UPDATE OF ISRAEL'S NATIONALLY DETERMINED CONTRIBUTION UNDER THE PARIS AGREEMENT

Submitted July 2021

This submission is in response to paragraphs 24 and 25 of decision 1/CP.21 and in particular Israel's commitment to communicate or update its nationally determined contribution (NDC). Israel has included in this document accompanying information to facilitate clarity, transparency and understanding (ICTU) of its NDC in compliance with Decision 4/CMA.1.

Israel formally communicated its INDC under the Paris Agreement on 29 September 2015 which became its NDC upon ratification of the Paris Agreement on 22 November 2016.

Since then, Israel has undertaken steps to increase its ambition. Most noteworthy is Government Decision 171 passed on the 25th of July 2021 entitled "Transition to a Low Carbon Economy."

Unlike Israel's original NDC, this new Decision includes an unconditional absolute greenhouse gas (GHG) emissions reduction goal for 2030 of 27% relative to 2015 and an unconditional absolute GHG emissions reduction goal for 2050 of 85% relative to 2015.

Whereas our INDC submitted in 2015 projected 2030 emissions would be 81.65 MtCO2e, under this update they are projected to be 58 MtCO2e by 2030.

This updated goal significantly improves upon Israel's first NDC which was presented as a per capita economy-wide unconditional GHG reduction. The previous target was 7.7 tCO2e by 2030 which corresponded to a total of 81.6 MtCO2e. The updated target presented in this NDC is 58 MtCO2e, which corresponds to a reduction of 23 MtCO2e or 29% in Israel' s total emissions.

We believe that this updated NDC is a marked improvement both in the process by which the 2030 and 2050 national and sectoral goals were determined; in the more ambitious mitigation goal and in the work carried out to increase preparedness and adaptation to Climate Change.

A multi stakeholder process, entitled **"Israel 2050: A Flourishing Economy in a Sustainable Environment",** took place over two years to determine 2050 low carbon

goals from which 2030 goals and targets were derived, including recommendations for implementation. Some of these policies already exist and others will be the subject of future government decisions, ministerial policies or other tools as required.

The main provisions of the recently adopted Decision 171 which set out updated national GHG reduction goals are as follows:

- ✓ Revision of the existing national greenhouse gas emission reduction target for 2030 set by Government Decision 542 so that the annual amount of greenhouse gas emissions by 2030 will be reduced by at least 27% from the annual amount measured in 2015 (79 MtCO2e). The annual amount of greenhouse gas emissions in 2030 will be about 58 MtCO2e.
- ✓ Approval of a national reduction target for greenhouse gas emissions by 2050, of at least 85% of the annual amount measured in 2015. Accordingly, the annual amount of greenhouse gas emissions in 2050 will be about 12 MtCO2e.
- ✓ Recognition of the desirability of a net-zero emissions goal by 2050 and a global target to limit temperature increase to 1.5 degrees Celsius. Therefore the 2050 target of 85% GHG emissions reduction will be periodically revisited.

The following sectoral targets were set:

- ✓ **Transport**
  - As of 2026, all new municipal buses purchased will be clean vehicles as defined in section 77A of the Transport Ordinance [New Version].
  - Limit the increase in greenhouse gas emissions from transportation by 2030, so that the total increase in emissions will be only 3.3% compared to emissions measured in 2015, which were 17.6 MtCO2e.
  - Limit the amount of greenhouse gas emissions from new vehicles, weighing up to 3.5 tonnes, registered from 2030, to an amount equal to 5% of the average greenhouse gas emissions for a new vehicle, weighing up to 3.5 tonnes, registered in 2020. This target will be reexamined in 2025, and will be updated as necessary, having regard to technological developments, the extent of the penetration of electric vehicles in Israel and globally, electricity infrastructure and the deployment of charging stations in Israel.
  - Reduction of greenhouse gas emissions from transport by 2050 by at least 96% compared to emissions measured in 2015.
- ✓ **Waste**
  - Reduction of greenhouse gas emissions from solid waste by 2030 by at least 47% compared to emissions measured in 2015, which were 5.5MtCO2e.
  - A 71% reduction in the amount of municipal waste landfilled by 2030 compared to the amount of municipal waste landfilled in 2018, which was about 4.5 million tonnes.
  - Reduction of GHG emissions from municipal waste by 2050 by at least 92% compared to emissions measured in 2015.

