METHODOLOGICAL ANNEX

PROGRESS OF MAJOR EMITTERS TOWARDS CLIMATE TARGETS

2025 update **| Methodological Annex**

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The views and assumptions expressed in this report represent the views of the authors and not necessarily those of the client.

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PBL Netherlands Environmental Assessment Agency

NEW CLIMATE INSTITUTE

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A1: Summary of methods

This report assesses to which degree countries are projected to meet their NDC targets. It does not evaluate how countries' policies or targets contribute to the achievement of global mitigation objectives, such as the collective temperature goals of the Paris Agreement.

Every year, existing policies and targets may change, and new policies may be adopted. This implies that all projections are subject to and, to a certain extent, are expected to change. In our publication, we create two main scenarios, the NDC scenario reflects countries' NDC targets as of October 2025, and the current policies scenario reflects countries' policies as of May 2025.

These are the main updates and methodological changes in the 2025 update report:

- We quantified the effect of policy developments since the 2024 update report (cut-off date: May 2025) based on the periodical updates of the Climate Policy Database (NewClimate Institute and Wageningen University and Research, 2022).
- Country-level policy packages for quantification in emissions scenarios were reviewed by in-country experts involved in the H2020 ELEVATE and NEWPATHWAYS projects to identify policies, not limited to those focused on energy and climate, expected to deliver significant emission reductions.
- Historical emissions data was updated according to the PRIMAP-hist national historical emissions time series (Gütschow *et al.*, 2025). For the LULUCF sector, emissions reported are based on the First Biennial Update Reports and the 2025 CRF tables submitted by each country
- Improvements in the regional representation and updated calibration elements from GLOBIOM-G4M.

In the 2025 update report, emission values are expressed using AR6 Global Warming Potentials (GWP-AR6). This is an update compared to the previous versions of the report, where emission values were expressed in AR4 Global Warming Potentials.

The ongoing Russian Federation's war of aggression against Ukraine has significant implications for emissions in the short and medium term, as well as for a country's capacity to implement current mitigation policies. Economic measures to address Russian gas dependency in the European Union are expected to reduce emissions in both economies (Liu *et al.*, 2023). The transition away from natural gas to renewable energy is projected to reduce global CO_2 emissions by 1% to 5% in 2030 (IEA, 2022). However, the long-term effect of the invasion on ongoing energy policy reforms globally will only be fully quantified once all of them are legislated in the major economies analysed. In some economies, where the economic effects of the war have already been quantified, we also consider updated economic and energy forecasts (IEA, 2022).

The information about NDC targets is collected from government documents submitted to the UNFCCC. In this year's report however, taking into account the updates of all countries' NDCs, we are also considering official announcements made by government spokespersons during the United Nations Climate Summit 2025. We considered the official estimate of an NDC target when it is provided in absolute terms or when it is provided as a reduction below the base year or reference scenario, with clear communication of the reference value. This includes, for example, the value for the base year emissions reported in the national emissions inventory reports and the reference scenario reported in the NDC document.

The current assessment has several methodological limitations, which are in part attributable to the differences in the nature and characteristics of NDCs and policies across countries:

- The current policy scenario is subject to the uncertainty associated with macroeconomic trends, such as economic growth, and technology developments. Some NDCs are also subject to the uncertainty of future GDP growth and other underlying assumptions. For example, China and India have pledges indexed to economic growth, implying that the absolute emission levels under their targets are highly uncertain.
- The last historical year can considerably impact our current policy scenario. This is particularly the case for historical emissions from land use, land-use change, and forestry (LULUCF) emissions, which can fluctuate from year to year due to peat fires or natural disturbances. The impact of climate change and natural disturbances is not considered in the land use projections.

A2: Historical data

Historical emissions data sources

Regarding emissions excluding LULUCF we used the PRIMAP-hist national historical emissions time series available until 2023, representing country reported data where available, supplemented with third-party data (Gütschow *et al.*, 2025). For LULUCF emissions, the main source is the GHG inventories submitted by the countries. For this update, the main sources were the First Biennial Transparency Report (BTR) and the Common Reporting Format tables 2025 (Table A-1); if the other countries did not submit any new inventory, the same data as last year were included, updating only based on the GWP from the AR6.

The emissions projections under current policies were harmonised with the historical emissions dataset by applying a constant offset value (i.e. the difference in emissions of the two datasets in the harmonisation year) to the entire emission pathway. Emissions projections were always harmonised with the latest historical data available.

Table A-1: Data sources for historical emissions in non-Annex I countries.

Country	Source	Last reported data year
Argentina	BTR 1	2022
Australia	BTR 1	2022
Brazil	BTR 1	2022
Canada	NID 2025	2023
China	BTR 1	2021
Colombia	BTR 1	2021
Egypt	BTR 1	2023
Ethiopia	NC3 and BUR 1	2018
European Union (EU)	BTR 1	2022
India	NC 3	2019
Indonesia	BTR 1	2022
Japan	BTR 1	2022
Republic of Korea	BUR 4	2018
Mexico	BUR 3	2019
Morocco	BTR 1	2022
Russian Federation	BTR 1	2022
South Africa	BTR 1	2022
Thailand	BUR 4	2019
Türkiye	NID 2025	2023
Ukraine	NID 2025	2023
United Arab Emirates (UAE)	BUR 1	2021
United Kingdom (UK)	NID 2025	2023

United States of America (USA)	BTR 1	2022
Viet Nam	BUR 3	2014

A3: Quantification of NDC targets

We always translated countries' NDC targets to absolute emissions. However, the countries analysed submit different types of NDC targets:

- **Base year target:** reduction from historical base year emissions. NDCs set a target reduction below the historical base year emission level. This category covers countries like Australia, Canada, the EU and the USA.
- **Baseline or business-as-usual (BAU) target:** emissions reductions relative to a baseline or BAU projection, usually specified in the NDC document. Countries analysed that use this type of target are, for example, Indonesia, Iran, Mexico, Morocco and Viet Nam. In some cases, NDC baseline or business-as-usual projections are not specified, such as for Saudi Arabia. For the calculations, we used the projections from other national and third-party studies.
- **Intensity and sectoral target:** emission intensity target and sectoral target. China and India aim for reductions in emission intensity (over GDP) and targets an increase in renewable electricity capacity, for example (see more details below).
- **Trajectory and fixed-level target:** South Africa presents a trajectory target stating the emission ranges for 2025 and 2030. Colombia and Argentina put forward a fixed-level target.

Calculating the NDC targets for all groups above is straightforward, except for the intensity targets. China and India are the only G20 economies that have proposed a combination of targets, which highly depend on model parameterisation. The targets include peaking of emissions, non-fossil energy targets, forest targets, and emission intensity targets (i.e., improvements of the ratio of emissions to GDP). For the PBL calculations, their combined effect was calculated using the PBL TIMER energy model (van Vuuren et al., 2021) for energy- and industry-related emissions, the IIASA GLOBIOM/G4M land use model (Havlík *et al.*, 2014) for LULUCF emissions and removals (see also (den Elzen *et al.*, 2016). The calculation of all new or updated unconditional NDCs has been updated and is described in peer-reviewed literature (den Elzen *et al.*, 2022, 2023). For countries not analysed by PBL (Colombia, Egypt, Ethiopia, Iran, Morocco, Saudi Arabia, Thailand and Viet Nam), we refer to Climate Action Tracker (Climate Action Tracker, 2023).

Table A-2 provides an overview of how the NDC targets were quantified. Most countries report emission target levels that include removals from activities related to the LULUCF sector. We exclude LULUCF from the NDC calculations for the countries that exclude the sector from their NDC (Egypt, Saudi Arabia and Thailand).

Table A-2: Overview of NDC configuration per country.

Country	Target type 2030	LULUCF sector is included in the 2030 NDC	Target type 2035	LULUCF sector is included in the 2035 NDC
Argentina	Fixed-level target	LULUCF sector is included in the 2030 target.	-	-
Australia	Base year	LULUCF sector is included in the baseline year and the target.	Base year	LULUCF sector is included in the baseline year and the target.
Brazil	Fixed-level target	LULUCF sector is included in the 2030 target.	Base year	LULUCF sector is included in the baseline year and the target.
Canada	Base year	LULUCF sector is excluded in the baseline year and included in the target.	Base year	LULUCF sector is excluded in the baseline year and included in the target.

Country	Target type 2030	LULUCF sector is included in the 2030 NDC	Target type 2035	LULUCF sector is included in the 2035 NDC
China	Base year intensity (plus additional targets)	LULUCF sector is included in the baseline year and the target.	Reduction from peak year (announcement only)	LULUCF sector is included in the 2035 target (announcement only).
Colombia	Fixed-level target	LULUCF sector is included in the 2030 target. The NDC's deforestation emissions reduction target is calculated independently and in a unified manner at the national level in line with NREF projections to 2030.	Fixed-level target (declarative version)	LULUCF sector inclusion not further specified yet (declarative version).
Egypt	Baseline specified (not economy-wide)	LULUCF sector is excluded from the NDC target	-	-
Ethiopia	Baseline specified	LULUCF sector is included in the baseline and the target.	Baseline specified	LULUCF sector is included in the baseline year and the target.
EU	Base year	LULUCF sector is included in the baseline year and the target.	Base year (announcement only)	LULUCF sector is included in the baseline year and the target (announcement only).
India	Base year intensity (plus additional targets)	LULUCF sector is included in the target, however, it is not clear for the baseline year and the intensity targets.	-	-
Indonesia	Baseline specified	LULUCF sector is included in the baseline and the target.	-	-
Iran	Base year	LULUCF sector is included in the baseline year and the target.	-	-
Japan	Base year	LULUCF sector is excluded in the baseline year however it is included in the target.	Base year	LULUCF sector is included in the baseline year however it is included in the target.
Mexico	Baseline specified	LULUCF sector is included in the baseline and the target.	-	-
Morocco	Baseline specified	LULUCF sector is included in the baseline and the target.	Baseline specified	LULUCF sector is included in the baseline year and the target.
Republic of Korea	Base year	LULUCF sector is excluded in the baseline year however it is included in the target.	-	-
Russian Federation	Base year	LULUCF sector is included in the baseline year and the target.	Base year	LULUCF sector is included in the baseline year and the target.
Saudi Arabia	Trajectory	LULUCF sector is excluded in the NDC target	-	-

Country	Target type 2030	LULUCF sector is included in the 2030 NDC	Target type 2035	LULUCF sector is included in the 2035 NDC
South Africa	Trajectory	LULUCF sector is included in the baseline year and the target.	-	-
Thailand	Baseline specified	LULUCF sector is excluded in the NDC target	-	-
Türkiye	Baseline specified	LULUCF sector is included in the baseline year and the target.	Baseline specified (announcement only)	LULUCF sector is included in the baseline year and the target (announcement only).
Ukraine	Base year	LULUCF sector is included in the baseline year and the target.	-	-
UAE	Fixed-level target	LULUCF sector is included in the 2030 target.	Base year	LULUCF sector is included in the baseline year and the target.
UK	Base year	LULUCF sector is included in the baseline year and the target.	Base year	LULUCF sector is included in the baseline year and the target.
USA*	Base year	LULUCF sector is included in the baseline year and the target.	Base year	LULUCF sector is included in the baseline year and the target.
Viet Nam	Baseline specified	LULUCF sector is included in the baseline year and the target.	-	-

*On January 20th, 2025, President Trump signed an executive order mandating the USA's withdrawal from the Paris Agreement, to take effect one year later. The NDC targets have been removed from the official USA government site but are still accessible in the UNFCCC database.

Although there are uncertainties concerning which accounting approaches and methodologies countries will apply to account for LULUCF-related emissions and removals, we assume that a majority of countries apply the net-net accounting approach (den Elzen *et al.*, 2016). In this approach, we compare the reported net emissions in each year of the accounting period to the net emissions in the base year. In the situation where the net emissions have decreased, a country may issue credits (i.e., removal units, or RMUs), while if net emissions have increased, a country must cancel units (i.e., take on debits). The net-net accounting method implies that credits and debits from the LULUCF sector are treated as any other sector.

In the gross-net approach, the actual reported net emissions (or removals) in each year of the commitment period are accounted for without comparing the estimates with a base year. These countries expect the LULUCF sector to be a net-emissions sink in the target year, thus treating the LULUCF sector as a source of carbon credits. This report identified two countries that apply the gross-net accounting approach (Japan and Republic of Korea). For these countries, our NDC target estimates exclude the expected amount of carbon credits.

A few countries have established accounting approaches for each LULUCF sub-sector and documented these in national documents and regulations. Two such examples are Canada and the EU. For the EU we apply a simplistic approach and assume that the EU will account for all LULUCF sub-sectors using the net-net accounting approach as this is the case for most sub-sectors. Canada uses two different approaches for its managed forest and associated harvested wood products (HWPs), uses a reference level approach and for all the other sectors compares net emissions in 2030 with net emissions in 2005

(“net-net” approach). For a better understanding, we assume that Canada will use the net-net accounting for all sub-sectors.

A4: NewClimate Institute projections

Current policies projections

NewClimate Institute analysis follows the calculation steps used in the Climate Action Tracker (Climate Action Tracker, 2023). The starting point for the current policy scenario is a publicly available 'reference' scenario for economy-wide emissions or energy-related CO_2 emissions. For most countries, we use one at least one of the sources below:

- Most recent government submissions to the UNFCCC (such as National Communications and Biennial Update Reports)
- Other national policy projections (government source)
- Projections from international organisations such as the International Energy Agency (IEA) World Energy Outlook (WEO) and other international research organisations.

The choice of a 'reference' scenario depends on several factors such as the coverage of policies, detailedness of the projections and their description (sector, gas, policies considered), and key underlying assumptions (e.g., GDP and population growth).

When a scenario with only energy-related CO_2 emissions was used as a basis, we gathered emissions projections for other greenhouse gas emissions from various sources to ensure complete emission coverage. For non-CO_2 emissions, we rely on the USA EPA report on global anthropogenic emissions (United States Environmental Protection Agency, 2019, 2025). Projections for non-energy CO_2 emissions are most often taken from national governments' submissions to the UNFCCC.

Methodology for specific policy instruments and targets

We examined whether important policies adopted to date are included in the scenarios used as input to this analysis. When a recently adopted policy with a considerable expected mitigation impact potential is not covered, we include its impact by carrying out separate add-on calculations.

The add-on calculation steps are policy specific. In some cases, emission impacts are estimated in external sources and applied directly to the 'reference' scenarios, whereas in other cases more detailed technical calculations are carried out. The choice of quantification method is also heavily dependent on data availability. We present common approaches used to quantify distinct policy types:

- **Renewable energy targets**: emissions reductions are calculated based on the energy balance projections underlying the 'reference' scenario for energy-related emissions. Case-specific assumptions define which fuels would be replaced by the changes in renewable energy production.
- **Vehicle fuel efficiency standards**: A simplified stock turnover model is used for many countries. Calculations were done using the underlying data from the Global Transportation Roadmap Model of the International Council on Clean Transportation (ICCT, 2012).
- **Emissions trading schemes**: The targeted emission levels are applied to the sectors covered by the scheme. Carbon price levels are not considered in the analysis.

Table A-3 presents the URLs and the posted dates of country assessment updates by the Climate Action Tracker used in this analysis.

Table A-3: Country assessments by Climate Action Tracker used in this report.

Country	URL	Last updated
Argentina	https://climateactiontracker.org/countries/argentina	February 2025
Australia	https://climateactiontracker.org/countries/australia	June 2025
Brazil	https://climateactiontracker.org/countries/brazil	August 2024
Canada	https://climateactiontracker.org/countries/canada	August 2024
China	https://climateactiontracker.org/countries/china	June 2025
Colombia	https://climateactiontracker.org/countries/colombia/	July 2025
Egypt	https://climateactiontracker.org/countries/egypt/	August 2023
Ethiopia	https://climateactiontracker.org/countries/ethiopia	May 2025
EU	https://climateactiontracker.org/countries/eu	November 2024
India	https://climateactiontracker.org/countries/india	September 2024
Indonesia	https://climateactiontracker.org/countries/indonesia	December 2025
Iran	https://climateactiontracker.org/countries/iran/	December 2025
Japan	https://climateactiontracker.org/countries/japan	November 2024
Mexico	https://climateactiontracker.org/countries/mexico	October 2024
Morocco	https://climateactiontracker.org/countries/morocco	July 2025
Republic of Korea	https://climateactiontracker.org/countries/south-korea	October 2024
Russian Federation	https://climateactiontracker.org/countries/russian-federation	October 2024
Saudi Arabia	https://climateactiontracker.org/countries/saudi-arabia	December 2023
South Africa	https://climateactiontracker.org/countries/south-africa	May 2025
Thailand	https://climateactiontracker.org/countries/thailand/	October 2024
Türkiye	https://climateactiontracker.org/countries/turkey/	November 2024
UAE	https://climateactiontracker.org/countries/uae/	October 2024
UK	https://climateactiontracker.org/countries/uk/	September 2023
USA	https://climateactiontracker.org/countries/usa	September 2025
Viet Nam	https://climateactiontracker.org/countries/vietnam/	November 2023

* In a few cases, the information used in this analysis will become available on the CAT website after the publication of this report.

