention and Reduction of Air Pollution and Greenhouse Gas Emissions – implementation plan, 2022

* 1022 Shading and Cooling of Urban Space through Street Trees as Part of Climate Change Preparedness, 2022

ADAPTATION

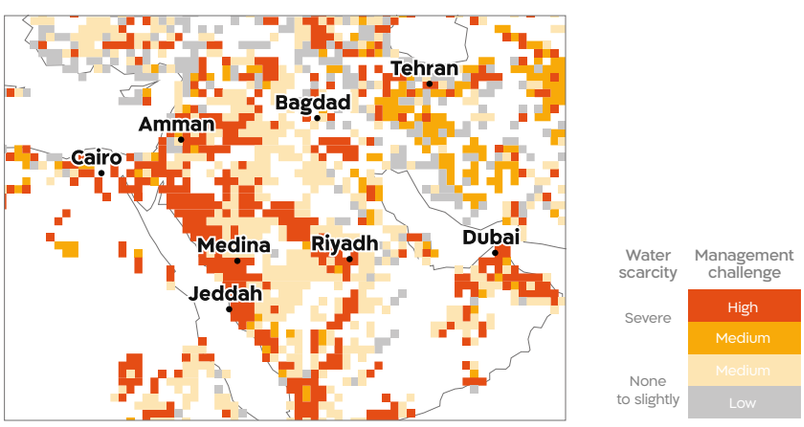
At the current rate of global warming, the average temperature in Israel is expected to rise by 1.5 degrees by the middle of the century. It will result in a **15% increase in the number of hot days**, an increase of about **30% in the number of extremely hot days**, and an increase of about **20% in the number of hot nights**. The number of heat waves will increase, their duration will be slightly longer, and the average peak temperature during these waves is expected to reach over 42 degrees Celsius.



Data: Israel Meteorological Service

Israel is situated in the Middle Eastern region which is considered to be a Climate Change "Hot Spot". With its Mediterranean, semi-arid and arid climates, Israel is extremely vulnerable to climate change and climate risks such as droughts.

Water scarcity in the Middle East



IPCC AR6 WGII Annex-I Figure AI.48

The Israeli Climate Change Adaptation Administration with the help of the Israeli Meteorological Service defined the four main climatic trends that are expected to occur in Israel in the upcoming years. The four trends are:

Warmer

Facts:

2021-2050

- Increase of additional 1.5 °C (on top of the present increase of 1.4 °C)
- Decrease of 13 cold nights (below 7 °C) per year
- Increase of over 20 warm nights (over 20 °C) per year
- Increase of 12-20 hot days (over 30 °C) per year

Acts:

- **Government decision 1022** — shading and cooling of urban space
- First plans and pilots in over 20 authorities — 25 million NIS

More extreme

Facts:

- Increased frequency of fires, snowstorms and flooding

Acts:

- New reference scenarios for flooding, fires and extreme heatwaves by the National Emergency Management Authority
- New surface runoff regulations by the Israel Planning Administration
- **Government decision 1091:** A national plan to cope with forest, woodland and open spaces fires
- **Government decision 378:** A plan to repair fire damage in the Mateh Yehuda Regional Council
- **Government decision 207:** Promoting infrastructure and managing flood risks

Higher

Facts:

- 2021 – 2100 – Sea level rise for Mediterranean coast of 1.06 m

Acts:

- Preparation of a forecast for the Red Sea
- Improvement of sea-rise modelling
- Establishment of sub-committee in the Climate Change Adaptation Administration

Drier

Facts:

- 2021-2050 – Increased frequency of drought in central and southern parts of country
- 2021-2100 – decrease of 10-24% in precipitation, especially in north-east of the country

Acts:

- **Government decision 625** – The establishment of A 'DeserTech' center, focused on climate change in dry climates, as part of the upcoming innovation district in the city of Be'er-Sheva
- Food systems and food security – national committee