- ✓ **Electricity Generation**
  - Reduction of greenhouse gas emissions from electricity generation by 2030 by 30% compared to emissions measured in 2015, which were 37.6 MtCO2e, taking into account the renewable energy targets set in Government Decision No. 465 (see below).
  - Reduction of greenhouse gas emissions from electricity generation by 2050 by at least 85% compared to emissions measured in 2015.
- ✓ **Energy Intensity**
  - To set a new energy intensity target so that by 2030 the energy intensity of GDP will be 122 MWh per NIS 1 million.
- ✓ **Industry**
  - Reduction of greenhouse gas emissions from industry by 2030 by at least 30% relative to emissions in 2015, which were 12 MtCO2e.
  - Reduction of industrial greenhouse gas emissions by 2050 by at least 56% relative to emissions in 2015.
- ✓ **Climate Impacts of Goods and Services**
  - To establish a voluntary mechanism for reporting and publicizing information on the GHG emissions associated with products and services manufactured in and imported to Israel.

Mid-century, long-term low greenhouse gas emission development strategies

Government Decision 171 detailed above also includes targets for 2050 in furtherance of Article 4, paragraph 19, of the Paris Agreement, and paragraph 35 of decision 1/CP.21 and constitutes Israel's current low greenhouse gas emission development strategy. GHG reductions will be reduced from 79.4 MtCO2e emissions in 2019 to 58 MtCO2e in 2030 and 12 MtCO2e in 2050.

Fair and ambitious

Taking into consideration its national circumstances, Israel believes its target to be fair and ambitious reflecting genuine efforts to move forward in a sustainable manner to facilitate the transition to a low-carbon and climate-resilient economy. Further information can be found in section 6(a) of the ICTU table below.

Key sectoral approved decisions and strategies contributing to the NDC's achievement:

Government Decision Nº 465 (approved on October 25, 2020) which formalized the decision undertaken by the Minister of Energy to phase-out coal-fired power generation no later than 2026 and determined targets for a renewable power generation share of 20% in 2025 and 30% in 2030.

Implementation of the Kigali Amendment to the Montreal Protocol. In November 2020, the Internal Affairs and Environment Committee of the Knesset amended the Hazardous Materials Regulations to set quotas on the import of HFC refrigerant gases, in line with Israel's targets under the Kigali Amendment, to take effect in July 2022.

National Waste Strategy: In February 2021, the Ministry of Environmental Protection published a new National Strategy for a Circular Economy in 2050 and a Sustainable Waste Sector in 2030. The strategy addresses treatment of Municipal Solid Waste (MSW) in a comprehensive manner and includes the following key abatement measures in relation to sources of GHG emissions.

- Transition from 80% of waste landfilling in 2020, to only 20% by 2030;
- Zero landfilling of untreated organic waste and paper and cardboard by 2030;
- All active landfills will be sealed, and methane collection and destruction/utilization systems will be installed, so that methane collection will amount to no less than 50% of total methane production in the landfill.

Implementation

The government intends to review the national GHG reduction goals and strategy every five years which will also include an independent review process.

More detailed information on implementation is included in Israel's Third National Communication and in Israel's Second Biennial Update Report to be submitted in the near future.

Monitoring Reporting and Verification

In April 2016, the Israeli government set out in its National Greenhouse Gas Emissions Reduction Plan (Resolution 1403) the establishment of a national system for monitoring, reporting and verification, relating to the implementation of the program and national targets for reducing greenhouse gas emissions. Further information can be found in the table below.

Research and Development

Israel continues to be one of the largest investors in Research and Development per capita among OECD countries. A portion of that investment goes to Clean Tech and to climate technologies specifically in areas in which Israel has a relative advantage such as water use, agritech, and adaptation to arid and semi-arid conditions.

