<Interim Version>

Japan's Nationally Determined Contribution (NDC)

Japan's Greenhouse Gas Emission Reduction Target

Japan aims to reduce its greenhouse gas emissions by 46 percent in fiscal year 2030 from its fiscal year 2013 levels, setting an ambitious target which is aligned with the long-term goal of achieving net-zero by 2050. Furthermore, Japan will continue strenuous efforts in its challenge to meet the lofty goal of cutting its emission by 50 percent.

Table: Targets and estimates by greenhouse gases and other classifications[*1]

(Unit: Million t-CO_2)

	Targets and estimates in Fiscal Year 2030[*1]	Fiscal Year 2013
Greenhouse gas emissions and removals	760	1,408
Energy related CO_2	677	1,235
Industry	289	463
Commercial and others	116	238
Residential	70	208
Transport	146	224
Energy conversion[*2]	56[*2]	106
Non-energy related CO_2	70.0	82.3
Methane (CH_4)	26.7	30.0
Nitrous oxide (N_2O)	17.8	21.4
Four gases incl. alternative CFC[*3]	21.8	39.1
Hydrofluorocarbons (HFCs)	14.5	32.1
Perfluorocarbons (PFCs)	4.2	3.3
Sulfur hexafluoride (SF_6)	2.7	2.1
Nitrogen trifluoride (NF_3)	0.5	1.6
Greenhouse gas removals	-47.7	―
Joint Crediting Mechanism (JCM)	Japan aims to contribute to international emission reductions and removals at the level of a cumulative total of approximately 100 million t-CO_2 by fiscal year 2030 through public-private collaborations. Japan will appropriately count the acquired credits to achieve its NDC.	

[*]1: Figures of target (or estimates in the case of energy-related CO_2).
[*]2: Excluding statistical discrepancy from power and heat allocation. For that reason, the total sum of the actual results by each sector is not equal to the emissions of energy-related CO_2.
[*]3: Figures for the four kinds of greenhouse gases of HFCs, PFCs, SF_6 and NF_3 are calendar year values.

Information to facilitate clarity, transparency and understanding of nationally determined contributions, referred to in decision 1/CP.21, paragraph 28 (Decision 4/CMA.1 and Annex I)		
1. Quantifiable information on the reference point (including, as appropriate, a base year) :		
(a)	Reference year(s), base year(s), reference period(s) or other starting point(s);	Fiscal Year 2013
(b)	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;	The total emissions in the base year of fiscal year 2013 amount to 1,408 million t-CO_2 (based on the National Greenhouse Gas Inventory Report of Japan (The GHG inventory), submitted to the Secretariat of the United Nations Framework Convention on Climate Change (hereinafter UNFCCC) in April 2021 (final figures for fiscal year 2019)). Japan aims to reduce its greenhouse gas emissions by 46 percent, equivalent to the reduction of 76 million t-CO_2, in fiscal year 2030 from its fiscal year 2013 levels. Furthermore, Japan will continue strenuous efforts in its challenge to meet the lofty goal of cutting its emission by 50 percent from its fiscal year 2013 levels.
(c)	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;	Not applicable.
(d)	Target relative to the reference indicator, expressed numerically, for example in percentage or amount of reduction;	Japan aims to reduce its greenhouse gas emissions by 46 percent in fiscal year 2030 from its fiscal year 2013 levels, setting an ambitious target which is aligned with the long-term goal of achieving net zero by 2050. Furthermore, Japan will continue strenuous efforts in its challenge to meet the lofty goal of cutting its emission by 50 percent.
(e)	Information on sources of data used in quantifying the reference point(s);	The total emissions in the base year (fiscal year 2013) written in the above are based on the National Greenhouse Gas Inventory Report of Japan (The GHG inventory) submitted to the UNFCCC Secretariat in April 2021.
(f)	Information on the circumstances under which the Party may update the values of the reference indicators;	The methods of estimation and the emissions in the base year are subject to further updates, depending on, among others, the progress of future international negotiations on estimating and accounting rules, the revision of various statistical data for annually reported figures, and the

		review on estimation methods.
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);	From April 1, 2021 to March 31, 2031
(b)	Whether it is a single-year or multi-year target, as applicable;	Single year target (fiscal year 2030)