A5: The IMAGE model

For the PBL analysis, we used the integrated assessment model (IAM) IMAGE 3.4 (Van Vuuren *et al.*, 2018; Hof *et al.*, 2022) to assess the impact of national current policies. The IMAGE model is well suited for such an assessment given the relatively high degree of detail with which this model represents the activity levels in the different sectors and its focus on a physical description of activities (allowing a rather straightforward interpretation of the implemented policies).

More specifically, the IMAGE model framework includes the TIMER energy model, where most of the policies were implemented. The TIMER model simulates long-term energy baseline and mitigation scenarios (van Vuuren *et al.*, 2017) on the global and regional level. The TIMER energy model describes energy demand in five different end-use sectors, i.e. industry, transport, residential sector, service sector and other, on the basis of detailed sectoral sub-models. In these sub-models, the demand for energy services is described for 26 world regions in terms of physical indicators (person kilometre travelled; tons of steel produced etc.). Different energy carriers can be chosen to fulfil this demand based on their relative costs. The model can also decide to invest in energy efficiency instead. On the supply side, the model describes the production of primary energy for fossil fuels, bioenergy, and several other renewable energy carriers. The costs of these primary energy carriers depend on depletion, technology development and trade. The demand and supply models are connected via several models describing energy conversion processes such as the electric power and hydrogen production model.

IMAGE-land is a spatially explicit part of the model and is coupled with the agro-economic model MAGNET (Woltjer and Kuiper, 2014). It contains a detailed representation of environmental aspects including land use, land use change and forestry (LULUCF), the carbon cycle, and the global agricultural economy. This integration allows for assessments of countries' current land-based mitigation policies on their future land use and land use change and its interactions across the borders.

Methodology for specific policy instruments and targets

For all policies and targets analysed in this study (see tables in country chapters), the methodology for calculating the effect on emissions is described briefly below (for more details, see (Roelfsema *et al.*, 2020, 2022)). The calculations were done using the IMAGE/TIMER implementation of the SSP2 scenario (van Vuuren *et al.*, 2021).

In general, climate policies are implemented in integrated assessment models through a carbon tax, at a level resulting in a desired emission level. A carbon tax attaches a price to carbon emissions and induces a response of the energy system where investments in energy efficiency, fossil fuel substitution and additional investments in non-fossil options increase (Van Vuuren, 2007). These carbon taxes can be differentiated at regional and sector levels. Other policy instruments, such as feed-in-tariffs, cannot be directly implemented in these models. Therefore, policy instruments were translated to targets that can be implemented in the IMAGE model, most notably the TIMER energy model. Model input parameters were changed in such a way that the desired target is achieved.

After the target year, no assumptions were made on continuation of the policy, as information on if and how a policy may be continued or even strengthened is not always available. However, due to technology learning, effects of the policy may continue. This is especially the case for renewable energy capacity additions but does not happen in the case of more generic policy instruments like carbon taxation.

Some measures, such as energy and emissions intensity targets, cannot be implemented as such, but are checked afterwards, by calculating the resulting energy use or emissions divided by GDP. If the targets are not met, they are calculated iteratively by the implementation of either other policy measures, or a carbon tax.

Renewable mix targets, i.e., a certain share of renewable energy in a target year. The share of renewable energy is either measured in terms of primary energy supply or electricity generation (which is a form of secondary energy supply). The difference between the two is that primary energy supply also includes energy use outside the electricity sector and that it accounts for energy losses in power plants within the electricity sector. The target in the share of electricity production from a certain renewable technology (e.g., wind, solar), can be prescribed using desired fractions in the energy supply module of TIMER, which uses a multinomial logit function to determine investment shares of each energy technology. Along those lines, technologies can be made more expensive by applying a premium factor, used to simulate e.g. coal phase-out targets.

Renewable capacity targets, i.e., a certain amount of installed power capacity of a certain renewable source, can be prescribed using desired capacities in the energy supply module of TIMER. Learning-by-doing, i.e. cumulative installed renewable energy capacity, lowers the capital costs and as such affects installed capacity also after the policy target year (de Boer and van Vuuren, 2017).

Non-renewable mix or capacity targets are more common in certain countries. Such policies that promote, e.g., reduction in electricity production from nuclear, coal, natural gas or oil are implemented in the TIMER energy model the same way the renewable targets are implemented on the target year of the policy.

Power plant standards (i.e., the CO_2 emissions per unit generated electricity) applying to new power plants are implemented as such in TIMER. In essence, the implementation of a standard results in no new installation of technologies with emissions intensity above said standard. Power plant standards applying to existing stock are implemented through a carbon tax on the energy supply sector.

Coal phase-out policies are implemented imposing a premium factor on electricity production from coal, and as such making coal power production unattractive compared to other technologies such as natural gas power plants or renewable electricity production. The option to make the technology completely unavailable for a country/region that has a coal phase-out as a policy is also possible.

Capacity caps on certain technologies are implemented by making the technology unavailable for that region after the target year capacity has been achieved. TIMER keeps the existing capacity operating until the end of its lifetime but will not add any more capacity even if it is financially or technologically more attractive.

Efficiency goals for new and existing capacity are goals set for specific electricity generation technologies and are implemented as such in TIMER. If new capacity does not meet this goal, it will not be installed, and respectively, if existing capacity does not meet this goal, it will be retired.

Feed-in-tariffs is an energy-supply policy focused on supporting the development of new renewable power generation. The most common feed-in-tariffs policy provides a fixed rate per kilowatt hour (US$/kWh) for the electricity produced for a guaranteed period of time (Blok and Nieuwlaar, 2016). A feed-in-tariff cannot be implemented as such, but is proxied by target shares for renewable energy, by assuming these tariffs support a strategic policy document. Such a document would, in itself, not be defined as current policy, but classifies when it is supported by policy instruments such as feed-in tariffs.

Emissions Trading Systems (ETS) are implemented by applying a carbon tax to the sectors that are covered by the ETS (e.g., energy supply and industry) in order to reach the emissions reductions targeted by the ETS.

A **fuel efficiency car standard** aims to achieve a certain fuel efficiency for new cars within a specific period. The effect of fuel efficiency standards for cars is calculated by the TIMER transport model (Girod *et al.*, 2012). Fuel efficiency of new cars is an input parameter and is set for fossil fuel cars to the policy target for the specific target year. The fuel efficiency for years before the target year is interpolated

between 2015 and the target year, but only if that results in more efficient cars compared to the SSP baseline. Non-energy costs, such as car manufacturing costs, are changed accordingly.

A **biofuel target** sets a mandatory minimum volume or share of biofuels to be used in the total transportation fuel supply. Biofuel targets are also included using the TIMER transport model. Cars in TIMER drive on one fuel (except for electric and H_2 cars), so biofuel blending is modelled by fixing the ratio of biofuel cars and liquid fuel cars. However, the biofuel target input variable that can be set applies to the biofuel share of the total new fleet in a specific year, i.e., including electric and H_2 cars, and only applying to new cars. Therefore, this parameter is set to such a level that it results in the desired biofuel share for the total liquid car fleet.

Electric vehicle targets are included in the TIMER transport model. Electric vehicle targets are usually described in national policy documents as either a percentage of the total vehicle fleet at a target year, or as a percentage of sales of new vehicles by a target year and are implemented in the TIMER model as such.

Fuel taxes or subsidies are implemented directly in the TIMER transport model. Subsidy per person-kilometer (pkm) driven is an input parameter in the TIMER transport model, which can be interpreted as negative taxes. The total vehicle costs decrease when a subsidy is implemented, thereby changing the output of the multinomial logit function that determines vehicle shares. Fuel tax in terms of currency per litre is translated to 2005 US dollar per pkm by using the exchange rate between the specific currency and dollars (for specific years), as well as the fuel efficiency in terms of km/L. The latter is calculated from the fuel efficiency per car type (MJ/pkm), which is an input parameter to the TIMER model, by assuming a fixed energy content of 34.8 MJ/L fuel and average load of 1.6 persons per car.

Regulation on methane (CH_4) leakage from coal, oil and gas production is implemented by increasing the reduction potential of methane leakage. This is a parameter in TIMER and is set to such a level that it results in the desired reduction of methane emissions.

Regulation on F-gases is implemented by first translating the desired emissions reductions to an absolute target level for F-gases. Then an exogenous emissions tax is applied only to F-gases in order to reach the target level per region.

Building codes are implemented in TIMER's residential buildings module through a variety of ways:

Buildings energy efficiency is improved through insulation. A premium factor on building insulation levels simulates a minimum standard policy. Furthermore, subsidies for insulation are introduced for new and older buildings during their construction and renovation process, respectively.

Appliance standards (kWh/year) are implemented as such in TIMER. Appliances must adhere to a maximum unit energy consumption (UEC) based on relevant policies.

Residential PVs and/or heat pumps are installed to all new buildings in specific regions. This implementation simulates the construction of NZEB in which the energy demand is covered by renewables. Heat pump installation is avoided in some cases as a region's poor electricity fuel mix can lead to an increase in emissions.

Policies related to **agriculture, forestry, and other land use** (AFOLU) were implemented in the IMAGE-land model and incorporated into our analysis. We only considered policies that are currently embedded in national laws and focused on countries with considerable AFOLU emission reductions.

For Brazil, this entailed the implementation of the Agricultural Policy for Climate Adaptation and Low Carbon Emission (ABC+), which aims to expand planted forested area by 4 million hectares by 2030 compared to the no-policy baseline scenario.

For Canada, we implemented the 2 Billion Trees Commitment plan, which aims for 2 billion trees planted by 2030. In IMAGE-land, this was translated to 1.3 million hectares of new forested land.

Under the Master Plan for National Key Ecosystem Protection and Restoration Major Protects (2021-2035), China has an ambitious goal of maintaining the area of natural forest to 200 million hectares by 2035 (Sino-German Environmental Partnership II, 2020). However, following Gallagher et al. (2019) and for feasibility reasons, we allocate an increase of 44.2 million hectares from 2020 to 2030 in the IMAGE-land model.

In our previous report update, India had a target of re- and afforestation of 10 million hectares (Green India Mission 2011) between 2015 and 2030 and relative to the no-policy scenario. This policy has now ended, but after consultation with experts and research into the country's forest and tree coverage, it is assumed that that target has been reached, so we updated our IMAGE-land model data to reflect that.

Finally, for Indonesia we implemented the Forest Law Enforcement National Strategy (FLENS), using the afforestation target of 5 million hectares by 2030 in the IMAGE-land model relative to the no-policy baseline scenario.

A6: The GLOBIOM-G4M model

The GLOBIOM–G4M Model

The LULUCF policy projection scenarios use the integrated GLOBIOM–G4M framework, which combines the economic land-use model GLOBIOM) (Havlík *et al.*, 2014) and the forestry model G4M (Gusti and Kindermann, 2011).

GLOBIOM

GLOBIOM is a global recursive dynamic partial equilibrium model covering agriculture and forestry, with geographically explicit land use and GHG emissions representation. It uses bottom-up data (land cover, management systems, productivity) aggregated to production and markets. Productivity is modelled at the grid-cell level (5x5 to 30x30 arc minutes), while demand and trade are represented for 59 global regions. The model simulates markets by allocating land use among competing activities to maximize welfare, subject to technological, demand, and policy constraints. Trade is cost-based and follows a spatial equilibrium approach, enabling bilateral flow analysis. GLOBIOM integrates forestry productivity from G4M.

G4M

G4M is a spatially explicit forestry model (0.5° resolution) that simulates afforestation (Gusti and Kindermann, 2011). As these growth rates are influenced by global mean temperature, a scenario mapping is utilised that aligns the NGFS scenario with the RCP emissions trajectory reported by Grassi et al. (2021)., deforestation, and forest management, estimating related CO_2 emissions and removals. Land use change is modelled by comparing the net present value (NPV) of agriculture and forestry, while forest management decisions are based on NPVs of current versus alternative practices to meet wood demand. Forests are classified into six management types according to productivity and competitiveness with agriculture. Protected forests, based on WDPA data, are excluded from harvest or land conversion but subject to natural disturbances. Emissions are calculated from biomass changes, with IPCC biomass expansion factors applied. Deforestation leads to immediate emissions from biomass and gradual losses from litter and soil, while afforestation creates carbon sinks in biomass and soils. Only managed forests are reported under UNFCCC definitions, with unmanaged forests converted to managed if wood demand requires it. G4M is calibrated to FAO FRA 2010–2020 forest area change data, ensuring consistency with observed trends.

Model Updates

Recent updates include new agricultural mitigation options (e.g., algae as feed, SOC management, silvopasture, biochar), improved crop yield projections, and finer spatial detail (59 global regions with improved downscaling). Additionally, the usual updates for calibration are included, such as calibration with the latest UNFCCC data for emissions and areas.

Policy Scenarios

Policy instruments are represented mainly through carbon taxes or constraints. Afforestation/reforestation and forest area targets are achieved by applying carbon taxes that reduce deforestation and increase afforestation rates. Harvest intensity and carbon stock targets are enforced through direct constraints or sectoral carbon pricing. Emission reduction goals in the LULUCF sector are also modelled with carbon taxes, with projections updated in 2025 to include new national policies (Brazil, India, UK, Mexico, Viet Nam).

Methodology for specific policy instruments and targets

For the 2025 report, we updated all the countries' projections based on the model improvements and data updates, to represent the current status of the implemented policies. For Brazil, India, the United Kingdom, Mexico, and Viet Nam, we included policies that start their implementation between June 2024 and August 2025.

Current policies projections by IIASA have been assessed for the specific country using the GLOBIOM-G4M model. Below follows a generic description of the methodology used for calculating the effect of the policies for the LULUCF sector. In general, climate policies are implemented in the model framework through a carbon tax or directly in the models by changing parameters or adding constraints in such a way that a target is achieved.

- Afforestation / reforestation / deforestation targets are implemented by applying a carbon tax to the forest sector in GLOBIOM/G4M in order to reach the annual afforestation/reforestation target. The carbon tax is set at a level that leads to the target level being reached in the desired year and is thereafter kept constant over time.
- Forest area targets are implemented by applying a carbon tax to the forest sector in GLOBIOM/G4M for the forest sector to reach the annual afforestation/reforestation target. Implementation of the carbon tax leads to a reduction in the annual deforestation rate and increases the annual afforestation rate.
- Harvest intensity targets, i.e., an increase of the forest harvest rate by X% or X m^3, can be prescribed in GLOBIOM or G4M by applying constraints directly in the models.
- Forest carbon stock targets set a mandatory level of the forest carbon stock by a specific period. The fulfilment of the target is implemented using a carbon tax in G4M on the forest sectoral emissions and removals. The carbon tax is set at a level that leads to the target level being reached the desired year and is thereafter kept constant over time.
- Emissions reductions targets are implemented by applying a carbon tax to the LULUCF sector in GLOBIOM/G4M to reach the target.

Harmonization of GHG Projections with National Inventories

GHG emission projections are harmonized to ensure comparability with national GHG inventories and to enable analysis of whether countries are on track to meet their nationally determined contributions (NDCs).

The harmonization approach ensures consistency between projections and historical data, as well as alignment with emission reduction targets based on those historical values. The ex- post scaling method allows for direct comparison between scenario projections and the official emission targets reported by national governments. Since data availability differs between Annex I and non-Annex I countries, the approach is adapted accordingly to reflect the sources available.

For major emitting countries, ex post scaling is also applied to land-use, land-use change, and forestry (LULUCF) emissions and removals, so that the starting point of projections matches historical data. In this method, projections are adjusted by adding the absolute difference between model data and inventory data in the chosen harmonization year. This approach is widely used in policy-relevant assessments, such as the UNEP Emissions Gap Report 2021 and the UNFCCC NDC Synthesis Report under the Paris Agreement.

Pre-scaling step

In addition to ex post scaling, some countries require an additional pre-scaling step before harmonization. This is necessary when historical time series have been recalculated, forest definitions (managed/unmanaged) have changed, or natural disturbances have been reclassified in national

inventories. For example, in Australia, Argentina, and Brazil, projections were pre-scaled to historical values of key reporting categories using country-reported data (CRT tables or CRF submissions, for Australia). The calibration included:

- G4M afforestation and deforestation rates (ha): adjusted for the 1990–2020 period.
- G4M deforestation emissions (CO_2/ha): scaled to the 2010–2020 average.
- G4M forest management emissions/removals: scaled to the 2010–2020 average.

This additional step improves the representation and understanding of each country's historical emissions within the modeling framework. Following this calibration, ex post harmonization was applied in the same way as for other countries.