Adaptation to Climate Change

Israel has also been focusing on formulating adaptation policies, based on the increasingly severe climate predictions and trends for Israel and the region. The government adopted a government decision in 2018 for Adaptation to Climate Change and established the National Adaptation to Climate Change Committee (NACCC). The role of the NACCC is to mainstream adaptation efforts in all government bodies and relevant organizations, to coordinate cross sector adaptation activities and projects, to mainstream adaptation and to develop and distribute climate knowledge.

In 2019, The Israel Meteorological Service published the "Climate change in Israel – historical trends and future predictions of temperature and precipitation Report". This report presents the first comprehensive analysis of temperature and precipitation trends for Israel, based on data for various areas in Israel, and an analysis of projected climate models for the coming decades.

The Adaptation Committee submitted its first National Adaptation Report in May 2021 including recommendations to recognize Climate Change as a national security threat; outlining steps to be taken at the national and particularly at the local level for which a budget of 2.5 billion NIS over 5 years is proposed. It is intended that this Report will form the basis of a future government decision.

In the interim, the Water Authority, for example, is already incorporating data on the trends and projection into its master plans, thus maintaining Israel's ability to develop new desalination plants and to provide water supply both in Israel and for neighboring countries as well as continuing to develop innovation wastewater treatment and water recycling technologies. Enhancing the resilience of the public health system will be another area of focus

Tel Aviv – Yafo was the first city to publish its Adaptation to Climate Change Plan in 2020, in line with the C-40 covenant. 15 local authorities are currently developing their adaptation plans and In the next few years, it is expected that many more local authorities will follow suit. In recognition of the importance of the local government's role in adaptation efforts and in order to mainstream adaptation efforts, the NACCC developed Adaptation Guidelines for local government to be adopted by all local authorities.

Information to facilitate clarity, transparency and understanding

In line with Article 4, paragraph 8 of the Paris Agreement and Decision 4/CMA.1 Israel submits the following ICTU.

<table>
<tr><th colspan="3">Information to facilitate clarity, transparency and understanding of nationally determined contributions, referred to in decision 1/CP.21, paragraph 28</th></tr>
<tr><td>1.</td><td>Quantifiable information on the reference point (including, as appropriate, a base year):</td><td></td></tr>
<tr><td>(a)</td><td>Reference year(s), base year(s), reference period(s) or other starting point(s);</td><td>The reference year for all GHG emissions is 2015.</td></tr>
<tr><td>(b)</td><td>Quantifiable information on the reference indicators, their values in the reference year(s), base year(s), reference period(s) or other starting point(s), and, as applicable, in the target year;</td><td>Reference indicator: Net greenhouse gas (GHG) emissions in MtCO2e.
In 2015, Israel’s net GHG emissions were 79 MtCO2e. Achieving the targets will reduce emissions to approximately 58 MtCO2e by 2030 and approximately 12 MtCO2e by 2050.
Values in the reference year for the sectorial emission reduction targets are as follows:
<table>
<tr><th>Sector</th><th>GHG emissions (MtCO2e) in 2015</th><th>GHG emissions (MtCO2e) in 2030</th><th>GHG emissions (MtCO2e) in 2050</th></tr>
<tr><td>Electricity generation</td><td>37.6</td><td>26.3</td><td>5.6</td></tr>
<tr><td>Transport</td><td>17.6</td><td>17</td><td>0.7</td></tr>
<tr><td>Industry</td><td>12</td><td>8.4</td><td>5.3</td></tr>
<tr><td>Waste</td><td>5.5</td><td>2.9</td><td>0.4</td></tr>
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<tr><td></td><td></td><td><table><tr><td>Other</td><td>6.3</td><td>N\A</td><td>N\A</td></tr></table></td></tr>
<tr><td>(c)</td><td>For strategies, plans and actions referred to in Article 4, paragraph 6, of the Paris Agreement, or polices and measures as components of nationally determined contributions where paragraph 1(b) above is not applicable, Parties to provide other relevant information;</td><td>Not applicable.</td></tr>
<tr><td>(d)</td><td>Target relative to the reference indicator, expressed numerically, for example in percentage or amount of reduction;</td><td>Israel will achieve an economy-wide net reduction in GHG emissions of 27% by 2030 relative to 2015 emission levels.
Israel will achieve an economy-wide net reduction in GHG emissions of 85% by 2050 relative to 2015 emission levels.