3. Scope and coverage:		
(a)	General description of the target;	Japan aims to reduce its greenhouse gas emissions by 46 percent in fiscal year 2030 from its fiscal year 2013 levels, setting an ambitious target which is aligned with the long-term goal of achieving net zero by 2050. Furthermore, Japan will continue strenuous efforts in its challenge to meet the lofty goal of cutting its emission by 50 percent.
(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 of coverage> All sectors and categories encompassing the following: (a) Energy - Fuel Combustion (Energy industries, Manufacturing industries and Construction, Transport, Commercial/Institutional, Residential, Agriculture/Forestry/Fishing, and Other) - Fugitive emissions from fuels - CO_2 transport and storage (b) Industrial processes and product use (c) Agriculture (d) Land Use, Land-Use Change and Forestry (LULUCF) (e) Waste <Targeted gases>

		Carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6) and nitrogen trifluoride (NF_3). <Percentage of coverage> 100 percent
(c)	How the Party has taken into consideration paragraph 31(c) and (d) of decision 1/CP.21;	Japan's scope and coverage include all sectors of anthropogenic emissions and removals. Also, they do not exclude the sources, sinks and activities which were included in the previous NDC of Japan.
(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 processes:		
(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:	At the joint meetings of the Mid- and Long-Term Climate Change Countermeasures Subcommittee of the Global Environment Committee under the Central Environment Council and the Working Group for Consideration of Global Warming Countermeasures of the Global Environment Subcommittee of the Committee on industrial Science and Technology Policy and Environment under the Industrial Structural Council, the examination was conducted on the Plan for Global Warming Countermeasures, a comprehensive plan for the implementation of Japan's emissions reduction goal for the year 2030, in a transparent manner to the public, while holding hearing from future generations and relevant ministries and agencies. With regard to energy policy and energy mix, the examination was conducted in a transparent manner to the public at the Advisory Committee for Natural Resources and Energy.
(a) (i)	Domestic institutional arrangements, public participation and engagement with local communities and indigenous peoples, in a	Towards the achievement of a sustainable society, Japan is proactively working to incorporate gender perspectives, including gender equal participation, into concrete actions, while aiming at

	gender-responsive manner;	enhanced participation of women in policy decision-making processes for responding to environmental problems including climate change, in line with ongoing international trends.
(a) (ii)	Contextual matters, including, inter alia, as appropriate:	
(a) (ii) a	National circumstances, such as geography, climate, economy, sustainable development and poverty eradication;	Please refer to Japan's 7th National Communication (NC7) (2017) for geographical, climatic and economic situations of Japan. Japan is implementing efforts towards the achievement of the United Nations' Sustainable Development Goals (SDGs). Please refer to Japan's Voluntary National Review (VNR) for further information on efforts for the SDGs by Japan.
(a) (ii) b	Best practices and experience related to the preparation of the nationally determined contribution;	Japan aims to reduce greenhouse gas emissions to net-zero, that is, to realize carbon neutrality by 2050, based on the idea that addressing climate change is no longer a constraint on economic growth and that proactive climate change measures bring transformation of industrial structures as well as its economy and society, leading to dynamic economic growth. Japan has enacted legislation for this target by the Act Partially Amending the Act on Promotion of Global Warming Countermeasures (Act No. 54 of 2021) in 204th session of the Diet. The legislative amendment will enhance the continuity and predictability of policies and accelerate efforts and investments as well as innovation for decarbonization towards not only the achievement of the mid-term target, but also the realization of a decarbonized society. On top of that, Japan aims to reduce its greenhouse gas emissions by 46 percent in fiscal year 2030 from its fiscal year 2013 levels, setting an ambitious target which is aligned with the long-term goal of achieving net-zero by 2050. Furthermore, Japan will continue strenuous efforts in its challenge to meet the lofty goal of cutting its emissions by 50 percent. In order to create a virtuous cycle of the economy and the environment and to realize robust growth toward its ambitious goal for fiscal year 2030, Japan will put forward all possible efforts in all areas including by thorough energy efficiency measures, maximum introduction of renewable energy, as well as decarbonization of public sectors and local communities. In food, agriculture, forestry, and fisheries industries, based on the "Strategy for Sustainable Food Systems, MeaDRI (Measures for