A7: Per capita and GDP-adjusted GHG emissions by country

The tables below show greenhouse gas emissions relative to countries' population and GDP for the 25 countries analysed. Table A-4 shows relative values for the 2030 NDC target year, alongside the corresponding current policies projection and the historical value for 2019. Table A-5 shows the same indicators for countries with a 2035 NDC target year. GHG emissions per capita and GHG emissions intensity of GDP were calculated using population projections from the UN World Population Prospects 2024 (United Nations, 2024) and GDP projections from IMF's World Economic Outlook 2025 (IMF, 2025).

Table A-4: GHG emissions per capita and GDP-adjusted emissions by country. Countries with submitted 2030 NDC targets only.

	GHG emissions per capita (tCO_2e/cap)			GHG emission intensity of GDP (tCO_2e/thousand 2010 USD)		
Country	**NDC target, 2030 (*)**	**Current policies, 2030**	**Historical, 2019**	**NDC target, 2030 (*)**	**Current policies, 2030**	**Historical, 2019**
Argentina	7.7	9.3	7.8	0.64	0.77	0.79
Australia	12.5	8.9 to 11.8	19.4	0.18	0.13 to 0.17	0.31
Canada	9.8 to 9.9	14.6 to 15.0	20.2	0.19 to 0.18	0.26 to 0.27	0.39
China	9.8 to 9.4	8.7 to 9.7	8.8	0.75 to 0.72	0.66 to 0.73	1.08
Colombia	3.0	5.2 to 5.4	5.5	0.32	0.56 to 0.58	0.69
Brazil	5.7	8.9 to 9.0	8.4	0.41	0.64 to 0.65	0.74
Egypt	0.0	3.5 to 3.8	3.3	0.00	0.85 to 0.94	1.08
Ethiopia	2.4	2.0 to 2.1	2.3	2.74	2.30 to 2.47	4.28
EU	4.7	4.8 to 5.2	7.5	0.11	0.11 to 0.12	0.20
India	9.8 to 2.8	2.5 to 2.6	2.1	0.87 to 0.78	0.69 to 0.73	0.98
Indonesia	6.9	5.2 to 6.5	6.7	1.07	0.81 to 1.02	1.50
Iran	21.3	12.5 to 13.2	11.9	2.74	1.61 to 1.70	1.86
Japan	6.4	6.6 to 7.5	9.1	0.12	0.12 to 0.14	0.19
Mexico	4.9	4.6 to 5.5	4.4	0.44	0.40 to 0.49	0.41
Morocco	3.0	2.3 to 3.0	2.7	0.64	0.50 to 0.64	0.72

Republic of Korea	8.6	9.1 to 10.5	13.0	0.23	0.24 to 0.28	0.43
Russian Federation	12.0	4.5 to 7.7	7.9	0.76	0.28 to 0.48	0.61
Saudi Arabia	9.8 to 19.6	22.4 to 22.6	24.2	1.00 to 0.74	0.85 to 0.86	0.99
South Africa	9.8 to 5.2	5.9 to 6.9	8.2	0.79 to 0.66	0.75 to 0.87	1.01
Thailand	5.6	5.5 to 6.0	5.4	0.76	0.75 to 0.81	0.85
Türkiye	7.9	5.3 to 6.2	5.3	0.35	0.24 to 0.27	0.36
UAE	15.4	20.0 to 23.4	23.8	0.31	0.40 to 0.46	0.54
UK	3.7	4.7 to 5.5	6.8	0.08	0.10 to 0.12	0.15
USA	9.8 to 9.0	14.4 to 15.2	17.1	0.14 to 0.14	0.22 to 0.23	0.31
Viet Nam	7.7	5.8 to 6.8	4.5	1.81	1.38 to 1.61	1.71

* The NDC targets refer to unconditional targets, except for Egypt.

Table A-5. GHG emissions per capita and GDP-adjusted emissions by country. Countries with submitted or announced 2035 NDC targets.

	GHG emissions per capita (tCO_2e/cap)			GHG emission intensity of GDP (tCO_2e/thousand 2010 USD)		
Country		NDC target, 2035 (*)	Current policies, 2035	Historical, 2019	NDC target, 2035 (*)	Current policies, 2035	Historical, 2019
Australia	9.4 to 6.3	6.6 to 11.1	19.4	0.11 to 0.08	0.09 to 0.15	0.31	
Canada	9.4 to 8.8	11.3 to 13.9	20.2	0.16 to 0.15	0.19 to 0.24	0.39	
China	9.4 to 9.1	7.5 to 8.8	8.8	0.60 to 0.58	0.47 to 0.56	1.08	
Colombia	9.4 to 2.9	5.1 to 5.6	5.5	0.27 to 0.28	0.49 to 0.54	0.69	
Brazil	9.4 to 4.0	7.9 to 8.4	8.4	0.32 to 0.26	0.52 to 0.55	0.74	
Ethiopia	0.9	1.9 to 2.0	2.3	0.84	1.84 to 1.99	4.28	
EU	9.4 to 3.0	3.3 to 4.6	7.5	0.08 to 0.06	0.07 to 0.10	0.20	
Japan	4.9	5.2 to 7.1	9.1	0.08	0.09 to 0.12	0.19	
Morocco	3.2	2.1 to 3.2	2.7	0.61	0.41 to 0.62	0.72	
Russian Federation	9.4 to 11.3	5.2 to 8.5	7.9	0.69 to 0.67	0.31 to 0.51	0.61	
Türkiye	7.1	5.2 to 6.4	5.3	0.27	0.20 to 0.25	0.36	
UAE	8.1	19.0 to 24.3	23.8	0.14	0.33 to 0.43	0.54	
UK	2.1	3.9 to 5.3	6.8	0.04	0.08 to 0.11	0.15	
USA	9.4 to 6.2	13.2 to 13.9	17.1	0.10 to 0.09	0.18 to 0.20	0.31	

* The NDC targets refer to unconditional targets submitted to the UNFCCC, except for announcements made only by China, the European Union, and Türkiye, as well as the declarative version submitted by Colombia.

A8: Policy tables by country

The following tables present the policies quantified in our current policy scenario for the 25 economies analysed. In a few cases, relevant policies are not quantified in the emission projections but listed due to their relevance in the national context; we indicated these policies with footnotes.

Argentina

Table A-61: Overview of key climate change mitigation policies in Argentina.

Sector	Policies (marked with '(+)' when mentioned in NDC)	Description
Cross-cutting	National Climate Mitigation and Adaptation Plan (2022)	This policy document was designed to support the implementation of Argentina's NDC and structure the transition along the following key thematic areas: the energy transition, the productive transition, sustainable mobility, sustainable and resilient territories, conservation of biodiversity and common goods, and sustainable management of food systems and forests.
	National Strategy for the use of carbon markets (2023) [2)]	The National Strategy covers voluntary and regulated markets, both domestic and international. It also outlines the Principles for the use of carbon markets within national territory, the Institutional Arrangements, and the general Monitoring, Reporting, and Verification (MRV) requirements for the implementation of the strategy.
Energy Supply	Renewable Energy Law 27.191 setting renewable targets (2015) [1)], National Development Scheme for the Use of Renewable Energy Sources (RenovAr) (2016)	This law sets out renewable electricity targets of 18% by 2023 and 20% by 2025 (excl. hydro larger than 50 MW), as well as a tendering scheme to support their achievement.
	Carbon tax on energy (2017) [1)]	Tax levels are adjusted every trimester, reaching a top rate of USD 5/tCO_2 in 2020. Targeting emissions from transport fuels and coal. The carbon tax excludes natural gas consumption and shale gas production.
	Decree 892/2020 on natural gas supply and demand scheme (2020) [1)]	This plan aims to produce 30,000 Mm^3 of natural gas in four years. It includes incentives and benefits for companies looking to produce unconventional natural gas.
	Law 27.424 on net-metering for distributed generation (2017) [1)]	This law supports distributed renewable energy generation and establishes a net metering mechanism.
	Argentine Nuclear Plan (2024) [2)]	The plan establishes the creation of a Nuclear Council. Iz sets out the construction of four ACR-300 small modular reactors (SMRs) at the Atucha site (total 1.2 GW), with the first unit targeted for 2030.
Transport	Biofuels Law (updated 2021) [1)]	This law sets out a blending mandate of 5% for biodiesel and 12% for ethanol in gasoline from 2021. This new regime allows authorities to adjust blending mandates based on input prices, with a floor of 3%.
Agriculture and Forestry	Joint resolution 1/2018 creating the Environmental and Insurance Sustainability Program (September 2018) [2)]	This policy aims to increase forest plantations from 1.3 million hectares to 2 million hectares by 2030. This would mean expanding forested areas by 62,000 hectares per year.

Sector	Policies (marked with '(+)' when mentioned in NDC)	Description
	Extension and amendment of Law 25.080 related to the investments for cultivated forests (2018) [2) 3)]	The law aims to increase the investments, area, and quality of cultivated forests within the country. The law grants among other benefits, an annual non-refundable economic contribution to approximately 3,000 small and medium forest producers.
	Law for Minimum Budgets for Environmental Protection of Native Forest (2007) [2) 3)]	This law sets out a regulatory frame to control the reduction of native forest area and prevent net deforestation.
	National Forest Management Plan with Integrated Livestock (2015) [2) 3)]	This policy aims to contribute to the sustainable use of native forests through incorporating livestock activities in native forest area in a sustainable manner, thus preventing further agricultural land expansion.
	Investments for Cultivated forests (2008) [2)]	This policy sets out the development of afforestation projects on a total of 500,000 hectares of land based on economic incentives.
	National plan for the restoration of native forests (2019) [2) 3)]	This plan sets out the creation of the National Plan for the Restoration of Native Forests, which seeks to restore 20 thousand hectares of native forest per year by 2030.
	Strategic plan for forestry and industrial forestry 2030 (2021) [2) 3)]	This policy aims to improve the management of productive forest areas, developing the value chain and benefiting communities of producers.
	National Principles and Guidelines for the Management of Forests with Integrated Livestock in accordance with Law N° 26.331 (2023) [2) 3)]	This policy aims at promoting productive use of forests while ensuring the provision of ecosystem services and avoiding their fragmentation.
	National Forest Management Plan with Integrated Livestock (2015) [2) 3)]	This policy aims to contribute to the sustainable use of native forests through incorporating livestock activities in native forest area in a sustainable manner, thus preventing further agricultural land expansion.

[1)] Not quantified in NewClimate Institute projections. [2)] Not quantified in PBL IMAGE model projections. [3)] Not quantified in IIASA model projections.

Australia

Table A-72: Overview of key climate change mitigation policies in Australia.

Sector	Policies	Description
Cross-cutting	Emissions Reduction Fund (ERF) (2014, updated in 2022) [1)] – *relabelled Climate Solutions Fund in 2019*	The fund sets out a reverse auction mechanism designed to reduce emissions at the lowest available cost. The government purchases carbon credits generated by companies that voluntarily reduce their emissions. The fund was modified in 2022 to allow existing purchase contracts to be terminated and for companies to sell their credits in the market.
	Energy Productivity Plan (2015) [1)]	This policy sets out a target to increase energy productivity (unit of GDP per unit of energy use) by 40% by 2030, relative to 2015 levels.
	Hydrofluorocarbon (HFC) emissions reduction under the Montreal Protocol (2017)	This policy sets out a target to reduce HFC emissions by 55% by 2030, relative to 2010 (and 85% by 2036).

Sector	Policies	Description
	Federal Budget 2024 - 2025 [1]	The budget includes the ”Future Made in Australia” investment of 22.7 bn AUD over the next decade; targeting investments in hydrogen, critical mineral processing, green metals, low-carbon liquid fuels, and clean energy manufacturing.
	Climate Change Act (2022)	The Bill aims to legislate Australia’s climate targets, including a 43% reduction in greenhouse gas emissions by 2030 (from 2005 levels) and achieving net zero by 2050. It requires an annual ministerial statement to Parliament on progress towards these targets, with the Climate Change Authority advising the Minister on the statement and future emissions targets for international communication.
	Future Gas Strategy (2024) [1]	This strategy maps the Australian Government’s plan for how gas will support the economy’s transition to net zero in partnership with the world.
Energy Supply	Technology Investment Roadmap and Low Emissions Technology Statement (2020) [1]	The Technology Investment Roadmap sets a process to develop and deploy low emissions technologies. The Low Emissions Technology Statement sets government’s technology priorities and goals. For 2021 these include: clean hydrogen (also from fossil sources), ultra-low-cost solar, electricity storage, low emissions steel and aluminium, carbon capture and storage, and soil carbon.
	Community solar incentives (2023) [1]	The government has instituted two mechanisms to support community solar projects. The Community Batteries for Household Solar program makes up to AUD 200 million available to install over 400 batteries and provide flexibility to over 100,000 households across the country. The Community solar banks fund aims to support shared solar systems for people who cannot install solar systems on their own. Under the fund, the government is co-investing AUD 100 million to deploy these systems over the country.
	Capacity Investment Scheme (2023) [1]	Provides a national framework to encourage new investment in renewable capacity, such as wind and solar, as well as clean dispatchable capacity, such as battery storage.
	Energy Efficient Communities Program (2019) [1]	This program provides yearly grants for businesses and community organisations to improve energy efficiency and reduce electricity bills.
	Hydrogen Headstart Program (2023) [1] [2]	Aims to scale up renewable hydrogen production in Australia, facilitating an accelerated pathway to the technical and commercial viability of renewable hydrogen production and use.
Transport	Fuel tax (2006, last amendment in 2019) [1] [3]	This policy sets out a fuel tax for diesel and gasoline currently set at AUD 0.496 per litre.
	Future Fuels and Vehicle Strategy (2021) [1]	This strategy sets out a technology-led approach to tackle emissions in the transport sector aimed at increasing the uptake of hybrid, hydrogen, electric and biofueled vehicles. It plans to reduce 8 $MtCO_2e$ by 2035.
	National Electric Vehicle Strategy (2023) [1]	Aiming to increase the uptake of electric vehicles by encouraging increases in demand and supply of EVs, as well as supporting the development of infrastructure nationwide.
	New Vehicle Efficiency Standard (2024)	The standard will establish a maximum CO_2 emissions limit for new vehicles sold in the Australian market starting 1 January 2025, and encourage the supply for fuel efficient, low and zero emission vehicles. It estimates to reduce 20 $MtCO_2$ through 2030 and 80$MtCO_2$ through 2035.

Sector	Policies	Description
Buildings	National Construction Code (2019) (updated in May 2022) [2)]	This update to the building code includes new residential energy efficiency provisions.
Agriculture and Forestry	Growing a better Australia. A billion trees for jobs and growth (2018) [1)]	This program aims to plant a billion new trees to boost the Australian economy and drive jobs and growth in its rural industries and regional manufacturing.
	Carbon Farming and Land Restoration Program (2021) [1) 5)]	Realise the potential of the agriculture sector to sequester carbon. Including financial assistance, grants for carbon sequestration and capacity building activities.
	Land use, land-use change and forestry sector emissions reduction pledge (2021) [1) 5)]	This policy aims at reducing emissions, protecting native forests, restoring degraded landscapes and planting millions of new trees.
Waste	National Food Waste Strategy (2017) [1)]	This policy provides a framework to support action towards the national goal of halving Australia's food waste by 2030.
	State-based waste policy frameworks [1)]	Most states and territories have specific waste strategies and most also additional targets to the national targets.
	National Waste Policy (2018) and Action plan (2019) [1) 2)]	This policy sets national targets to the export of some waste, reducing total waste generation in Australia, setting minimum waste recovery standards from all waste streams, increasing the use of recycled content, phasing out some plastics, halving the amount of organic waste sent to landfill and improving data availability to support investment and policy decisions.

[1)] Not quantified in PBL IMAGE model projections. [2)] Not quantified in NewClimate Institute projections. [3)] Quantification based on OECD (2013). [4)] Renewable electricity exports are excluded from the share. [5)] Not quantified in IIASA model projections.

Brazil

Table A-83: Overview of key climate change mitigation policies in Brazil.

Sector	Policies (marked with '(+)' when mentioned in NDC)	Description
Cross-cutting	National Programme for the Reduction of Methane Emissions - Zero Methane (2022) [1)]	This programme aims to reduce methane emissions by stimulating the production and use of biomethane and biogas through public banks' dedicated financing and credit lines.
	Energy Efficiency Guarantee Fund – FGEnergia (2020) [1)]	The Guarantee Fund for Energy Efficiency Credit (FGEnergia) aims to provide credit guarantees to reduce the financial risk associated with efficiency projects across different sectors of the economy.
Energy Supply	Resolution No 806 of 2020 from ANP Brazil (2020) [1)]	This resolution regulates flaring and losses from oil and gas developments, establishing that burning of crude oil and non-associated gas is forbidden unless due to emergency reasons.
Transport	National Biodiesel Programme (2005)	This program mandates a biodiesel share in diesel of 7% from 2015 and 11% from 2019 onwards, increasing by 1%-point every March until reaching 15% by March 2023.
	Ethanol Blending Mandate (1993)	This program mandates a bioethanol share in gasoline of 27% from 2015 onwards.