In addition, sectorial emissions reduction targets – relative to the annual amount measured in 2015 in each corresponding sector – have been approved:

<table><tr><td>Sector</td><td>2030</td><td>2050</td></tr><tr><td>Electricity generation</td><td>30%</td><td>85%</td></tr><tr><td>Transport</td><td>3.3% increase</td><td>96%</td></tr><tr><td>Industry</td><td>30%</td><td>56%</td></tr><tr><td>Waste</td><td>47%</td><td>92%</td></tr></table>
Israel has further committed to a complete phase out of coal-fired power generation by 2026, and to increase the share of renewable power generation to 20% in 2025 and 30% in 2030.</td></tr>
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(e)	Information on sources of data used in quantifying the reference point(s);	Data used in quantifying the reference points will be based on the 2008-2030 Israeli GHG Inventory submitted to the UNFCCC in 2032.
(f)	Information on the circumstances under which the Party may update the values of the reference indicators.	Where necessary, the Israeli GHG inventory may be revised to incorporate methodological improvements, changes to international reporting guidelines and new data.
2.	**Time frames and/or periods for implementation:**	
(a)	Time frame and/or period for implementation, including start and end date, consistent with any further relevant decision adopted by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA);	NDC time frame: January 2021 - 31 December 2030 Long-term low-emission development strategy timeframe: January 2021 – 31 December 2050
(b)	Whether it is a single-year or multi-year target, as applicable.	Single-year target in 2030 and in 2050.
3.	**Scope and coverage:**	
(a)	General description of the target;	Israel's target is economy-wide to achieve a 27% reduction in net GHG emissions by 2030 relative to 2015, to a level of no more than 58 MtCO2e. In addition, Israel aims to achieve an 85% reduction in net GHG emissions by 2050, relative to 2015, to a level of no more than 12 MtCO2e. In order to achieve its economy-wide target, Israel has also approved sectorial targets for 2030 and 2050 (see above clause 1.d)

(b)	Sectors, gases, categories and pools covered by the nationally determined contribution, including, as applicable, consistent with Intergovernmental Panel on Climate Change (IPCC) guidelines;	**Sectors covered:** • Energy (Fuel combustion) in: energy industries (electricity generation), manufacturing industries, construction, transport, other sectors (residential, commercial, institutional, agriculture) • Industrial Processes • Agriculture • Waste and Wastewater • Land-use Change and Forestry **Greenhouse gases covered:** Carbon Dioxide (CO2), Methane (CH4), Nitrous Oxide (N2O), Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs), Sulphur Hexafluoride (SF6). **Categories covered:** Category 1.B. "Fugitive emissions from fuels" is currently not covered by Israel's NDC. However, this category is to be included in Israel's National GHG Inventory in the future (see below, section 3(c). Initial estimates are that fugitive emissions constitute between 0.1% to 0.8% of Israel's total GHG emissions . LULUCF pools are negligible in Israel. The sectors, gases, categories and pools covered by Israel's NDC are based on the revised 1996 Intergovernmental Panel on Climate Change (IPCC) Guidelines for National Greenhouse Gas Inventories, the 2006 IPCC Guidelines for National GHG Inventories and the Global Warming Potential (GWP) values from the IPCC Second Assessment Report (1995).