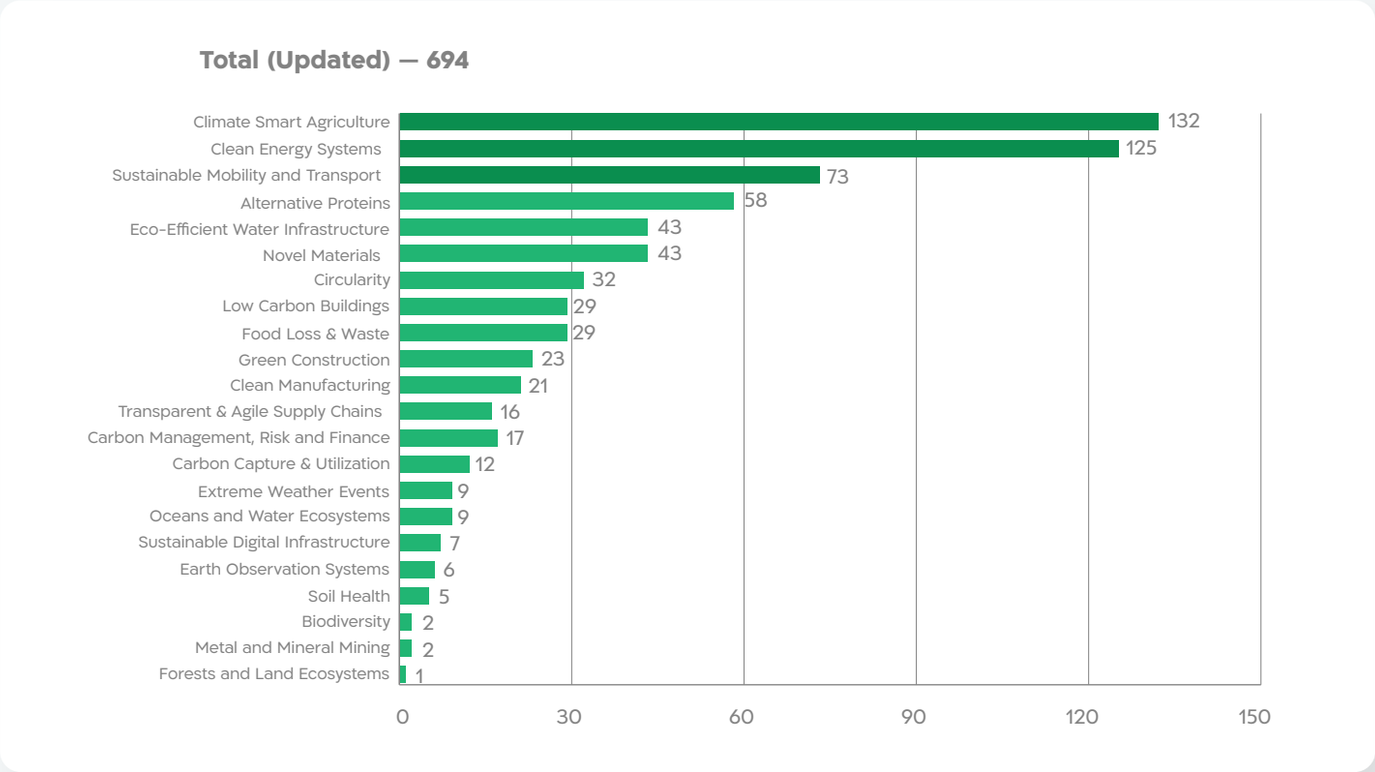
Cross-sector Action

- Define climate change as a national threat (annual national assessment by National Security Council)
- Implementation of Government Decision 4079 (amendment to decision 1902) - Israel's Preparedness to Adapt to Climate Change: Implementing Recommendations for a Strategy and a National Action Plan
- Implement climate education programs from kindergarten to 12th grade in collaboration with the Ministry of Education and establish young "climate leadership" in all youth movements and organizations
- Develop a National Climate Computation Center (Government Decision) and develop a climate change adaptation portal that includes mapping the risks, sensitivity, adaptive capacity and vulnerability to extreme weather events
- Develop adaptation plans for local authorities by 2024
- 22M NIS (around $6M) for preparation of urban reforestation projects