Sector	Policies (marked with '(+)' when mentioned in NDC)	Description
	RenovaBIO (2018)	This policy aims to improve the carbon intensity of biofuels by 7% between 2017 and 2028, reaching 66.8 gCO_2/MJ by 2028.
	New Industry (Nova Indústria) Brazil (2024)	Increase the share of biofuels and electric vehicles in transportation to 27% by 2026 and 50% by 2033.
Industry	New Industry (Nova Indústria) Brazil (2024)	Achieve a 10% reduction in carbon emissions from national industry by 2026 and 30% by 2033, while enhancing biodiversity usage.
Agriculture and Forestry	National Plan on Climate Change (2008) [1)]	This plan aims to reduce deforestation rates in all Brazilian biomes to reach zero illegal deforestation.
	The Low-Carbon Agriculture (ABC) Plan) (2010) (+)	This plan aims to restore an additional 15 million hectares of degraded pasturelands by 2030 and enhance 5 million hectares of integrated cropland-livestock-forestry systems by 2030.
	Green Rural Product Certificate (Rural Verde Producers Certificate) (2021) [1)]	This policy regulates Rural Product Certificates related to activities of conservation and recuperation of native forests and their biomes.
	Decree 11.367 creating the Permanent Interministerial Commission for the Prevention and Control of Deforestation and taking other measures (2023) [1)]	This decree establishes the Permanent Interministerial Commission for the Prevention and Control of Deforestation, reestablishes the Action Plan for the Prevention and Control of Deforestation in the Legal Amazon - PPCDAm and deals with the Action Plans for the Prevention and Control of Deforestation in the Cerrado, in the Atlantic Forest, in the Caatinga, Pampa and Pantanal.
	National Native Vegetation Recovery Plan - PLANAVEG Brazil (2025)	Restoring 12.5 million hectares by 2030 and reducing its carbon emissions by 37% by 2025 and 43% by 2030. To achieve these goals, PLANAVEG proposes the restoration and recovery of 10.3 million hectares in permanent preservation areas (APP) and legal reserves (RL), as well as 2.2 million hectares in degraded, low-productivity areas.

[1)] Not quantified in PBL IMAGE model projections.

Canada

Table A-94: Overview of key climate change mitigation policies in Canada.

Sector	Policies (marked with '(+)' when mentioned in the NDC document)	Description
Cross-cutting	Greenhouse Gas Pollution Pricing Act (adopted June 2018; pricing started January 2019)	The Act consists of two parts: one puts a carbon levy on small emitters including industries under 50 $ktCO_2e$, and the other sets a cap-and-trade system or output-based pricing system bigger facilities. The federal price on emissions, starting at C$20/$tCO_2e$ in 2019 and rising by C$10/$tCO_2e$ per year until $50/$tCO_2e$ in 2022, applies to provinces and territories that request it or have not implemented their own carbon pricing regime ('backstop').
	Update to the Pan-Canadian Approach to Carbon Pollution Pricing 2023-2030 (2025)	This March 2025 update to the Federal benchmark removed the consumer-facing carbon price completely, leaving only the heavy industry price in effect. The minimum carbon pollution price of at least CAN$65 per ton of emissions calculated in CO_2e in 2023, rising by CAN$15 per year to CAN$170 per ton of CO2e in 2030.

Sector	Policies (marked with '(+)' when mentioned in the NDC document)	Description
	Regulation of HFCs (2020)	This regulation aims at reducing HFC emissions by 85% by 2036, relative to 2012.
	2030 Emissions Reduction Plan (2020) [1)]	The plan outlines sector-by-sector measures to achieve a 40% reduction of total emissions by 2030, and net-zero emissions by 2050. The measures are not yet fully implemented.
	National Adaptation Strategy (2023) [1)]	The National Adaptation Strategy's aim is to build resilient communities by reducing the impacts of climate-related disasters, protecting and restoring nature and biodiversity, building and maintaining resilient infrastructure and other measures.
	Standard on the Disclosure of Greenhouse Gas Emissions and the Setting of Reduction Targets (2023) [1)]	This policy requires companies that enter into contracts with government departments and organizations above CAD 25 million to disclose and reduce their greenhouse gas emissions.
Energy Supply	CO_2 standard for new power plants (2012) – updated in November 2018 to phase out traditional coal	This policy sets out a standard of 420 gCO_2/kWh from 1 July 2015; plants must comply by 2030 at the latest. It includes a phase-out of traditional coal (without CCS) by 2030.
	Regulations limiting carbon dioxide from natural gas fired electricity generation (January 2019) [1)]	This regulation limits CO_2 emissions from natural gas plants to 420 g/kWh for boiler units and large combustion units, and 550 g/kWh for smaller combustion units.
	Faster and Further – Canada's Methane Strategy (2022)	This policy builds upon previous regulations set in the sector. Its aim is to reduce methane emissions from the country's oil and gas sector by at least 75% from 2012 levels by 2030. The strategy also includes a target for a 35% reduction of all domestic methane emissions in Canada below 2020 levels by 2030.
	Hydrogen Strategy for Canada (2020) [1)]	The Strategy aims to reduce emissions to 45 million metric tonnes a year in 2030 and would create up to 350 000 new jobs by 2050, building a $50 billion domestic hydrogen market.
Transport	Efficiency standards light commercial vehicles (2004)	This policy sets out new fuel efficiency standards of 34.1 mpg (14.9 km/l) by 2017, and 55 mpg (23.2 km/l / 0.91 MJ/pkm) by 2025.
	Efficiency standards heavy-duty trucks (2013)	This policy sets out new fuel efficiency standards of per type of truck (aligned with federal-level regulations in the USA) to 1.38 MJ/tkm by 2027 for medium trucks, 0.83 MJ/tkm by 2027 for heavy trucks.
	Zero Emission Vehicle Infrastructure Deployment (2019, updated 2021)	This policy sets out a target of a 30% share of low-emissions vehicles in new light-duty vehicle sales by 2030 (10% by 2025 and 100% by 2040). To support that, CAD130 million is available through the 2019 Budget (2019-2024), for deploying charging and refuelling stations in localized areas, among others. In 2021, the target year has been moved from 2040 to 2035. The 2021 update has not been quantified.
	Electric Vehicle Availability Standard (2023) [1)]	Auto manufacturers and importers are required to meet annual zero-emission vehicle (ZEV) regulated sales targets.
Buildings	EcoENERGY efficiency (2011) [3)]	This program supports the implementation of energy codes, among other things, to improve energy efficiency of buildings.

Sector	Policies (marked with '(+)' when mentioned in the NDC document)	Description
	Federal Energy Efficient Equipment and Appliances Program (2007) [1)]	This policy is expected to result in emissions reduction of 10.4 $MtCO_2e$ by 2030, relative to baseline.
	Building Energy Technology Programme (2019) [1)]	This policy sets out a target of a 50% improvement in energy performance of buildings. Various levels of government will develop increasingly stringent building codes, starting in 2020, aiming for provinces and territories to adopt a 'net-zero energy ready' model building code by 2030.
Agriculture and Forestry	The Growing Forward 2 (2013) [1) 2)]	This policy supports the initiatives to advance environmentally sustainable agriculture.
	Green Construction through Wood Program (2018) [1) 2)]	This program supports projects and activities that increase the use of wood as a building material in infrastructure projects.
	2 billion Trees Commitment (2022)	The 2 billion Trees program is part of the Natural Climate Solutions Fund, and aims at 1.3 Mha of afforestation by 2030.
	Nature Smart Climate Solutions Fund (2021) [1) 2)]	Reduce Canada's net greenhouse gas emissions using natural climate solutions, while providing benefits for biodiversity and human wellbeing. Supporting projects that conserve, restore and improve the management of wetland, peatland, grassland, and forest ecosystems to store and capture carbon.
	PEI Agriculture Climate Solutions Program (2021) [1) 2)]	Support farmers to mitigate the production of GHGs and/or sequester carbon in the soil. By providing assistance and financial support to reduce GHG emissions from the agriculture sector.

[1)] Not quantified in PBL IMAGE model projections. [2)] Not quantified in IIASA model projections. [3)] Quantified in PBL IMAGE model as building codes for space heating. The second biennial report estimated the mitigation impact of this policy to be 6.5 $MtCO_2$/year by 2020, relative to their baseline (Government of Canada, 2016).

China

Table A-105: Overview of key climate change mitigation policies in China.

Sector	Policies (marked with '(+)' when mentioned in the NDC document)	Description
Cross-cutting	Action Plan for Reaching Carbon Dioxide Peak Before 2030 (2021) [1)]	Aim to peak CO_2 emissions before 2030. (+) Lower CO_2 emissions per unit of GDP by over 65% from 2005 levels by 2030. (+)
	14th Five-Year Plan (2021-2025) [4)]	This policy sets out several targets, including: - 20% non-fossil share in TPES in 2025 (midterm target to achieve NDC non-fossil target in 2030) - Energy intensity cut by 13.5% over the period [2)] - Carbon intensity cut by 18% over the period [2)]
	Kigali Amendment on HFCs (2021)	Phase down schedule for the use of HFCs expressed in % compared to baseline, in year: - Peak in 2024 at consumption levels of 2020-2022 - 90% by 2029 - 70% by 2035

Sector	Policies (marked with '(+)' when mentioned in the NDC document)	Description
		- 50% by 2040 - 20% by 2045
	National Economic and Social Development Plan (2021 and 2022)	The plan sets policies with regard to a range of fossil fuels that aim to maintain affordable access to power sources. Reaching peak carbon emissions and achieve carbon neutrality, and how to coordinate them.
	Made in China 2025 (2015) [5]	Transition from heavy industry to higher value-added manufacturing, with the goal of raising domestic content of core components and materials to 70% by 2025
Energy Supply	Coal Mine Methane Emission Standard (revised in 2024) [5]	The new standard, effective from 1 April 2025, prohibits the discharge of coal mine gas with a methane concentration above 8% and an extraction rate greater than 10 cubic metres per minute. The previous standard released in 2008 only imposed mandatory requirements for coal mine gas with a methane concentration above 30%.
	Action Plan for Low-Carbon Transformation and Construction of Coal Power Plants (2024-2027) [1] [2]	For selected plants, carbon emissions per kWh of electricity (compared to the average emissions from similar coal power units in 2023) should be reduced by - 20% by 2025 - 50% by 2027
	14th Five-Year Plan on Modern Energy System Planning (2022)	This policy sets out several targets, including: - "About" 39% non-fossil power generation 2025 - Energy production capacity of 4.6 billion tonnes coal equivalent, 200 million tonnes of oil and 230 billion cubic metres meters of gas by 2025 - Electricity generation 30% of total final energy consumption - Total installed power capacity 3000 GW
	14th Five-Year Plan Renewable Energy Development (2021)	This policy sets out several targets, including: - 3300 TWh of electricity to be generated from renewable sources in 2025 - 33% of total electricity generation to be from renewable sources, with 18% to come from non-hydropower sources - Over half of incremental electricity consumption growth from 2021-2025 to be met by renewable sources - "Around" 25% non-fossil energy consumption in 2030 (+) - Over 1200 GW installed capacity of wind and solar power in 2030 (+)
	Energy Supply and Consumption Revolution Strategy (2016-2030) [1]	This policy sets out several targets, including: - 15% share of gas in total primary energy consumption in 2030 [6] - Cap at 6 billion tonnes coal equivalent in total primary energy consumption in 2030 - Non-fossil share of electricity generation over 50% by 2030
	Notice on Printing and Distributing the "Guiding Opinions on Promoting the High-quality Development of Central Enterprises and Doing a Good	This policy sets out the target of renewables making up half of all installed power capacity by 2025.

Sector	Policies (marked with '(+)' when mentioned in the NDC document)	Description
	Job in Carbon Neutralization" (2021) [1]	
	Working Guidance for Carbon Dioxide Peaking and Carbon Neutrality in Full and Faithful Implementation of the New Development Philosophy (2021) [1]	This policy sets out several targets, including: - Strictly limit the increase in coal consumption over the 14th Five-Year Plan period (2021-2025) and phase it down in the 15th Five-Year Plan period (2026-2030) - Petroleum consumption to reach its peak and plateau during the 15th Five-Year Plan period (2026-2030)
Transport	Mid-Century Long-Term Low Greenhouse Gas Emission Development Strategy (2021)	This policy sets out the target to achieve around 40% market share of vehicles sold for NEVs (new energy vehicles, including EVs) by 2030.
	'Made in China 2025' standards for auto industry (2013)	This policy sets out the target of implementing new fuel economy standards of 5L/100 km by 2020, as well as reaching 1 million units of new energy vehicles sold in 2020. In addition, a fuel efficiency target of 3.2 litres/100 km was outlined for new passenger cars on average by 2030.
	Phase V fuel consumption standards for passenger vehicles (2019) [5]	The new standard sets a corporate average fuel consumption target of 4.0 litres/100 km for 2025 and 3.2 litres/100 km in 2030.
	New Energy Vehicle Industry Development Plan (2021-2035) [6]	The plan's objective is that new energy vehicles reach 20% of new vehicle sales in 2025 and 40% in 2030.
Industry	Carbon peaking for steel sector (2022) [1]	This policy sets out the target of peaking carbon from the steel sector by 2030.
	'Made in China 2025' CO_2 intensity target (2013) [1] [2] [4]	This policy sets out the target for manufacturing industries to reduce their CO_2 emissions per unit of added value by 22% by 2020 and 40% by 2025 from 2015 levels.
	14th Five-Year Circular Economy Development Plan (2021-2025) [1] [5]	This plan's objective is to reduce comprehensive energy consumption per tonne of steel by 2% by 2025.
Buildings	China National Minimum Energy Performance Standard (MEPS) and Energy Efficiency Labelling for Room Air Conditioners (1989) [1] [5]	China updated energy efficiency grades and sets more stringent minimum 'allowable values' of energy efficiency for the units.
	Mid-Century Long-Term Low Greenhouse Gas Emission Development Strategy (2021) [1]	This policy sets out several targets, including: - Implementing green building standards in 100% of new buildings by 2025 - "strive to" install solar panels on 50% of the rooftops on new public buildings and factories starting in 2025 - 8% replacement of fossil fuel energy consumption by renewables by 2025
	Appliance Standards and Labelling Programme [1]	This is an energy efficiency program supplemented with subsidies and awareness-raising campaigns.
	"Design Standard for Energy Efficiency of Public Buildings" (2015) and the "Design Standard for Energy Efficiency of Residential Buildings" (2010) [1]	This is a standard for maximum energy consumption per square meter for different types of buildings.

Sector	Policies (marked with '(+)' when mentioned in the NDC document)	Description
	Green and High-Efficiency Cooling Action Plan (2019) [1)]	The plan targets a 30% improvement in energy efficiency levels of cooling products and a 20% increase in the market share of green and high-efficiency cooling products by 2022. By 2030, the plan targets a 30% boost in the cooling efficiency of large-scale public structures, a greater than 25% enhancement in the overall energy efficiency of cooling systems, and a more than 40% expansion in the adoption of eco-friendly and highly efficient cooling products.
Agriculture and Forestry	The 14th Five-Year Plan for the development of forestry and grassland conservation (2021-2025) [1)]	This policy sets out several targets, including: - Forest coverage to reach 24.1% (ca. 230.53 million hectare) with forest stock volume of 19 billion cubic meters. - Commercial harvest over natural forest to be prohibited, preserving 1.944 billion mu of forests (129.6 million hectares). - Grassland vegetation cover to reach 57% and protection rate of wetland to reach 55%. Increase of nature reserve areas to 18% of national land area, and transformation of decertified land by 0.1 billion mu (6.67 million hectares).
	Program plan for national reserve forest (2018-2035) [1)]	This policy sets out several targets, including: New planted reserve forest (for wood products) of 7 million hectares by 2020, and 20 million hectares by 2035 (i.e., 13 million hectares between 2021 and 2035), with annual forest stock volume increases of 200 million cubic meters (i.e., 10 cubic meters per hectare). Annual forest stock volume increase of native species and the large-diameter timber volume to reach 63 million cubic meters.
	Revision of Forestry Law (2019) [1)]	China revised its Forest Law for the first time in 20 years, with the most significant policy change being the implementation of a ban (in effect as of July 2020) on the purchasing, processing, or transport of illegal logs for Chinese companies. The law enhances protection for forests classified by the law as public-benefit, natural, protected, or rare. The law also includes changes to the forest tenure system, afforestation mechanism, forest resource protection system, and the forest management, and harvesting mechanism.
	Revision of Land Administration Law (2019) [1)]	The law, which became effective in January 2020, re-affirms a policy redline of a minimum of 120 Mha of arable land. In case of conversion of agricultural land, the law requires the same area and quality of land be reclaimed for agricultural use.
	15-year plan (2021-2035) to protect ecosystems (2020) [3)]	This policy sets out several objectives, including targets to increase forest cover to 26% of national land area by 2035 and forest stock volume to 21 cubic meters, to stabilize natural forest area at 200 million h and to increase grassland vegetation cover to 60% and nature reserve areas to 18%.
	Five-year plan on the National Agricultural and Rural Science and Technology Development (2021-25) (2022) [1) 3)]	This document sets the government's sectoral development strategy over five years. It notably seeks to increase resilience, reduce risks on output, improve fertiliser and plastic usage. It defines a number of targets, including an expansion of grain and meat production.