(c)	How the Party has taken into consideration paragraph 31(c) and (d) of decision 1/CP.21;	Category 1.B. "Fugitive emissions from fuels" have not been included in past Israel's Inventories but will be included in future inventories, starting with the report for the 2020 inventory year. Previous figures will be revised to include this category as well. Otherwise, all relevant categories of anthropogenic emissions or removals are included and will continue to be included.
(d)	Mitigation co-benefits resulting from Parties' adaptation actions and/or economic diversification plans, including description of specific projects, measures and initiatives of Parties' adaptation actions and/or economic diversification plans	Not applicable.
4.	**Planning process**	
(a)	Information on the planning processes that the Party undertook to prepare its nationally determined contribution and, if available, on the Party's implementation plans, including, as appropriate:	**NDC update and Long-Term Low-Emission Development Strategy** In early 2019, in cooperation with the Israel Democracy Institute and the OECD, the Israeli government initiated a broad and collaborative multi-sector process for formulating Israel's Long-Term Low-GHG Emission Development Strategy to transition to a prosperous and low-carbon economy by 2050. Five sectoral working groups (power generation, transport, industry, waste, and cities and buildings) were established, as well as a macroeconomic team and a social impacts team, consisting of a broad range of relevant stakeholders.
i.	Domestic institutional arrangements, public participation and engagement with local communities and indigenous peoples, in a gender-responsive manner;	A public consultation process was launched once the sectorial teams were established in the beginning of 2019. This consultation process enabled a wide participation of the public in the on-going work of the sectorial teams. It resulted in the integration of insights and comments by the public within the

		work of the sectorial teams, and ultimately it facilitated a more holistic and inclusive strategy for a low-carbon transition. **Inter-ministerial Steering Committee for GHG Emissions Reductions** The decision-making process going forward is supported by an Inter-ministerial Steering Committee for GHG Emissions Reductions, which consists of representatives from all relevant government ministries and other relevant stakeholders. The Steering Committee submits an annual report to the government evaluating the effectiveness of government measures to reduce emissions, the progress towards meeting national GHG emission reduction targets and supporting targets and recommends additional measures as needed. **Monitoring, Reporting and Verification of GHG emission reductions** In April 2016, the Israeli government set out in its National Greenhouse Gas Emissions Reduction Plan (Resolution 1403) the establishment of a national system for monitoring, reporting and verification, relating to the implementation of the program and national targets for reducing greenhouse gas emissions. To date, Israel monitors emission reduction on both a national and a policy level in accordance with the national Monitoring, Reporting and Verification (MRV) system. The MRV system was implemented in 2016 by the Ministry of Environmental Protection in cooperation with other government ministries and relevant statutory bodies. It operates on the basis of guiding principles of the UN Climate Convention and on the basis of methodologies developed in accordance with the characteristics of the Israeli economy. It is managed by the Ministry of Environmental Protection, on behalf of the Steering Committee.
ii.	Contextual matters, including, inter alia, as appropriate:	
a.	National circumstances, such as geography, climate, economy, sustainable development and poverty eradication;	National circumstances are described in detail in Israel's National Communication submitted in 2018 and additional information is detailed in the Biennial Update Report that will be submitted shortly.

		Sustainable development and poverty eradication: Israel is committed to the implementation of Agenda 2030 and the Sustainable Development Goals as detailed in its Voluntary National Review submitted to the UN in July 2019.
b.	Best practices and experience related to the preparation of the nationally determined contribution;	The establishment of sectorial working groups consisting of representatives of relevant ministries, local authorities, public representatives, NGOs, academia and others as described in section 4(a) above ensured broad public involvement and commitment, while the involvement of public policy think tanks and the OECD further contributed to the acceptability of the results. Within this context, establishing Israel's Long-Term Low-Emission Development Strategy further informed the process to revise Israel's 2030 NDC targets. (See above clause 4.a.)
c.	Other contextual aspirations and priorities acknowledged when joining the Paris Agreement;	Not applicable
(b)	Specific information applicable to Parties, including regional economic integration organizations and their member States, that have reached an agreement to act jointly under Article 4, paragraph 2, of the Paris Agreement, including the Parties that agreed to act jointly and the terms of the agreement, in accordance with Article 4, paragraphs 16–18, of the Paris Agreement;	Not applicable
(c)	How the Party's preparation of its nationally determined contribution has been informed by the outcomes of the global stocktake, in accordance with	Israel participated actively in the Talanoa Dialogues and looks forward to participating in the Global Stocktake in 2023.