		achievement of Decarbonization and Resilience with Innovation) (decided by Ministry of Agriculture, Forestry and Fisheries on May 12th, 2021),” Japan aims to enhance productivity potentials and ensure sustainability in a compatible manner through innovation. Based on the “MLIT’s Green Challenge (decided by Ministry of Land, Infrastructure, Transport and Tourism on July 6th, 2021),” Japan will steadily carry out efforts in cross-sectoral decarbonization in national land, urban and regional spheres. Japan will create new industries and jobs by proceeding efforts in strategic transitions to a circular economy, which is necessary for decarbonization, as well as through nature-based solutions (NbS). Japan will continue its strenuous efforts towards 2030, and further towards 2050. Realizing carbon-neutrality by 2050 and cutting emissions by 46 percent in fiscal year 2030 is certainly not an easy task; it is therefore essential to position decarbonization as one of the main issues in all socio-economic activities and to bring forward the transformation into sustainable and resilient socio-economic systems. For those targets to be achieved, Japan will promote policies contributing to growth by holding decarbonization as its pillar. As already mentioned in (a) (i), specific examinations were conducted in a manner open to the public, at the joint meetings of the Mid- and Long-Term Climate Change Countermeasures Subcommittee of the Global Environment Committee under the Central Environment Council and the Working Group for Consideration of Global Warming Countermeasure of the Global Environment Subcommittee of the Committee on industrial Science and Technology Policy and Environment under the Industrial Structural Council, as well as at the Advisory Committee for Natural Resources and Energy. On July 17th, 2015, Japan submitted its Intended Nationally Determined Contribution (INDC) to the UNFCCC Secretariat. Following that, on May 13th, 2016, Japan made a Cabinet Decision on the Plan for Global Warming Countermeasures. Every year since the formulation of the plan, the Global Warming Prevention Headquarters, led by the Prime Minister with all Cabinet Ministers as its members, has made rigorous reviews and examinations on, among others, the state

		of progress in each countermeasure taken by the Government, by using the outcome in emission reductions including figures by greenhouse gases and other classifications, and indicators to evaluate the progress in implementing countermeasures. Specifically, by administering evaluations on each section of measures and policies and identifying sections whose progress is delayed, the Government conducted examinations on, among others, how to improve progress in the identified sections. In so doing, the Government considered not only the enhancement of measures and policies that are already included in the Plan for Global Warming Countermeasures but also the introduction of new measures and policies. Also, with regard to the new target for fiscal year 2030, the Government will continue progress management in a similar manner as mentioned in the above.
(a) (ii) 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 Article 4, paragraph 9, of the Paris Agreement;	Not applicable since the global stocktake has not been carried out.
(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	Not applicable.

	on:	
(d) (i)	How the economic and social consequences of response measures have been considered in developing the nationally determined contribution;	Not applicable.
(d) (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, paragraph 31, and accounting guidance adopted by the CMA;	<Sectors of coverage> All sectors and categories encompassing the following: (a) Energy - Fuel Combustion (Energy industries, Manufacturing industries and Construction, Transport, Commercial/Institutional, Residential, Agriculture/Forestry/Fishing, and Other) - Fugitive emissions from fuels - CO_2 transport and storage (b) Industrial processes and product use (c) Agriculture (d) Land Use, Land-Use Change and Forestry (LULUCF) (e) Waste <Targeted gases>

		Carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6) and nitrogen trifluoride (NF_3). <Percentage of coverage> 100 percent <Assumptions and methodological approaches> Methodologies are in line with the Guidelines for National Greenhouse Gas Inventories prepared by the IPCC, and adopted by the COP. The metrics used for the total GHG emissions and removals (CO_2 equivalent) is the Global Warming Potentials of a 100-year time horizon which were presented in the IPCC Fourth Assessment Report. Removals by LULUCF sector are accounted in line with approaches equivalent to those under the Kyoto Protocol. These methodologies are subject to change depending on the progress of future international negotiations on estimating and accounting rules.
(b)	Assumptions and methodological approaches used for accounting for the implementation of policies and measures or strategies in the nationally determined contribution	Assumptions and methodological approaches for the implementation of policies and measures towards the achievement of Japan's goals are included in the Plan for Global Warming Countermeasures.
(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	Refer to (d).
(d)	IPCC methodologies and metrics used for estimating anthropogenic greenhouse gas emissions and removals;	Methodologies are in line with the Guidelines for National Greenhouse Gas Inventories prepared by the IPCC, and adopted by the COP. The metrics used for the total GHG emissions and removals (CO_2 equivalent) is the Global