[1)] Not quantified in PBL IMAGE model projections. [2)] Not quantified in NewClimate Institute projections. [3)] Not quantified in IIASA model projections. [4)] Not quantified separately in PBL IMAGE model projections, but achievement checked after implementation of other (related) targets. [5)] Not quantified in NewClimate Institute projections, but quantified in the IEA World Energy Outlook as a key reference.

Colombia

Table A-116: Overview of key climate change mitigation policies in Colombia.

Sector	Policies [3] (marked with '(+)' when mentioned in the NDC document)	Description
Cross-cutting	Decree 926 establishing a carbon offset program (2017) [1]	This decree establishes a mechanism for exemption of the national liquid fossil fuel Carbon Tax (Law 1819 Art 221). To be exempt, actors need to demonstrate carbon neutrality (achieved through offsets from external projects on, e.g., renewable energy and energy efficiency).
	Resolution No.1988 on establishing energy efficiency targets (2017) [1] Resolution No.585 on the application procedure for energy efficiency projects (2017) [1]	Resolution No. 1988 establishes the adoption of environmental goals and measures in the transportation, energy, industry, and buildings sectors, as described in the Indicative Action Plan on energy efficiency (PROURE) 2017–2022 (Resolution No. 41286 of 2016). The resolution No. 585 establishes procedures to carry out those measures.
Energy Supply	Colombian Low-Carbon Development Strategy (+) (ECDBC) (2012)	Through the implementation of eight Sectoral Mitigation Action Plans, this strategy aims to deviate from BAU emissions levels, which are estimated to be over 60% from current levels by 2030.
	Law 697: Programme for rational and efficient use of energy and other forms of non-conventional Energy (PROURE) (2010; latest adopted in 2016) [1]	This policy sets out the target to reach a 9.05% energy efficiency improvement in the transport and industry sectors between 2017 and 2022.
	National Energy Plan (PEN) 2022-2052 (2022)	This policy sets out energy scenarios for Colombia. It serves as a guiding policy to develop its energy sector but does not directly set out targets.
Buildings	NAMA Project for the domestic refrigeration sector (2017-2021)	This program aims at a reduction of emissions from the domestic refrigeration sector. It sets out the target of an annual reduction of around 3.8 $MtCO_2e$ by 2030 (50% reduction from BAU) and 16.8 $MtCO_2e$ over the lifetime of a single equipment.
	National policy for sustainable buildings (2018) [1]	This policy aims at making new construction in Colombia more energy efficient.
	National Roadmap for Net Zero Buildings (2022)	This roadmap highlights key actions such as urban planning, sustainable materials, efficient transportation and distribution, innovative design, labelling and certification, as well as optimized water and energy use, and effective waste management. It also evaluates the current state of the buildings sector and examines the potential social and environmental impacts of achieving net zero buildings on a national scale.
Transport	NAMA Project for Transit Development (TOD) (2015 to 2019)	This program supports the construction of lasting infrastructure and buildings that will lock in efficient land use and travel patterns with estimated annual emissions reduction between 3.6 to 5.5 $MtCO_2e$/year by 2040.
	National Strategy for Electric Mobility (2020)	This policy sets out the target of reaching 600,000 sales of EVs by 2030.
Agriculture and Forestry	The National Development Plan of Colombia (+) (2015)	This policy sets out the target to reduce the annual deforestation rate from 121,000 hectares in 2013 to 90,000 hectares by 2018.

Sector	Policies [3] (marked with '(+)' when mentioned in the NDC document)	Description
	REDD+ Zero Deforestation in the Amazon by 2020 (2009) [2]	This plan consists of four phases of strategy with a total of 18.5 million USD for planning and implementation.
	Resolution to increase the area of protected forest land in the Amazon (2018)	This policy sets out a target to increase Colombia's protected forest area coverage to 30 million hectares to reach a total of 38 million hectares.
	National Policy for the Control of Deforestation and Sustainable Management of Forests (2021) [2]	This policy aims to implement cross-sectoral strategies for deforestation control and forest management that promote the sustainable use of natural capital, the forest economy, and community development in areas of high deforestation.
	Decree 690 on the sustainable management of wild flora and non-timber forest products (2021) [2]	This policy regulates the sustainable management of wild flora and non-timber forest and non-timber forest products, to be applied by environmental authorities and by anyone interested in the management of these products.
	National Restoration Plan (2015-2035) (2022)	This plan aims to ecologically restore a cumulative total of 962,615 ha between 2015 and 2030.

[1] Not quantified in NewClimate Institute projections. [2] Not quantified in IIASA model projections. [3] Not quantified in PBL IMAGE model projections.

Egypt

Table A-127: Overview of key climate change mitigation policies in Egypt.

Sector	Policies [3]	Description
Energy Supply	Integrated Sustainable Energy Strategy to 2035 (2015)	This policy sets out a target to reach 20% of power generation from renewable sources by 2022 and 42% by 2035, focusing on wind (14%), hydro (2%) and PV (25%).
	Renewable Energy Law (2014) [2]	This law seeks to stimulate the private sector to invest in renewable power generation. The regulation brings diverse mechanisms such as competitive bidding and Feed-in tariffs.
	Renewable Energy Tax Incentives (2015) [2]	This policy sets out a reduction of energy sales taxes to 5%, in order to attract private sector investment.
Transport	Presidential decree to promote the use of compressed natural gas in transport (2022)	This decree sets out the goal of converting 450 thousand vehicles to CNG, reaching a total of 1 million.
Agriculture and Forestry	Egypt targets to increase agricultural production by 30% in 2024 (2021) [2]	The Minister of Planning and Economic Development Hala El-Said announced a target to increase the gross domestic product (GDP) contribution of agriculture to 12 percent by 2024, in addition to increasing agricultural production by 30 percent by 2024.
	Prime Ministerial Decree no. 104/2022 (2022) [1] [2]	This policy sets out investment incentives under Articles 11 of Egypt's Investment Law No. 72/2017 and 10 of its Executive Regulations issued by Prime Ministerial Decree no. 2310/2017 including renewable energy projects, agriculture, livestock.
	Decree No. 20 includes within the economic development strategy the production, storage, and export of	This decree establishes that the production, storage, and export of hydrogen and green ammonia are part of the Economic Development Strategy. To enhance the production of these

Sector	Policies [3]	Description
	hydrogen and green ammonia. (2022) [1] [2]	products is also accompanied by fiscal and tax incentives in the Investment Law No 72 of 2017 (Investment Law).

[1] Not quantified in IIASA model projections. [2] Not quantified in NewClimate Institute projections. [3] Not quantified in PBL IMAGE model projections.

Ethiopia

Table A-138: Overview of key climate change mitigation policies in Ethiopia.

Sector	Policies [2] (marked with '(+)' when mentioned in the NDC document)	Description
Cross-cutting	Climate Resilience and Green Economy Strategy (CRGE) (2011) (+) [1]	This strategy includes various mitigation measures to limit economy-wide GHG emissions in 2030 to 150 $MtCO_2e$ (250 $MtCO_2e$ below BAU). It also sets out the target of developing up to 25 GW of renewable power capacity by 2030.
Energy Supply	Growth and Transformation Plan II (2016) (+) [1]	This policy defines twelve major targets for the energy sector for the period 2015 to 2020 such as increasing power generating capacity from 4 GW in 2015 to 17 GW by 2020 (with hydropower accounting for over 13 GW) and increasing electricity access from 60% in 2015 to 90% by 2020.
	Scaling-Up Renewable Energy Program for Ethiopia (SREP Investment Plan) (2012)	This policy sets out the target to increase power generation capacity from the present level of 2 GW to 10 GW by 2015 and to 25 GW by 2030. Focus on five major investment projects of wind, geothermal and hydroelectric energy generation.
	National Biogas Programme (2007)	This policy sets out the target to build 20,000 biogas plants by 2017 (2nd phase: 2014-2017).
Transport	Intra-Urban Electric Rail NAMA (2012) [1]	This policy sets out the target to replace 50% of cargo transport with electric rail transport. This is expected to reduce emissions by 8.9 $MtCO_2e$/year by 2030.
Agriculture and Forestry	Afforestation and reforestation actions (part of the CRGE and further specified in NDC of 2021) (2011, update in 2021) (+)	This policy sets out various targets, including the unconditional target of 7 million hectares of afforestation and reforestation by 2030. [1] Further targets conditional on financial support: - Reforestation of 3 million hectares of land by 2030 - Restoration of 5 million hectares of land by 2030 and 9 million hectares of land by 2050 15,000-17,000 hectares of forest to be brought under protection and natural regeneration over a 30-year planning period as part of Ethiopia's Forest Sector Development Plan and other initiatives.
	Green Legacy Initiative (2019) (+) [1]	This large-scale tree planting initiative aims to plant more than 20 million seedlings through four annual seeding campaigns between 2019 and 2022.

[1] Not quantified in NewClimate Institute projections. [2] Not quantified in PBL IMAGE model projections.

European Union (EU)

Table A-149: Overview of key climate change mitigation policies in the EU.

Sector	Policies (marked with '(+)' when mentioned in the NDC document)	Description
Cross-cutting	Fit-for-55 package (2022)	The legislations proposed in the Fit-for-55 package aim to ensure that EU policies are in line with the climate goals agreed by the Council and the European Parliament of reducing the Union's emissions by 55% compared to 1990 levels by 2030. It introduces economy-wide amendments to regulations and schemes such as the Emissions Trading System, Effort Sharing Regulations, emissions standards for cars and vans and the Energy Efficiency Directive.
	Regulation (EU) 2021/241 Recovery Plan for Europe (2021) [4]	The Recovery and Resilience Facility (RRF), adopted by the Council on 11 February 2021, is a €672.5 billion fund designed to mitigate the economic and social impacts of the COVID-19 pandemic while supporting the EU's green and digital transitions. A key element of the RRF, along with the European Green Deal, is its focus on energy spending provisions aimed at reducing emissions. Through these initiatives, EU member states are empowered to advance toward more sustainable, resilient economies by investing in cleaner energy and emission mitigation strategies.
	EU ETS Directive (2003/87/EC revised by Directive 2023/959)	This directive establishes a cap on emissions from electricity/heat and industry to reduce emissions by 62% below 2005 levels by 2030. The cap is reduced at an annual rate of 4.3% (2024-2027) and 4.4% (2028-2030) annually.
	Effort sharing regulation (annual GHG targets for non-ETS sectors in the period 2021-2030) (2023) [1] [3]	This policy sets out a target to reduce GHG emissions from non-ETS sectors by 42% by 2030, relative to 2005.
	Revised Energy Efficiency Directive (EED) EU (2022) [3]	This policy sets out a target to reduce final energy consumption by 11.7% by 2030 (compared to the 2020 modelling projections for 2030).
	F-gas regulation (517/2014)	This policy sets out a target to reduce F-gas emissions by 37% by 2020 and by 79% by 2030, relative to the average values between 2009 and 2012.
	Regulation (EU) 2021/1119 establishing the framework for achieving climate neutrality (European Climate Law) (2022)	This document establishes 1) a comprehensive framework to enable climate change mitigation efforts, including carbon removal, across the Union, and 2) a framework aiming to meet the global adaptation goal set out in Article 7 of the Paris Agreement (art. 5). It further commits the Union to an enhanced target of GHG emissions reduction by 2030 (art. 4) and to climate neutrality by 2050 (art. 2).
	Carbon Border Adjustment Mechanism (2023) [4]	Measures to ensure that the carbon price of imports is equivalent to the carbon price of domestic production, so that the EU's climate objectives are not undermined.
	Critical Raw Materials Act (2024) [4]	Measures to ensure EU access to a secure and sustainable supply of critical raw materials.
Energy Supply	REPowerEU Plan (2022)	With this plan, EU increased its binding target of renewables share in electricity production for 2030 to 42.5%, with the ambition to reach 45%. The binding Energy Efficiency Target under the 'Fit for 55' package of European Green Deal legislation is also increased from 9% to 13%. This set the stage for the final agreement of a 11.7% target reached by the co-legislators.

Sector	Policies (marked with '(+)' when mentioned in the NDC document)	Description
Buildings	Eco-design Framework Directive (Directive 2009/125/EC)	This policy sets out a series of specific standards for a wide range of appliances.
	Energy Performance of Buildings (Directive (EU) 2018/844)	This policy sets out a target for all new buildings to be nearly zero-energy from 2021 onwards.
Industry	Innovation Fund (2019) [4]	The Innovation Fund is a financial program aimed at supporting the demonstration of cutting-edge low-carbon technologies. It focuses on innovative low-carbon technologies and processes within energy-intensive industries, including those that replace carbon-intensive products, carbon capture and utilization (CCU), the development and operation of carbon capture and storage (CCS), and innovative renewable energy generation.
Transport	Regulation of CO_2 emissions from heavy-duty vehicles (2019)	This policy sets the following targets: - New heavy-duty trucks: 30% reduction of CO_2 emissions per tonne-km from 2019 levels by 2030 - The share of renewable energy within the final consumption of energy in the road and rail transport is at least 14 % by 2030 [4]
	Regulation 2023/851 strengthening the CO_2 emission performance standards for new passenger cars and new light commercial vehicles (amending Regulation 2019/631)	The regulation includes the following CO_2 emission reductions for new cars and vans: - Limit of 95g CO_2/km for cars and 147g CO_2/km for vans (established 2021 targets) - 55% reduction for cars and 50% for vans (compared to the 2021 targets) - 100% CO_2 emission reduction for cars and vans from 2035
	Alternative Fuels Infrastructure Regulation (2023) [4]	The regulation sets mandatory national targets for deploying alternative fuels infrastructure in the EU for road vehicles, vessels, and aircraft. It includes requirements for recharging stations, ensuring adequate coverage and power output for both light and heavy-duty vehicles.
Agriculture and Forestry	EU Biodiversity Strategy for 2030 (2020) [2] [4]	Part of the European Green Deal, a strategy by the European Commission which proposes several actions related to biodiversity, including the aim to legally protect 30% of the area in the EU, of which 30% would be strictly protected.
	EU LULUCF Regulation (2018) [4]	This policy regulates the inclusion of the LULUCF sector in the overall EU 2030 climate and energy framework and the overall GHG emission reduction target for EU. Provides updated accounting rules and a no-debit rule that all Member States have to ensure that the accounted GHG emissions from the LULUCF sector are balanced by at least an equivalent accounted amount of removals of CO_2.
	EU Farm to Fork Strategy (2019) [2] [4]	This policy is part of the European Green Deal, a strategy by the European Commission related to fair, healthy and environment-friendly food systems.
	3 Billion Trees Pledge (map tree counter) (2021) [4]	Under the European Green Deal, the EU biodiversity strategy for 2030 commits to planting at least 3 billion additional trees in the EU by 2030 in full respect of ecological principles.
	EU Nature Restoration Law (2022) [2]	This law presents overarching restoration objective for the long-term recovery of nature in the EU's land and sea areas with binding restoration targets for specific habitats and species. These measures should cover at least 20% of the EU's land and sea areas by 2030, and ultimately all ecosystems in need of restoration by 2050.

Sector	Policies (marked with '(+)' when mentioned in the NDC document)	Description
	Regulation (EU) 2023/1115 on deforestation-free products [2)]	The new rules aim to avoid that the listed products Europeans buy, use and consume contribute to deforestation and forest degradation in the EU and globally, to reduce carbon emissions caused by EU consumption and production of the relevant commodities by at least 32 million metric tonnes a year, and to address all deforestation driven by agricultural expansion to produce the commodities in the scope of the regulation, as well as forest degradation.

[1)] Not quantified in NewClimate Institute projections. [2)] Not quantified in IIASA model projections. [3)] Not quantified separately in PBL IMAGE model projections, but achievement checked after implementation of other (related) targets. The final energy consumption target is interpreted alternatively as a maximum final energy target according to a PRIMES Baseline and is reached. The share of renewables in final energy consumption target is within reach. [4)] Not quantified in PBL IMAGE model projections.

India

Table A-1510: Overview of key climate change mitigation policies in India.