	Article 4, paragraph 9, of the Paris Agreement;	
(d)	Each Party with a nationally determined contribution under Article 4 of the Paris Agreement that consists of adaptation action and/or economic diversification plans resulting in mitigation co-benefits consistent with Article 4, paragraph 7, of the Paris Agreement to submit information on:	
i.	How the economic and social consequences of response measures have been considered in developing the nationally determined contribution;	Not applicable
ii.	Specific projects, measures and activities to be implemented to contribute to mitigation co-benefits, including information on adaptation plans that also yield mitigation co-benefits, which may cover, but are not limited to, key sectors, such as energy, resources, water resources, coastal resources, human settlements and urban planning, agriculture and forestry; and economic diversification actions, which may cover, but are not limited to, sectors such as manufacturing and industry, energy and mining, transport and communication, construction, tourism, real estate, agriculture and fisheries	Not applicable
5	**Assumptions and methodological approaches, including those for estimating and accounting for anthropogenic greenhouse gas emissions and, as appropriate, removals:**	
(a)	Assumptions and methodological approaches used for accounting for anthropogenic greenhouse gas emissions and removals corresponding to the Party's nationally determined contribution, consistent with decision 1/CP.21,	In accordance with the modalities, procedures and guidelines outlined in Decisions 4/CMA.1 and 18/CMA.1 of the Paris Rulebook, Israel will publish and submit to the UNFCCC, an annual National Inventory Report and Biennial Transparency Report by 31 December 2024 at the latest, and biennially thereafter.

	paragraph 31, and accounting guidance adopted by the CMA;	The National Inventory Report will account for Israel anthropogenic GHG emissions and removals and the Biennial Transparency Report will report on progress towards the Israel's NDC. Israel will compare achieved net GHG emission reductions with its NDC target for 2030. Israel will comply with future UNFCCC reporting guidelines on tracking, and reporting on progress. For current IPCC methodologies and metrics used, see section 5(d). Final accounting towards the target will take place in 2032. It will be based on the 2008-2030 Israel GHG Inventory, by comparing 2030 net GHG emissions to the 2015 reference year.
(b)	Assumptions and methodological approaches used for accounting for the implementation of policies and measures or strategies in the nationally determined contribution;	For domestic MRV and UNFCCC reporting see section 4(a)(i) above. Israel has established a market-wide and sector specific GHG emissions modelling framework which enables to forecast emissions throughout to 2050 given different scenarios, abatement measures and assumptions. In addition, Israel has an MRV system which produces the following annual information and results: → Policy Measure Impacts: Within the MRV system framework, both achieved (ex-post) and expected (ex-ante) emission reductions are monitored for key policy measures. The expected reductions are calculated for each of the target years (2020, 2025 and 2030), for two levels of implementation: • Implementation of the policy measure to the extent that it has already approved (but not necessarily fully implemented) • Implementation in accordance with approved sectorial targets.

		→ Abatement Scenario Emissions: Abatement scenario emissions are forecasted for each of the target years and each of the abovementioned three levels of implementation. The MRV system facilitates the following: • Measurement of national progress towards achieving mitigation goals. • Measurement of the effectiveness of specific government GHG reduction policies and actions. • Revision and expansion of the policy actions to maximize the achieved economic and environmental benefits. • Fulfillment of reporting obligations to the UN on mitigation actions by Israel and their effects. • Transparency of information on Israel's progress towards its reduction goals The monitoring is conducted on the basis of approved government methodologies, which define the calculation methodology, the parameters to be monitored, and the requisite QA/ QC procedures. The methodologies also define the manner in which overlapping effects between different government measures are accounted for in order to avoid double counting. The current methodologies under approval within the MRV system framework are: ○ Monitoring fuel consumption and emission reductions in power generation ○ Monitoring energy efficiency and electricity consumption ○ Monitoring energy efficiency in buildings ○ Monitoring grant programs and support for energy efficiency and reduction of greenhouse gas emissions projects ○ Monitoring fuel consumption and emission reductions in the transport sector ○ Monitoring fuel consumption and emission reductions in industry and buildings sectors ○ Monitoring emissions reduction from the prevention of solid waste landfilling and emissions from the waste sector ○ Monitoring national targets for reduction of GHG emissions from fluorinated gases ○ Updating emission forecasts from agriculture, land use, wastewater and industrial process emissions