		Warming Potentials of a 100-year time horizon which were presented in the IPCC Fourth Assessment Report. These methodologies are subject to change depending on the progress of future international negotiations on estimating and accounting rules.
(e)	Sector-, category- or activity-specific assumptions, methodologies and approaches consistent with IPCC guidance, as appropriate, including, as applicable:	
(e) (i)	Approach to addressing emissions and subsequent removals from natural disturbances on managed lands	In Japan, rules to exclude emissions from natural disturbances are not applied.
(e) (ii)	Approach used to account for emissions and removals from harvested wood products	Japan estimates emissions and removals from annual carbon stock changes of harvested wood products based on the production approach.
(e) (iii)	Approach used to address the effects of age-class structure in forests;	In Japan, removals by forests are estimated with consideration given to the difference in amounts of carbon accumulation due to age-class structure.
(f)	Other assumptions and methodological approaches used for understanding the nationally determined contribution and, if applicable, estimating corresponding emissions and removals, including:	
(f) (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	The reference indicators for Japan's NDC are the total greenhouse gas emissions in fiscal year 2013 published in the National Greenhouse Gas Inventory Report of Japan (The GHG inventory) submitted to the UNFCCC Secretariat in April 2021. The key parameters, assumptions, definitions, methodologies, data sources and models used to estimate emissions and removals are written in the aforementioned inventory.
(f) (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
(f) (iii)	For climate forcers included in nationally determined contributions not covered by IPCC guidelines, information on how the climate forcers are estimated;	Not applicable

(f) (iv)	Further technical information, as necessary	Not applicable
(g)	The intention to use voluntary cooperation under Article 6 of the Paris Agreement, if applicable	Japan will establish and implement the Joint Crediting Mechanism (JCM) in order to quantitatively evaluate contributions of Japan to greenhouse gas emission reductions and removals which are achieved through the diffusion of, among others, leading decarbonizing technologies, products, systems, services, and infrastructures as well as through the implementation of measures in developing countries and others, and in order to use such contributions to achieve Japan's NDC. By doing so, through public-private collaborations, Japan aims to secure accumulated emission reductions and removals at the level of approximately 100 million t-CO_2 by fiscal year 2030. Japan will appropriately count the acquired credits to achieve its NDC. With regards to the JCM which Japan has initiated to establish, Japan secures environmental integrity and the avoidance of double-counting in line with the international rules including the Paris Agreement. Also, based on its experience in the JCM, Japan intends to lead international discussions, thereby contributing to the development of appropriate international rules for the use of market mechanisms. Furthermore, Japan will also make proactive efforts in the area of international cooperation to promote decarbonization and to improve resilience in developing countries and others, including from developing policies and institutional platforms to promoting sector- and city-level efforts as well as facilitating technology diffusion.
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.	Set as an ambitious target which is aligned with the long-term goal of achieving net-zero by 2050, Japan's new goal will certainly not be an easy task as Japan would raise its previous target by over 70 percent. Nonetheless, as a nation which underpins manufacturing in the world, Japan is ready to demonstrate its leadership for world-wide decarbonization by defining a top-level ambitious target befitting to a next growth strategy. In promoting implementation of global warming countermeasures, Japan aims to advance

		policy measures to contribute to integrated improvement in environment, economy and society, by utilizing local resources, technological innovation and ingenuity, which could also provide solutions for challenges including economic vitalization, job creation and region-specific problems in the country. In light of the recognition that we are living in a major turning point of the era, what is required is not to simply return to the world before the COVID-19 pandemic, but to realize a transformation to a sustainable and resilient social system. Based on the declaration for net-zero by 2050, Japan will strongly promote the "re-design" of its economy and society to make it sustainable and resilient, through accelerating the three types of transitions, namely towards "a decarbonized society," "a circular economy" and "a decentralized society."
(b)	Fairness considerations, including reflecting on equity.	Japan's target is highly transparent and concrete, as it has been drawn up by accumulating concrete policies and measures for major sectors with clear breakdowns. Each Party's submission and sharing of information on each sector in this manner would contribute to improving transparency, ensuring fairness, and also enabling effective reviews. This would promote sector-by-sector actions, which would lead to fair and efficient reductions of global emissions.
(c)	How the Party has addressed Article 4, paragraph 3, of the Paris Agreement.	Refer to 6(a).
(d)	How the Party has addressed Article 4, paragraph 4, of the Paris Agreement.	Japan's NDC is an economy-wide absolute emission reduction target.
(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;	Refer to 7(b). Japan's enhanced NDC and its efforts towards the achievement of net-zero by 2050 contribute to the objective of the Convention as set out in its Article 2 to achieve stabilization of greenhouse gas 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	Japan’s enhanced NDC is consistent with the temperature goal of the Paris Agreement as set out in its Article 2, paragraph 1 (a), to hold the increase in the global average temperature to well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels. Furthermore, this NDC is aligned with the long-term goal of achieving net-zero by 2050, and contributes towards the Article 4, paragraph 1, of the Paris Agreement, which stipulates that Parties aim to reach global peaking of greenhouse gas emissions as soon as possible, and to undertake rapid reductions thereafter in accordance with best available science, so as to achieve a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases in the second half of this century.