Sector	Policies (marked with '(+)' when mentioned in the NDC document)	Description
Cross-cutting	Energy Conservation (Amendment) Bill (2022) [1)]	The amendment is aimed at helping India fulfil its NDC commitments by introducing a carbon credit trading scheme, obligations to use non-fossil sources of energy, energy conservation code for buildings and standards for vehicles and vessels.
	National Green Hydrogen Mission & Green Hydrogen/Green Ammonia Policy (2022) [1)]	The Mission sets a green hydrogen production target of 5 million tonnes per annum (MTPA), with the potential to scale up to 10 MTPA depending on export demand growth. The Policy provides incentives for green hydrogen and green ammonia producers with the objective of reducing production costs. Notable incentives include: - waiver of inter-state transmission charges for up to 25 years - banking of renewable energy for up to 30 days - allowing renewable energy consumed for green hydrogen production to count towards state renewable purchase obligations
	Cooling Action Plan (ICAP) [1)]	The ICAP presents a 20-year outlook and details the steps required to ensure access to sustainable cooling. The key targets include: reducing cooling demand across sectors by 20% to 25% by 2037-38, lowering refrigerant demand by 25% to 30% by the same year, and cutting cooling energy requirements by 25% to 40%. Additionally, it aims to train and certify 100,000 technicians in the servicing sector by 2022-23, aligning with the Skill India Mission.
Energy Supply	Renewable energy targets and support schemes (+) [1)]	Measures in support or renewables include: - 43% share of renewables in the electricity supply of distribution companies by 2030 – 7% from wind, 3% from hydropower, and the rest from other types of renewables. - Capacity target for 2028: 50 GW annual renewable power capacity additions between 2023-2028 - Capacity target for 2030: 500 GW total non-fossil power capacity

Sector	Policies (marked with '(+)' when mentioned in the NDC document)	Description
		- Renewable Purchase Obligations scheme (2022) [2)] - Renewable Energy Certificate mechanism (2011) [1) 2)] - Production Linked Incentive (PLI) Scheme: National Programme on High Efficiency Solar PV Modules [1)]
	Viability Gap Funding for development of Battery Energy Storage Systems (BESS) (2023) [1)]	The scheme envisages development of 4 GWh of BESS projects by 2030-31, with a financial support of up to 40% of the capital cost as budgetary support in the form of Viability Gap Funding (VGF).
	National Electricity Plan (2023)	This plan updates the National Electricity Plan from 2018. It includes a detailed plan for power capacity changes up to 2027 and a prospective plan with projections up to 2032. Key projections for 2031-32 include: - 35% of renewable energy generation in 2027 and 44% in 2032 - 29% of all installed capacity by 2032 coming from coal and lignite power plants
Buildings	Energy Efficiency Label for Residential Sector (2019) [1)]	This policy introduces a label for residential buildings to highlight energy efficiency standards. It aims to make energy performance a key factor in home pricing and is expected to reduce electricity use, potentially saving up to 40% compared to traditional homes, with annual savings projected at 90 billion units by 2030.
Transport	Fuel economy standards (2017)	This policy sets out the following standards: 1.3 MJ/pkm to 130g CO_2/km by 2017 and 0.9 MJ/pkm to 113g CO_2/km by 2022, for light-duty vehicles.
	Third phase of Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles (FAME-II) initiative (2019) [2)]	This policy supports the uptake of EVs by providing upfront incentives for the purchase of vehicles and by fostering the development of charging infrastructure. It includes the following targets: Subsidizing the purchase of 1,000,000 electric two-wheelers, 500,000 electric three-wheelers, 55,000 electric four-wheelers and 7,000 buses. Reaching 15% EV share in car stock by 2023, 30% by 2030.
	Support for biofuels (2007), National Policy on Biofuels (2018) [2)]	These policies include the following targets: 5% blending target for ethanol with petrol (no timeline set). 20% blending target for bioethanol in gasoline, 5% biofuel in diesel by 2030 (proposed target).
Industry	Energy efficiency in industry (PAT scheme) (2011)	This policy sets out a benchmarking scheme to compare the performance of designed companies against best practice, combined with a market mechanism to trade energy savings certificates. The seventh PAT cycle aims to achieve a total energy savings of 6,627 Mtoe by the end of 2025.
Agriculture and Forestry	Integrated Vision for Forests, Food, and Sustainability (2025) [2)]	The initiative aims to expand forest and tree cover by 5 million hectares while also enhancing the quality of an additional 5 mha of both forest and non-forest land. In doing so, it seeks to strengthen ecosystem services, including carbon storage, water regulation, and biodiversity conservation. At the same time, the program is designed to improve the livelihoods of approximately 3 million households by increasing income opportunities derived from sustainable, forest-based activities.

[1)] Not quantified in PBL IMAGE model projections. [2)] Not quantified in NewClimate Institute projections.

Indonesia

Table A-1611: Overview of key climate change mitigation policies in Indonesia.

Sector	Policies (marked with '(+)' when mentioned in the NDC document)	Description
Cross-cutting	Draft Second Nationally Determined Contribution (NDC) (2025)	The draft NDC will replace the previously submitted Enhanced NDC from 2022. The draft has not yet been approved by the legislative and executive, but it has been circulated. The figures are used as they are considered to better reflect the latest climate targets and recent developments, including the captive coal boom. The draft will be aligned with the low carbon scenarios compatible with the Paris Agreement (LCCP) from the 2021 Long-Term Strategy (LTS) that targets net zero emissions by 2060.
	Presidential Regulation No. 98/2021 on the Implementation of Carbon Pricing to Achieve the NDC [1) 2) 3)]	This regulation provides a national framework for the implementation of carbon pricing instruments and serves as a guideline on GHG emission reduction policies, measures, and activities to achieve the NDC target.
	Ministry of Environment and Forestry Regulation No. 21/2022 [1) 2) 3)]	This regulation provided the legal basis for the implementation of a cross-sectoral ETS in Indonesia and covered details on offsets, sector-specific carbon trade roadmaps, MRV procedures, and institutional arrangements.
Energy Supply	National Energy Policy (NEP) (2014) (+) [4)]	This policy sets out a target of 23% new and renewable energy (including nuclear) in total primary energy supply by 2025. In 2024, the government revised this downwards to 17–19% by 2025.
	New and Renewable Energy (NRE) Bill [1) 2) 3)]	This long-delayed legislation, intended to provide incentives for renewables, remains stalled due to disagreements over controversial provisions like power wheeling and the inclusion of coal derivatives.
	National Electricity Master Plan (RUKN 2024–2060)	This plan sets the direction for the RUPTL 2025–2034. It sets a target for the energy mix by 2060, comprising 74% from new and renewable energy, and 26% from fossil energy and carbon capture and storage (CCS).
	Electricity Supply Business Plan (RUPTL 2025–2034)	This plan aims to add 6.2 GW of coal-fired power plants, 10.5 GW of fossil gas-based capacity, 42.6 GW of new renewable capacity, and 10.3 GW of energy storage by 2034. Coal and fossil gas development will be front-loaded in the first phase (2025–2029), while renewable deployment will be back-loaded to the second phase (2029–2034). The share of renewables is expected to reach ~20% of electricity generation by 2030 and ~30% by 2035.
	Presidential Regulation No. 112 on Accelerated Development of Renewable Energy for Electricity Supply (2022) [1) 3)]	Regulation that establishes procurement methods for renewable electricity purchase from renewable sources and sets conditions for the phased retirement of coal-fired power plants by 2050.
	Ministry of Energy and Mineral Resources Regulation No. 5 (2025) [1) 2) 3)]	This regulation provides greater legal clarity and investment certainty for renewable PPAs between PLN and IPPs, aligning with recent market practice while introducing fixed pricing, clearer risk-sharing, carbon credit integration, and 30-year terms
	Ministry of Energy and Mineral Resources Regulation No. 10 (2025) [1) 2) 3)]	This regulation sets a roadmap for Indonesia's just energy transition by outlining nine strategic actions for cleaner electricity, including retiring coal early, scaling up renewables, and introducing clean fuels like green hydrogen and ammonia.

Sector	Policies (marked with '(+)' when mentioned in the NDC document)	Description
Transport	Biofuel Blending Targets (2013 & 2015) [3) 5)]	The mandatory biodiesel blending rate, established in 2013, increased from 15% (B15) in 2015 to 35% (B35) in 2023, with targets of 40% (B40) by 2025 and 50% (B50) by 2029. For bioethanol, the target was 5% blending (E5) by 2020 and 20% blending (E20) by 2025.
	Fiscal Incentives for Battery Electric Vehicles (2023) [1) 3)]	The incentives include VAT reductions and import duty exemptions for electric four-wheelers (E4Ws), cash subsidies for electric two-wheeler (E2W) purchases, and support for converting conventional motorcycles to electric, all intended to boost the adoption of electric vehicles
Buildings	Government Regulation No. 33 on Energy Conservation (2023) [1) 2) 3)]	The regulation mandates that buildings consuming over 500 tonne oil equivalent or with annual energy bills exceeding IDR 500 million must implement energy management.
	Ministry of Energy and Mineral Resources Regulation No. 3 on Energy Conservation (2025) [1) 2) 3)]	The regulation targets public buildings and requires certified energy managers, regular audits, implementation of energy efficiency programs, and annual reporting.
	Ministry of Public Works and Housing Regulation No. 21 on Green Buildings Performance Assessment (2021) [1) 2) 3)]	The regulation mandates green building certification (BGH) for new and existing large public and commercial buildings.
Waste	Presidential Regulation No. 97 on National Waste Management Strategy (2017) [1) 2) 3)]	The plan targets a 30% reduction in household waste generation and 70% solid waste treatment by 2025.
	Ministry of Environment and Forestry Regulation No. 75 on Extended Producer Responsibility (EPR) (2019) [1) 2) 3)]	This regulation requires producers, particularly in the food and beverage as well as retail sectors, to develop a roadmap to reduce their waste by 30% by 2029.
Agriculture and Forestry	Presidential Instruction No. 5/2019 on Forest Moratorium (2019) [1) 3)]	The old Presidential Instruction No. 6/2013 restricted clearance of peatlands and primary forests, as defined in the Ministry of Forestry land cover map, to halt commodity-driven deforestation. The new instruction makes the moratorium on clearing primary forests and peatlands in moratorium areas permanent.
	Food and Energy Estate Program, as part of National Strategic Projects (2020) [1) 2) 3)]	This policy allows protected forests, such as those in Kalimantan and Papua, to be cleared at a large scale to produce food and energy crops.
	Indonesia's FOLU Net Sink 2030 (2022) [1) 3)]	This policy sets out the target for the FOLU sector to become a net sink in 2030, achieving net negative emissions of 140 $MtCO_2e$ by 2030 and further reducing them to 340 $MtCO_2e$ by 2050 through the prevention of deforestation, conservation of natural forests, sustainable forest management, and enhancement of carbon sinks from peatlands and mangroves.

[1)] Not quantified in PBL IMAGE model projections. [2)] Not quantified in IIASA model projections. [3)] Not quantified in NewClimate Institute projections. [4)] Not quantified separately but checked if achieved after implementation of other policies. [5)] Implemented in PBL IMAGE model as 22.5% total biofuel share.

Japan

Table A-1712: Overview of key climate change mitigation policies in Japan.

Sector	Policies (marked with '(+)' when mentioned in the NDC document)	Description
Cross-cutting	Global warming countermeasures tax (2012) [1]	This policy sets out an upstream tax of 289 JPY/tCO_2 (around 2.3€) on fossil fuels on top of existing petroleum and coal tax.
	Energy Conservation Act (1993 amendment) [1]	This policy sets out the target of reducing energy consumption by 1%/year and annual reports to the government by large operators.
	Green Transformation (GX) Basic Policy (2023) [1] [2]	This policy outlines directions to achieve Japan's NDC and 2050 net zero pledge. Notable points include: (i) nuclear power policy to build next-generation reactors and extend the lifetime of existing reactors, (ii) support schemes for hydrogen and ammonia supply chain (including their co-firing with fossil fuels), (iii) establishment of green bonds, iv) full-fledges emissions trading system by companies from 2026.
Energy Supply	Basic Energy Plan (2021) (+)	This policy sets out the target of reaching 36% to 38% renewable electricity (incl. large hydro) by 2030.
	Renewable Energy Act (feed-in tariff) (2012) [1]	This policy requires electric utility operators to purchase all electricity generated at designated prices; applicable to most renewable technologies.
Buildings	Building Energy Efficiency Act (2022 amendment)	All new buildings are now required to meet the minimum energy efficiency standards.
	Basic Energy Plan (2018) (+)	This policy sets out the target of making all new buildings net-zero energy by 2030.
Transport	Passenger vehicle fuel efficiency standards (2020 amendment) [2]	This policy sets out a target of 25.4 km/l by 2030 for passenger vehicles, representing a 32.4% improvement compared to 2016 values.
	Top Runner Standards (2020 amendment of the Energy Conservation Act) [1] [2]	The Top Runner Program is a mandatory standard programme based on the Energy Conservation Act targeting manufacturers and importers of energy-consuming products. The standards also apply to electric vehicles.
	Green Growth Strategy (June 2021 revision) [2]	This policy sets out a target of 100% share of electrified vehicles (including fuel cell vehicles and non-plugin hybrids) in new passenger car sales by 2035.
F-gases	Act on Rational Use and Proper Management of Fluorocarbons (2013, last amendment 2019) [1]	This policy sets out stricter control of the entire F-gas chain (GWP targets for equipment types, obligation of F-gas destruction for entities re-using recovered F-gases). The 2019 amendment includes several penalty and obligatory measures to increase the F-gas recovery rates up to the targeted 50% by 2030 from 38% in 2017.
	Ozone Layer Protection Act (2018 amendment) [2]	Regulation on production and import volumes to comply with the Kigali Amendment of the Montreal Protocol.
Agriculture and Forestry	Strategy for sustainable food systems (2021) [1]	This strategy aims to create jobs, improve livelihoods and encourage balanced diets for the Japanese population. To do so, it aims to create smart food value chains, boost human development, boost research and development, and encourage innovation, notably in rural areas. It also sets specific measures to decarbonise the food sector and make it more resilient.

Sector	Policies (marked with '(+)' when mentioned in the NDC document)	Description
	The Act for Promotion of Use of Wood in Public Building (2010, Act number 36) (2019) [1) 3)]	This act establishes the guidelines to use wood in the construction sector with sustainable principles.
	The Forest Act (1951, Act number 249) (2019) [1) 3)]	This act establishes the guidelines to promote forest conservation and restoring practices.
	Law No. 37/2022 concerning the Promotion of Environmental Burden Reduction Activities for the Establishment of Environmentally Harmonised Food Systems (2022) [1) 3)]	This law establishes basic principles relating to the establishment of a food system that is harmonised with the environment. It aims to contribute to the sustainable development of agriculture, forestry, fisheries and the food industry, whilst ensuring a stable food supply for citizens.

[1)] Not quantified in PBL IMAGE model projections. [2)] Not quantified in NewClimate Institute projections.
[3)] Not quantified in IIASA model projections.

Mexico

Table A-1813: Overview of key climate change mitigation policies in Mexico.

Sector	Policies (marked with '(+)' when mentioned in the NDC document)	Description
Cross-cutting	Special Program on Climate Change (2021 to 2024) [1) 2)]	This policy sets out to reduce GHG emissions by implementing specific measures in all sectors.
	General Law on Climate Change (LGCC, (+)) (2012, with subsequent reforms in 2014, 2015, 2016, 2018, 2020, and 2022) [1) 2)]	This law is the basis for climate policy in Mexico which translates the overarching GHG emission reduction targets (added to the law in a reform in April 2018) into strategies and plans and provides the institutional framework for their implementation. A reform in 2020 dissolved the Climate Change Fund. A further reform is underway to remove the National Ecology and Climate Change Institute (INECC) and transfer its functions to the Environmental Ministry (SEMARNAT).
	Emissions Trading Scheme (2018) [2)]	This policy sets out a national emissions trading scheme that will start a three-year pilot phase in 2020. The regulatory framework for the ETS is expected to be fully operational by 2023.
	Energy Transition Law (2015)	This law provides a framework for clean energy, energy efficiency and greenhouse gas emissions reductions. It also sets out targets for clean energy (includes efficient gas-fired cogeneration) of 25% in 2018, 30% in 2021 and 35% by 2024. Power auctions for wind and solar energy supporting the implementation of the targets were cancelled in 2019.
	National Transition Strategy to Promote the use of clean fuels and technologies (2016)	This policy is a planning document for medium and long-term clean energy (incl. efficient cogeneration). It sets out "clean" power generation targets of 35% by 2024, 37.5% by 2030 and 50% by 2050.
	Performance criteria and application for flaring and ventilation of natural gas (CNH.06.001/09) (2011) [1) 2)]	This policy sets out the target of reducing emissions from oil and gas production through a decrease in venting of 73 $MtCO_2e$ below BAU in 2020 and 92 $MtCO_2e$ in 2030.