(c)	If applicable, information on how the Party will take into account existing methods and guidance under the Convention to account for anthropogenic emissions and removals, in accordance with Article 4, paragraph 14, of the Paris Agreement, as appropriate;	See section 5(d) below
(d)	IPCC methodologies and metrics used for estimating anthropogenic greenhouse gas emissions and removals;	**IPCC methodologies:** The revised 1996 IPCC Guidelines for National GHG Inventories were applied for the calculation of GHGs in all sectors, except agriculture and waste. Agriculture (category 4) is calculated according to the 2006 IPCC Guidelines for National GHG Inventories as of the 2011 Inventory year. Waste (category 6) was recalculated in 2012, for all inventory years according to the 2006 IPCC Guidelines. Additional Guidance: In addition to the IPCC Guidelines for National GHG Inventories, the 'Good Practice Guidance and Uncertainty Management in National GHG Inventories' guidelines were used for preparation of the inventories. Tier Levels : The tier level applied in the national GHG inventory varies from sector to sector due to the varying availability of data and information: • Module 1-Energy: In principle, Tier 1 was applied, with notable exceptions being the application of Tier 2 using information that is unique to Israel such as calorific values of primary energy sources (coal, natural gas, shale oil). Tier 3 was applied for emissions of SOx, NOx, and CO from vehicles, as well as emissions of SOx and NOx from electricity generation.

		• Module 2-Industrial Processes: In principle, Tier 1 was applied. For some sources emission factors specific to Israeli industry were used and therefore Tier 3 was applied. Regarding emissions of fluorinated gases, a methodology was adapted specifically to Israel and therefore Tier 3 was applied. • Module 3-Solvent and Other Product Use: There is no calculation of emissions from sources as such and therefore no tier level was applied yet. • Module 4- Agriculture: In principle, Tier 1 was applied, taking into account the specific processes in Israel's agriculture sector and appropriate emission factors.For some sub sectors Tier 2 was applied. • Module 5- Land Use Change and Forestry: Israel uses the Tier 1 approach for estimating removals in forest land areas. There is no forest inventory in place as the forest land in Israel is negligible. However, data on forest land and on the mass of trees harvested do exist and are periodically updated. • Module 6- Waste: Tier 2 is applied to waste and Tier 1 to wastewater. **Metrics:** Global Warming Potential (GWP) values for a 100-year time horizon from the IPCC Second Assessment Report (1995).
(e)	Sector-, category- or activity-specific assumptions, methodologies and approaches consistent with IPCC guidance, as appropriate, including, as applicable:	
i.	Approach to addressing emissions and subsequent removals from natural disturbances on managed lands;	Not applicable
ii.	Approach used to account for emissions and removals from harvested wood products;	Not applicable
iii.	Approach used to address the effects of age-class structure in forests;	The effects of age-class structure are not currently taken into account in Israel's GHG Inventory.
(f)	Other assumptions and methodological approaches used for understanding the nationally determined contribution and, if applicable, estimating corresponding emissions and removals, including:	