INNOVATION

694 Israeli climate tech startups

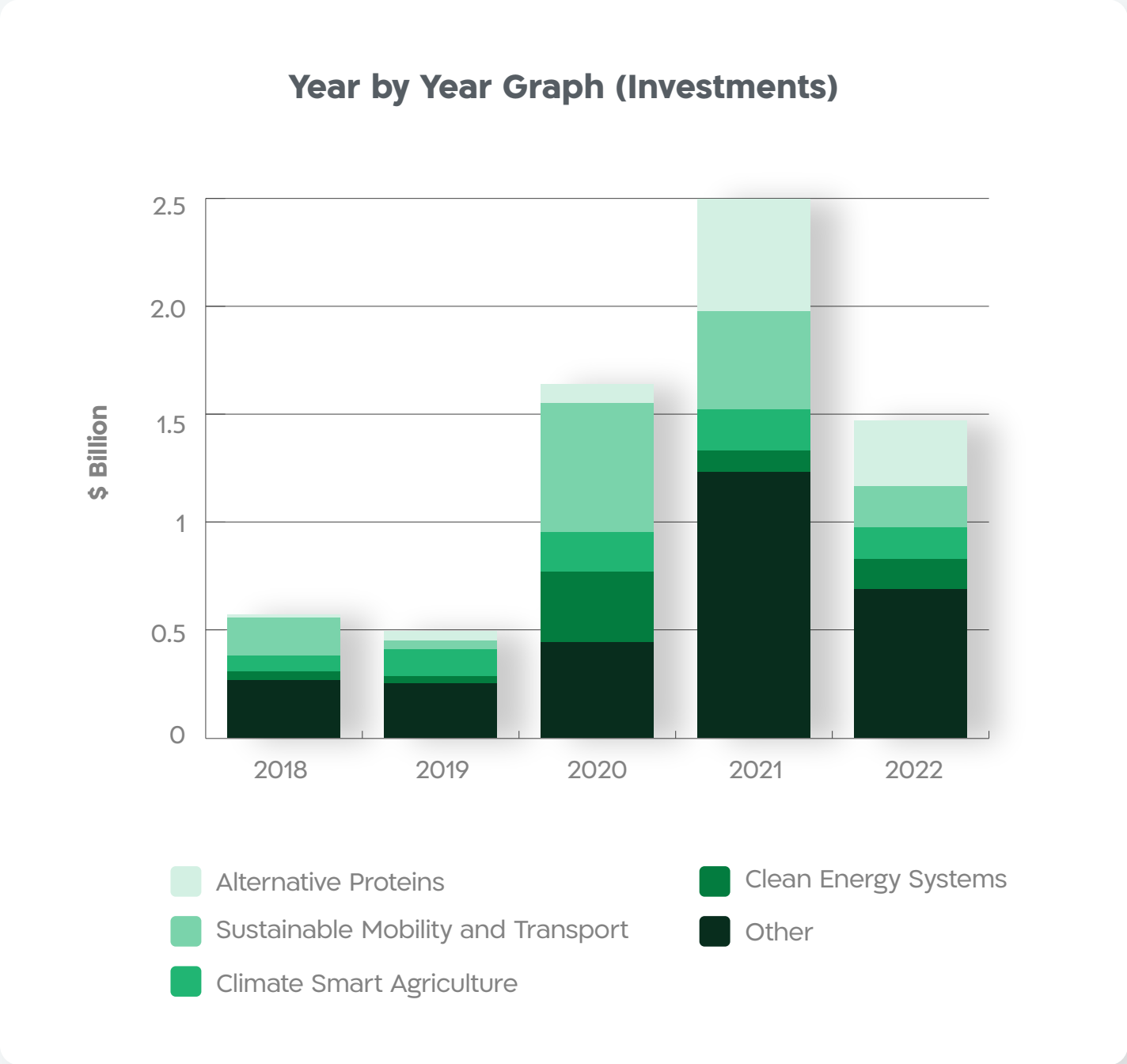
3 main challenges: Smart Agriculture, Clean Energy Systems and Sustainable Mobility & Transport



Data: Israel's State of Climate Tech 2022 Update

1 of 7 startups founded in 2021 are in climate tech

35% of all the climate tech startups were established from 2019 onwards

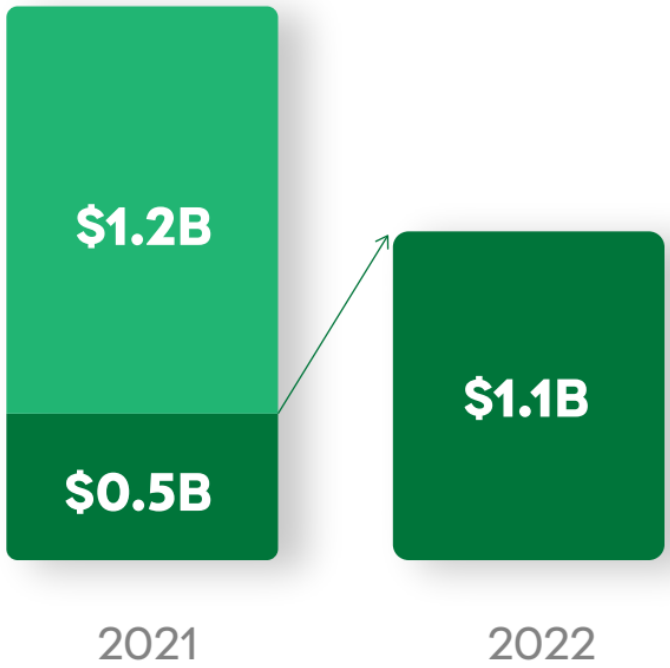


Data: Israel's State of Climate Tech 2022 Update

Total VC investments in Israeli Climate Tech

3 main challenges: Smart Agriculture, Clean Energy Systems and Sustainable Mobility & transport

Total VC investments in Israeli Climate Tech



Climate tech companies raised $3.9B since 2020

Growth rate in the last 24 months is 2.5 times faster than the global investment rate

In H1/22 investments grew by 120% compared to H1/21

H1 H2

Start-up Nation Central