Sector	Policies (marked with '(+)' when mentioned in the NDC document)	Description
	Program for the development of the national electric system (PRODESEN) (2022) [2]	This policy sets out clean energy targets up to 2036, including 25.5% for solar, and 12.8% for wind.
	Power Sector Law (2025)	The Electricity Sector Law (LESE) replaced the older 2014 Electricity Industry Law (LIE), while preserving core wholesale market structures (e.g. the Mercado Eléctrico Mayorista and CENACE). Under this law, the Mexican State, via CFE, must generate ≥54% of total grid electricity annually. Private generation is permitted through:Long-term production contracts exclusively for CFE, , Mixed-investment projects (CFE majority ownership, private minority partners), and Self-supply and distributed generation (e.g. ≤ 0.7 MW without permit), though surplus sales are regulated.
Transport	CO_2 emissions standards for light duty vehicles (2013) [2]	This policy sets out the following vehicle emissions standards for year 2016: Passenger cars: 135g to 180g CO_2/km (depending on vehicle size). Light duty trucks: 163g to 228g CO_2/km (depending on size).
Agriculture and Forestry	National Forestry Programme 2025 (2001) [1] [3]	This policy aims to conserve and restore the capacity of strategic forest areas to provide ecosystem services through an inclusive and participatory approach that contributes to guaranteeing a healthy environment for the development and well-being of the population.
	REDD+ National Strategy (2017) [1]	This policy sets out a target to reduce LULUCF emissions and achieve net-zero deforestation by 2030.
	Sowing Life Programme (Sembrando Vida) (2020) [1]	This policy sets out a target to plant 1 billion trees and pays farmers to plant fruit or timber trees on small plots of land to encourage industry in deprived rural areas. The impact is still unclear as planting big swaths of commercial species, sometimes on land that held native forests, can potentially end up increasing deforestation rates.
	Reform: The general law of sustainable forest development (2022) [1]	The reformed policy seeks to avoid granting support or economic incentives for agricultural and livestock activities in deforested areas or for those that promote land-use change.
	Support for sustainable forestry development (2021) [1] [3]	This policy supports the owners and inhabitants of forest areas to implement actions that contribute to the protection, conservation, restoration, and incorporation of sustainable forest management practices.
	Community Forest Management (CFM) programme and CONAFOR's Payment for Environmental Services (PES) programme (2022) [1]	Reduced CO_2 emissions from avoided deforestation. Increase carbon stocks.
	Management and enhancement of carbon sinks in protected natural areas under federal jurisdiction (2022) [1]	Improvement in management of federally protected natural areas and increase in federal conservation area.

Sector	Policies (marked with '(+)' when mentioned in the NDC document)	Description
	Sustainable Forest Development Program for Wellbeing 2025 (2025)[3)]	Seeks to support owners, landholders, and inhabitants of forest areas in Mexico in implementing actions for protection, conservation, restoration, and sustainable forest management of their lands. The program focuses on strengthening value chains and contributing to climate change adaptation and mitigation.

[1)] Not quantified in PBL IMAGE model projections. [2)] Not quantified in NewClimate Institute projections.
[3)] Not quantified in IIASA model projections.

Morocco

Table A-1914: Overview of key climate change mitigation policies in Morocco.

Sector	Policies [4)] (marked with '(+)' when mentioned in the NDC document)	Description
Cross-cutting	2030 National Climate Plan (2019)	This policy sets out various targets, including: - Renewable electricity capacity of 52% by 2030. - Reduce energy consumption by 15% by 2030. - 'Significantly' reduce fossil fuel subsidies. - Support afforestation and reforestation. - Governance measures: create a National Commission on Climate Change, enhance inter-sectoral coordination and reinforce the participation of NGOs in climate policy.
	Creation of a Strategic Committee for Sustainable Development (Decree 2.17.655) (2018) [1)]	This organization is in charge of the coordination of sustainable development policies, including the implementation of the National Strategy for Sustainable Development, which aims to make Morocco's economy 'green and inclusive' by 2030.
	Moroccan Climate Change Policy (MCCP) (2014) [1)]	This policy regulates the coordination and alignment of various sectoral and cross-sectoral national policies tackling climate change.
Energy Supply	National Energy Strategy (2009, updated 2012) (+) Morocco Integrated Wind Energy Programmes (2020) (2030) (+) Morocco Solar Plans (2020) (2030) (+) [2)] Morocco Hydroelectric Plan (2020) (2030) (+) [2)]	These policies include the following targets: - Renewable power capacity: 42% share in total capacity by 2020 and 52% by 2030. - Energy savings of 12–15% in 2020 and 20% in 2030. - Extension of national wind farms to total 1,467 MW by 2020 and 2,180 MW by 2030. - Extension of solar power capacity to 827 MW by 2020 and 4,000 MW by 2030 (both concentrated solar power plants & photovoltaic systems). - Extension of hydropower capacity by 1,098 MW by 2030.
Transport	High-speed train line between Rabat, Tangier and Casablanca (2018)	This policy sets out the upgrade of existing railway to high-speed train line completed in 2018.
	Extension of Casablanca tramway (2016)	This policy sets out the extension of Casablanca tramway by 45 km by 2025.
	Improvement of environmental standards for vehicles (2021) (+)	This policy sets out new environmental standards for vehicles.

Sector	Policies [4] (marked with '(+)' when mentioned in the NDC document)	Description
	Introduction of Euro 6 emission standards (2023) (+)	This policy introduces Euro 6 vehicle emission standards, which tighten limits on air pollutant emissions, to all new vehicles sold in the Moroccan market.
Industry	Energy efficiency program in the industry sector (2011)	This policy sets out energy efficiency programs for the industry, buildings and transport sector (excluding large energy-consuming industries).
Buildings	Energy efficiency program in the building sector (2009)	This policy sets out minimum requirements for new residential and commercial buildings.
	Energy efficiency program for public lighting (2009)	This policy sets out the instalment of new public lighting technologies.
Waste	National Strategy for the Reduction and Recovery of Waste (2019) (+)	This policy introduces a programme focusing on the mechanical-biological treatment and co-incineration of waste.
Agriculture and Forestry	Preservation and Sustainable Forest Management Strategy (2021)	This policy sets out a target of afforestation and regeneration of approximately 50,000 hectares of forest per year.
	Green Generation Strategy (2020) (+)	This policy sets out a plan for the sustainable management and general modernization of the agricultural sector and sets tree plantation targets.

[1] Not quantified in NewClimate Institute projections. [2] See Climate Action Tracker (Climate Action Tracker, 2023) for the implementation status. [3] Not quantified in IIASA model projections. [4] Not quantified in PBL IMAGE model projections.

Republic of Korea

Table A-2015: Overview of key climate change mitigation policies in the Republic of Korea.

Sector	Policies (marked with '(+)' when mentioned in the NDC document)	Description
Cross-cutting	Emissions Trading System (2015) [1]	This policy manages 68% of the national GHG emissions and covers nearly 600 companies from 23 sub-sectors. The emissions caps for Phase III (2021–2025) will be strictly set to be consistent with the annual target emissions from the 2030 Greenhouse Gas Reduction Roadmap.
Energy Supply	Renewable energy targets [1] 3rd Energy Master Plan (2019) 9th Basic Plan for Long-term Electricity Supply and Demand (2019)	These policies set out the following targets: - Share of renewables in total electricity generation: 20% by 2030 and 30–35% by 2040.[4] - Total 58.5 GW renewable capacity by 2030[2]: 2.1 GW hydropower, 17.7 GW wind, 33.5GW solar power, 1.7GW biomass, and 0.3GW waste capacity.
	Renewable Portfolio Standard (2012, 2021 update) [2]	This policy requires generation companies with a capacity over 500 MW to include a certain percentage of renewables. In 2021, the standards were raised, reaching 25% in 2026.

Sector	Policies (marked with '(+)' when mentioned in the NDC document)	Description
	5th Basic Plan for New and Renewable Energy (2019)	This policy sets out a target to reach 20.3% supply of new and renewable energy in total electricity generation by 2030, and 25.8% by 2034 (Renewable energy 22.2%, New energy 3.6%).
Transport	Renewable Fuel Standard (2013; 2020 update) [2)]	This policy mandates a biodiesel share in diesel of 3% from 2018 onwards. The 2020 update aims to improve share to approximately 5% in 2030. The update has not been yet quantified in our projections.
Agriculture and Forestry	2030 NDC Advance (2021) - Joint Ministries [2)]	This policy sets out a target to enhance the national carbon sinks from 22.1 $MtCO_2e$ in 2020, to 26.7 $MtCO_2e$ by 2030 including forest, ocean, and other natural sinks.
	2030 NDC Roadmap (2018) – updated [2) 3)] 1st National Carbon Neutrality and Green Growth Master Plan (Draft) (2023) - Joint Ministries [2) 3)]	The 2030 NDC Roadmap was revised in 2018, and the roadmap for the land use sector has been changed to the new joint ministries plan. In case of the LULUCF, the total emission reduction target of 26.7 $MtCO_2e$ by 2030 has not changed.
	6th Forest Master Plan (2018-2037) [2) 3)]	This policy sets out a target to increase the contribution of the LULUCF sink so that by 2030, it accounts for 10% of total emissions.
	2nd Comprehensive Plan for Improvement of Carbon Sinks (2018-2022, updated) [2) 3)] 3rd Comprehensive Plan for Improvement of Carbon Sinks (2023-2027) [2) 3)]	This policy sets out the following targets: - To increase national forest carbon stocks to 2.1 billion tCO_2 in 2022, compared to 1.8 billion tCO_2 in 2015. - To expand carbon storage in domestic harvested wood products (HWP) by up to 36 Mt by 2022, compared to 23 Mt in 2017. - 2027 expectation: increasing national total forest carbon sequestration by 28.26 $MtCO_2e$, 70,000 tCO_2e for new carbon sequestration sources using marginal area, 1.2 $MtCO_2e$ for using harvested wood products (HWPs), energy substitution 1.04 $MtCO_2e$ using forest biomass, reducing emission from forest fire 570,000 tCO_2e, 5M tCO_2e by foreign REDD+ activities. 2027 total 30 $MtCO_2e$ sequestration target.
	Forest Renaissance Promotion Strategy for forest management (2022-2027) [2) 3)]	This strategy aims to achieve a total of 32 $MtCO_2e$ of forest carbon sequestration (domestic: 25.5 $MtCO_2e$, foreign: 5 $MtCO_2e$, biomass: 1.5 $MtCO_2e$) until 2023. This target takes 10% of the NDC. This policy sets out the detailed strategies for the target as follows: - 1 million ha of forest restoration and afforestation in urban and deforested area and on idle land until 2027. - Apply forest tending on 319 thousand ha of forest area until 2027. - Enlargement of forest reserve up to 150 thousand ha until 2027. - Upgrade REDD+ pilot project in Cambodia, Myanmar and Laos to Subnational REDD+ and figure out new projects by adding the partner countries (e.g., Viet Nam, Peru, Mongolia).
	2nd Comprehensive Plan for Wood Use (2019-2024) [2)]	This policy sets out the following targets: To increase domestic wood self-sufficiency rate by 22.4% by 2024, compared to 19% in 2019. To expand the size of timber industry to $40 billion by 2024 by utilizing currently unused domestic forest biomass resources.
	2024 Implementation Plan for 3rd Rural Area Promotion Projects	This policy aims at reducing emissions from 12.2 $MtCO_2e$ to 9.7 $MtCO_2e$ until 2030 (20.5%). Application of biochar 0 in 2021 to 58,000 tCO_2e in 2030 and reducing 30% of methane emission until 2030.

Sector	Policies (marked with '(+)' when mentioned in the NDC document)	Description
	Master Plan (2023-2027) [2) 3)]	The 2024 implementation plan outlines procedures and schedules of the 3rd Rural Area Promotion Projects Master Plan.
	2050 Carbon Neutral Promotion Strategy of Agriculture and Food Sector (2021) [2)]	This policy aims at reducing emissions in the non-energy sectors by 28.3% by 2050 compared with 2018 estimates. This policy sets out targets to reduce emissions from rice production by 0.54 $MtCO_2e$, fertilizer use by 2.25 $MtCO_2e$, livestock waste treatments by 2.25 $MtCO_2e$.
	2050 Carbon Neutral Forest Sector Promotion Strategy (2021) [2) 3)]	This policy sets out a target of increasing the annual LULUCF removals by 23.6 $MtCO_2e$. This policy set out the following targets: - Increase forest plantations in idle land and urban area from 17 thousand ha to 61 thousand ha. - Afforestation of 288 thousand ha forest using carbon-efficient tree species. - Restore 11 thousand ha of forest by 2050. - Reduce the annual forest area damaged by disaster to 636 ha by 2050, compared to the expectation of 2,339 ha.
	4th Ocean and Fishery Sector Master Plan for Climate Change Response (2022-2026) [2) 3)]	This policy set out a target of sequestration by blue carbon around 1.362M tCO_2e. The targets by sector are: - Reduce 70% of carbon emissions from the Ocean and Fishery sector compared to 2018 until 2030 - Restore 105 km2 coastal salt marsh plant colonies until 2030 as a blue carbon - Create 530km^2 of marine forest until 2030 as a blue carbon
	4th Protection plan from environmental disruption caused by mining (2022-2026) [2) 3)]	This plan sets out financial investment of 20.9 billion KRW (about $15.2 million) for restoring forest damaged by mining. The policy aims to afforest 43.5 ha of land.
	2nd International Forest Cooperation Promotion Strategy (2023-2027) [1) 2) 3)]	The strategy has the aim of reducing forest related emissions in foreign countries by roughly 5 $MtCO_2e$.
	Food and Rural Affairs Business Plan (2022) [2)]	This policy sets out a target to reduce GHG emissions from Agriculture to below 18.0 $MtCO_2e$ by 2030 and 15.3 $MtCO_2e$ by 2050, compared to 20.4 $MtCO_2e$ in 2017.

[1)] Not quantified in NewClimate Institute projections. [2)] Not quantified in PBL IMAGE model projections. [3)] Not quantified in IIASA model projections. [4)] Not quantified separately in PBL IMAGE model projections, but achievement checked after implementation of other (related) targets.

Russian Federation

Table A-2116: Overview of key climate change mitigation policies in the Russian Federation.

Sector	Policies (marked with '(+)' when mentioned in the INDC document)	Description
Cross-cutting	Federal Law No. 261-FZ 'On energy saving and improvement of energy efficiency' (2012) [1)]	This law creates the general framework for energy efficiency in Russian Federation. It contains mandatory energy saving requirements for companies, a ban of inefficient incandescent light bulbs, and incentives for companies investing in energy efficiency. The "Energy Saving and Energy Efficiency" state program (2023) is being developed in accordance with the law

Sector	Policies (marked with '(+)' when mentioned in the INDC document)	Description
		and has set out a target to reduce the energy intensity of GDP by 35% in 2035 compared to 2019 levels.
	Regional energy savings programmes (Decree of July 31, 2014, No. 754) [1]	This policy provides subsidies and government financing to regions for improving energy-efficient technologies and energy conservation programmes.
	Social-economic development of the Russian Federation with low GHG emissions levels (Decree of October 21, 2021 No. 3052-r) [1]	This policy reiterates 2030 NDC target and outlines strategy to achieve carbon neutrality by 2060. The reductions are mostly bolstered by negative LULUCF emissions and increasing forest's carbon storage capacity. An accompanying action plan is being developed. Measures on the shorter term (to 2030) are covered through the "Initiative for the socio-economic development of the Russian Federation until 2030" (Decree of Octiber 6, 2021 No. 2816-r).
Energy Supply	Energy Strategy of the Russian Federation for the period up to 2035 (2020) [1]	This strategy outlines the expected development of Russia's energy sector for the next 15 years. The strategy indicates that Russia will continue to heavily support its fossil fuel industries and only briefly mentions renewables other than hydropower. It also sets new, less ambitious targets for limits on associated gas flaring.
Transport	Transport strategy until 2030 with a forecast up to 2035 (2021)	Target to reduce the energy consumption of the transport sector by 30% by 2030 by employing measures including vehicle standards, energy efficiency, alternative fuels, and electric vehicles.
	Concept for the development of production and use of electric motor transport in the Russian Federation for the period up to 2030 (2021) [1]	This strategy sets out the priority tasks for supporting the production of electric vehicles and stimulating EV demand through designated parking spaces, toll-free travel, and building charging infrastructure.
Industry	Investment tax credit for energy-efficient technologies and projects (Decree of June 17, 2015, No. 600) [1]	This policy provides investment tax loans to organisations that invest in eligible energy-efficient technologies or projects. The number of eligible technologies has increased from an original 4 to 56.
Buildings	Strategy for development of building materials sector for the period up to 2020 and 2030, adopted by Government Decree no. 868 (2016) [1]	This policy sets out a target of a 20% reduction in residential heat consumption per m^2 by 2030 relative to 2014.
	Strategy for the Development of the Construction Industry and Housing and Public Utilities of the Russian Federation until 2030 with a Forecast for the Period to 2035 (Decree of October 31, 2022 no. 3268) [1]	This strategy includes measures to improve the carbon footprint of the construction industry and improve energy efficiency by reducing heat energy losses in homes and during transmission. Another key measure is converting heat energy production to liquefied natural gas (LNG) to stimulate its domestic demand.
	On clarification of energy efficiency requirements for public procurement objects (Decree of April 21, 2018, No. 486 and December 31, 2009, No. 1221) [1]	This policy establishes energy efficiency requirements for public procurement objects, new and refurbished apartment buildings, and public and administrative buildings.
Agriculture and Forestry	National Strategy of Forestry Development by 2020 (2008) [1] [2]	This policy sets out a target to increase forest intensification and harvesting of wood by 5.8% per year compared to 2007.