i.	How the reference indicators, baseline(s) and/or reference level(s), including, where applicable, sector-, category- or activity-specific reference levels, are constructed, including, for example, key parameters, assumptions, definitions, methodologies, data sources and models used	Final reference year and target year emissions will be based on the 2015-2030 GHG Inventory to be submitted to the UNFCCC in 2032 for the 2030 target year. Emissions estimates in Israel's GHG Inventory are made using methodologies outlined in the 2006 IPCC Guidelines for National Greenhouse Gas Inventories and subsequent IPCC guidelines (see section 5(d)). The Inventory is revised annually and undergoes extensive review processes.
ii.	For Parties with nationally determined contributions that contain non-greenhouse-gas components, information on assumptions and methodological approaches used in relation to those components, as applicable;	Not applicable
iii.	For climate forcers included in nationally determined contributions not covered by IPCC guidelines, information on how the climate forcers are estimated;	Not applicable
iv.	Further technical information, as necessary;	Not applicable
(g)	The intention to use voluntary cooperation under Article 6 of the Paris Agreement, if applicable.	Israel is planning to achieve its NDC mitigation objectives through domestic means but is following Article 6 negotiations so that this option remains open should it be relevant in the future.
6	**How the Party considers that its nationally determined contribution is fair and ambitious in the light of its national circumstances:**	
(a)	How the Party considers that its nationally determined contribution is fair and ambitious in the light of its national circumstances;	Taking into consideration its national circumstances, Israel believes its target to be fair and ambitious reflecting genuine efforts to move forward in a sustainable manner to facilitate the transition to a low-carbon and climate-resilient economy.

		Israel is a small and densely populated country characterized by an expanding population and economic growth, facing land and water scarcity. Arid zones comprise over 45% of the area of the country while there is an exceptionally high degree of biological diversity that must be protected. Electricity generation has been largely based on domestic and imported fossil fuels as Israel has no access to a number of widely used low-carbon sources of energy such as nuclear, hydro-electric and geothermal power. The country is an energy island, without grid interconnectivity. There is limited surface area available for large-scale energy installations. The few available areas are subject to competing uses such as industrial development and housing, bio-diversity preservation, habitat conservation, agriculture and defense. Electricity generation from renewable energy (mostly solar PV) amounted to 6.1% of the total electricity generation in 2020. For many years, there has been significant use of solar heaters for water heating and greenhouse gas emissions associated with water heating are substantially lower than the global average. An additional factor limiting Israel's abatement potential is its small share of heavy industry sector with relatively low emissions reduction potential. Israel attains extremely high levels of water reuse (85%). However, to meet increasing water demand several desalination plants have been constructed. These installations are comparatively energy efficient and currently account for 5% of energy consumption. Water scarcity may necessitate the construction of additional plants in the future.
(b)	Fairness considerations, including reflecting on equity;	See above, section 6(a)
(c)	How the Party has addressed Article 4, paragraph 3, of the Paris Agreement;	Israel’s first NDC formulated a per capita GHG emissions target that did not entail a reduction in absolute emissions .

		Considering the previous target set in 2015 and revised population growth forecasts, the expected annual GHG emissions in 2030 would have been around more than 85 MtCO2e. The current target of 58 MtCO2e is significantly more ambitious.
(d)	How the Party has addressed Article 4, paragraph 4, of the Paris Agreement;	Israel's NDC is an economy-wide absolute emissions reduction target in compliance with Article 4.4 of the Paris Agreement. Sectorial targets were defined as well in order to facilitate successful implementation of the economy-wide target. See above, section 1(d).
(e)	How the Party has addressed Article 4, paragraph 6, of the Paris Agreement.	Not applicable
7	**How the nationally determined contribution contributes towards achieving the objective of the Convention as set out in its Article 2:**	
(a)	How the nationally determined contribution contributes towards achieving the objective of the Convention as set out in its Article 2;	This NDC represents Israel's contribution to achieving the objective of Article 2 of the Convention and reflects Israel's highest ambition at this time to stabilize GHG concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.
(b)	How the nationally determined contribution contributes towards Article 2, paragraph 1(a), and Article 4, paragraph 1, of the Paris Agreement.	Israel has outlined its specific circumstances (a growing population, limited land use area, and limitations on the forms of suitable renewable energies, among others). Through its multisectoral consultation process, Israel has determined a mid-century long-term low carbon strategy which was formalized and approved by the government. Thus, Israel aims to support the collective effort to reach global peaking of GHG emissions as soon as possible (which is expected to occur in Israel by mid-decade), as set out in Article 4.1 of the Paris Agreement.