Sector	Policies (marked with '(+)' when mentioned in the INDC document)	Description
Waste	Integrated system for handling municipal solid waste (2019) [1]	This project aims to further develop waste processing and disposal facilities to increase sorting and recycling rates and reduce the volume of waste sent to landfills and its related GHG emissions.

[1] Not quantified in PBL projections. [2] Not quantified in NewClimate Institute projections. [3] Small hydropower is not distinguished from hydropower in the TIMER model. The renewable share targets were not quantified separately but checked after implementation of capacity targets. [4] Not quantified separately in PBL projections, but achievement checked after implementation of other targets. [5] NewClimate Institute projections assume the 4.5% target will be reached in 2030 due to the slow progress.

Saudi Arabia

Table A-2217: Overview of key climate change mitigation policies in Saudi Arabia.

Sector	Policies [2] (marked with '(+)' when mentioned in the NDC document)	Description
Cross-cutting	Vision 2030 (updated in 2021)	This policy sets out to reform and diversify Saudi Arabia's oil-dependent economy was revised multiple times. The latest version, released in 2021, aims for 50% of electricity to be generated with renewable energy and 50% with fossil gas in 2030.
	5% VAT in fuel prices (2018) [1] [2]	This policy sets out a 5% VAT on fuels.
Energy Supply	National Renewable Energy Program (NREP) (2017,2019, revised 2021)	This is the policy through which the Ministry of Energy implements the latest 'Vision 2030' renewable energy target. Renewable power capacity is auctioned through competitive tenders.
Transport	Fossil fuel price reform (2017) [1] [2]	This policy sets out a new slower schedule for energy subsidy cuts. The plan is now to reach international gasoline parity prices, increase diesel prices up to 90% of international prices, and raise the price for other fuels between 2018 and 2025.
Buildings	Saudi Energy Efficiency Program (SEEP) (2012) [2]	This policy sets out efficiency labels for a range of household appliances and introduces standards for insulation materials.
Agriculture and Forestry	Greening Saudi Initiative (2022) [2]	This Initiative contributes to the target of planting 10 billion trees across Saudi Arabia.

[1] Not quantified in NewClimate Institute projections. [2] Not quantified in PBL IMAGE model projections.

South Africa

Table A-2318: Overview of key climate change mitigation policies in South Africa.

Sector	Policies (marked with '(+)' when mentioned in the NDC document)	Description
Cross-cutting	Carbon tax (2019) (+) [1)]	The carbon tax covers fossil fuel combustion emissions, industrial processes and product use emissions, and fugitive emissions such as those from coal mining.
	National Development Plan (2012) (+) [1) 2)]	This policy aims to eliminate poverty, reduce inequality, increase access to water and electricity.
	National Climate Change Response Policy (2011) (+) [1) 2)]	This policy aims to effectively manage climate change impacts and make a fair contribution to the global effort to stabilise GHG concentrations.
	Climate Change Act (2024) [2)]	Among other measures, includes adaptation strategies, and an obligation to determine a national GHG emissions trajectory and sectoral emissions targets.

Energy Supply	Integrated Resource Plan for electricity (supported by REIPP, Renewable Energy Independent Power Producer Programme) (2011; 2019 update) (+)	This policy sets out the following plans and targets:
		- Nuclear to remain stable at 1,860 MW throughout 2030.
		  ○ Extending lifetime of existing plant.
		  ○ The Government's intentions to support nuclear capacity in the future remain uncertain. Policy Position 8 of the IRP2019 emphasises the need for a 2.5 GW nuclear build programme, which is not reflected in the actual capacity planning until 2030.
		- Renewable electricity generation capacity targets:
		  ○ Hydropower to reach 4,600 MW by 2030 (adding 2,500 MW)
		  ○ Solar photovoltaic to reach 8,288 MW by 2030 (adding 6,000 MW beyond already committed/contracted capacity)
		  ○ Wind to reach 17,742 MW by 2030 (adding 14,400 MW beyond already committed/contracted capacity)
		- Concentrated solar power to reach 600 MW by 2030 (adding 300 MW, which is already contracted)
		  ○ Decommissioning of 5.4 GW of coal

Transport	Regulation Regarding Petroleum Products Specification and Standards for Implementation (2023) [1)]	This policy sets out blending requirements for biofuels: a maximum of 5% volume by volume biodiesel should be blended for low-sulphur grade diesel. For low-sulphur grade diesel B10, B20, B30, B40, B50 and B100 it should be 15%, 25%, 35%, 45%. 55%, and 100%, respectively.
Buildings	National Building Regulation (2011) [2)]	This policy sets out building codes and standards.
Agriculture and Forestry	National Forest Act (1998) [2) 3)]	This law aims at securing ecologically sustainable development and use of natural resources while promoting justifiable economic and social development. It also seeks to facilitate improved timber availability and secure supply of timber to ensure sustainability of the entire timber value chain.

Sector	Policies (marked with '(+)' when mentioned in the NDC document)	Description
	Strategic Plan for the Development of Agriculture, Forestry and Fisheries (2013) [2) 3)]	This policy aims to promote the conservation of forest biological diversity, ecosystems and habitats, while promoting the fair and equitable distribution of their economic, social, health and environmental benefits.
	Conservation Agriculture Policy (2021) [2) 3)]	Promote sustainability in the agriculture sector.
	DFFE Strategic Plan (2023) [2)]	Strategic Plan for 2017/2018 to 2023/24 provides for the afforestation of 15,000 ha, rehabilitation of 1,500 ha of state-owned forest, rehabilitation of grasslands and wetlands, and also includes the reduction in land degradation (40,452 ha).

[1)] Not quantified in NewClimate Institute projections. [2)] Not quantified in PBL IMAGE model projections [3)] Not quantified in IIASA model projections.

Thailand

Table A-2419: Overview of key climate change mitigation policies in Thailand.

Sector	Policies [3)] (marked with '(+)' when mentioned in the NDC document)	Description
Cross-cutting	Climate Change Master Plan (2015-2050) (2015) (+)	This policy sets out the following targets: 7–20% GHG emissions reductions by 2020 below BAU in the energy and transport sectors. Share of at least 25% of the total energy consumption from renewable energy sources by 2021. Reduction of energy intensity by at least 25% compared to BAU by 2030.
Energy Supply	Alternative Energy Development Plan and Power Development Plan (2015 (+); revised 2018) [1)]	This policy sets out the following targets: Increase of renewable energy shares to 30% of total energy consumption, 21% of power generation (plus an additional 9% from imported hydro), 35% of heat generation and 35% of transport fuels by 2037. The plans also project a reduction in coal-fired power generation (23% to 12%), an increase in gas-fired power generation (37% to 53%) and overall demand reduction of 6% in comparison to 2018.
	Energy Efficiency Plan (2015-36) (+) [1)]	This policy sets out a target to reduce energy intensity per GDP (in final energy terms) by 30% by 2036, as compared to 2010, with total savings of 90 TWh by 2036.
	Oil Plan (2015-2036) [1)]	This policy sets out measures to save fuel in the transportation sector and enhance ethanol and biodiesel consumption.
Transport	Environmentally Sustainable Transport System Plan (2013-30) (2012) (+) [1)]	This policy supports the improvement of rail infrastructure to reduce annual logistics costs and the annual energy bill by about 2% and 1% of GDP respectively.
	National EV Roadmap (2020)	This policy aims to transform the country into an EV hub within the ASEAN region.

Sector	Policies [3] (marked with '(+)' when mentioned in the NDC document)	Description
		It sets out a target to reach 250,000 EVs, 3,000 electric public buses, and 53,000 electric motorcycles by 2025 and for EVs to make up 30% of production by 2030.
	Excise tax on new vehicles (2016)	The tax varies between 20-50%, depending on the type of vehicle and CO_2 emissions intensity. It aims to help the adoption of cleaner and more efficient vehicles. The policy is expected to be revised in the upcoming years to push for quicker adoption of EVs, necessary to respect the EV Roadmap's objectives.
Industry	Energy Conservation and Promotion Act (1992, amended 2007) [1]	This law sets out a target to stabilise the share of energy demand for the three most energy-intensive sectors at 40% by 2030.
Buildings	Minimum Energy and High Energy Performance Standards (MEPS/HEPS) (2011) [1]	This policy sets out mandatory MEPS for air conditioners, refrigerators, self-ballasted compact fluorescent lamps and double-capped fluorescent lamps. HEPS for 28 appliances and types of equipment.
	Building energy code (2009) [1]	This policy sets out a target to reduce electricity use by large commercial buildings by > 50% by 2030 compared with BAU.
Agriculture and Forestry	National Forest Financing Strategy of Thailand (2021) [2]	This policy describes different strategies put in place to finance forestry activities.

[1] For policies in energy and industry sectors, see APEC (2022) for detailed assumptions. [2] Not quantified in IIASA model projections. [3] Not quantified in PBL IMAGE model projections.

Türkiye

Table A-2520: Overview of key climate change mitigation policies in Türkiye.

Sector	Policies	Description
Cross-cutting	Energy intensity target (Energy Efficiency Law) (2012) [1] [2]	Reduce primary energy intensity by 20% by 2023, compared to the 2008 level.
	Energy Efficiency Action Plan (2017) [1] [2]	Reduce primary energy consumption by 14% compared to the BAU scenario in 2023.
	Türkiye's 2022 Roadmap [1] [2]	Türkiye's Roadmap covers future planning for transformations in energy, transportation, industry, agriculture (and LULUCF) that are required to meet the country's 2053 Net Zero Emissions Target that was announced in 2021.
Energy Supply	National Energy Plan for 2020-2035 (2022) [1] [2]	The plan foresees an increase in the share of renewable energy in primary energy consumption from 16.7% in 2020 to 23.7% in 2035.
	11th Development Plan (2019) [1] [2]	Sets a target of 38.8% renewables in electricity production by 2023.
	Natural Resources Strategic Plan 2019-2023 (2019) [1]	This policy sets out the following renewable capacity targets by 2023: Wind (11.8 GW), hydroelectric (32 GW), geothermal (2.8 GW) and solar (10 GW).

Sector	Policies	Description
Agriculture and Forestry	Initiative to plant 252 million saplings by year end (2021) [1) 2)]	This initiative sets out a target to plant 252 million tree saplings by the end of 2021, as well as a target to plan 7 billion saplings by the end of 2023.

[1)] Not quantified in NewClimate Institute projections. [2)] Not quantified in PBL IMAGE model projections.

United Arab Emirates (UAE)

Table A-2621: Overview of key climate change mitigation policies in the UAE.

Sector	Policies [2)] (marked with '(+)' when mentioned in the NDC document)	Description
Cross cutting	Energy Strategy 2050 (2017; update in 2023) (+)	This policy sets out a target of reaching 50% of clean energy in the electricity mix by 2050, including renewables (44%) and nuclear (6%). In the transport sector, this policy sets out a target for deployment of EVs of 691,000 vehicles by 2030 and 3 million by 2050.
	Energy and water demand side management strategy (2021)	This policy sets out a target to reduce industrial energy consumption by 33% below a BAU scenario by 2050. It also includes measures for the buildings sector, including periodic updates of building codes, retrofits of inefficient buildings, higher penetration of efficient cooling, and introduction of PV and solar water heating. It targets a 51% reduction in buildings energy consumption by 33% below a BAU scenario by 2050.
Industry	National Hydrogen Strategy (2023)	This policy sets out targets for hydrogen production 7.4 mtpa in 2040 and 14.9 mtpa in 2050, out of which 47.5% green h2, 47.5% blue h2 and 5% pink h2.
Transport	Federal Decree Law No. 8 (2018) [1)]	This law sets out a 5% VAT tax for petrol and diesel, but crude oil and natural gas are exempted.
	Vehicle fuel quality standard (2021) (+) [1)]	This policy sets out a fuel quality standard of 10 ppm sulphur content and Euro 5 standards.
	Transport sector decarbonization plans (2023)	These measures are included in the UAE's LTS and include the following targets: Reaching EV sales of 99% of total sales by 2050 for light-duty vehicles, including taxis and private vehicles, 90% electrification of buses by 2050 and starting electrification of rail and conversion of diesel trains to use hydrogen staring in 2025.
Buildings	Green building codes in Abu Dhabi (2011) and Dubai (2014) [1)]	These policies include measures to support building retrofits, increasing the penetration of district cooling, and facilitating access to project finance.
	Energy Efficiency Standardization and Labelling Program (2019) [1)]	This policy covers a range of household goods and appliances.
Agriculture and Forestry	Federal Decree-Law No. (11) of 2024 On the Reduction of Climate Change Effects	It aims to reduce emissions and align with global efforts toward climate neutrality while strengthening ecosystems, economic sectors, and society to adapt to climate change. It promotes innovation, research, technology, and private sector engagement, supported by international cooperation mechanisms. Additionally, it emphasizes data sharing, regional collaboration, and the alignment of national and local strategies to enhance global competitiveness in climate action.

[1)] Not quantified in NewClimate Institute projections. [2)] Not quantified in PBL IMAGE model projections.

United Kingdom (UK)

Table A-2722: Overview of key climate change mitigation policies in the United Kingdom.

Sector	Policies [3)] (marked with '(+)' when mentioned in the NDC document)	Description
Cross-cutting	Climate Change Act (2008, 2019 update) (+)	This amendment in 2019 introduced a net-zero 2050 emissions target, strengthening its previous 2050 goal of at least an 80% GHG emissions reduction below 1990 levels by 2050. The sixth carbon budget proposed by the Committee on Climate Change (CCC) in December 2020 sets an emission reduction target for 2030 of 68% compared with 1990 levels. This target was subsequently adopted by the UK government.
	Ten Point Plan for a Green Industrial Revolution (2020) (+)	This policy defines several policy interventions in the energy, buildings, transport, nature, and technologies sectors, aiming to mobilise GBP 12 billion of government investment of which GBP 4 billion is new funding.
	National Infrastructure Strategy United Kingdom (2020)	This strategy presents an overview of multiple policy interventions and actions across different sectors, many of which also reflected in sectoral plans.
	Clean Growth Strategy (2017) (+)	This policy presents intended actions by the UK government to accelerate the shift to low carbon transport, deliver clean and flexible power, improve energy efficiency, and reduce emissions from households.
	Climate Change Levy (2001, 2018 update) (+)	Amended in 2018 to increase the tax levels over time, the Climate Change Levy taxes the supply of energy in the industry, commerce and public sectors (electricity, gas, solid fuel, liquefied gases).
	UK F-Gas regulation (2019) (+)	This regulation ensures the continuation of emission reductions beyond the UK's exit from the EU from January 2021 onwards of a 79% phase down of hydrofluorocarbons while further banning some F-gases and strengthening regulations related to leakage and repair.
	Environmental Act (2021) [2)]	This act aims to improve air and water quality, tackle waste, increase recycling, halt the decline of species, and improve the country's natural environment to make it more resilient to climate shocks.
Energy Supply	Energy White Paper (2020) (+) supported by Ten Point Plan for a Green Industrial Revolution (2020) (+)	This white paper outlines an expected 230 $MtCO_2e$ in cumulative emissions reductions by 2032, presenting several measures in the energy supply sector: - Announcement of UK Emissions Trading System (UK-ETS), which started operations in 2021 - Investments in nuclear power with a commitment to make a final investment decision of at least one nuclear power plant by 2024 and funding for research on advanced nuclear technology - Targeting 40 GW of offshore wind power capacity by 2030, incl. 1 GW of innovative floating offshore wind - Increase installation rate of electric heat pumps from 30,000 per year to 600,000 per year by 2028
Transport	Transport Decarbonisation Strategy (2021) (+)	This strategy outlines the government's intention end the sale of fossil fuel heavy goods vehicles (HGVs) by 2040, with sales of smaller

Sector	Policies [3] (marked with '(+)' when mentioned in the NDC document)	Description
		trucks banned by 2035. These dates have not been finally adopted as of August 2021. The strategy also presents plans to make domestic aviation net-zero emissions by 2040, with total aviation emissions to reach net-zero by 2050.
	National Bus Strategy (2021)	The strategy outlines the government's plans to enhance and expand the public bus networks across the United Kingdom, among other measures, by support the purchase of at least 4,000 new zero emission buses.
	Jet Zero strategy: delivering net zero aviation by 2050 (2022)	This strategy targets 10% sustainable aviation fuel (SAF) by 2030.
	Energy White Paper (2020) supported by Ten Point Plan for a Green Industrial Revolution (2020) (+)	These policies set out a ban on selling petrol and diesel vans and cars by 2030, with all vehicles being required to have a significant zero emissions capability from 2030 and be 100% zero emissions from 2035. Several investment packages to support the following: - Electrification of UK vehicles and their supply chains (GBP 1 billion) - Accelerate the roll out of charging infrastructure (GBP 1.3 billion) - Enhancement and renewal of rail networks and city public transport (more than GBP 10 billion) - Supporting clean maritime technology (GBP 20 million) and support the production of sustainable aviation fuels (GBP 15 million)
	UK Road Vehicle Emission Performance Standards (2019)	This regulation sets vehicle emission standards in line with EU regulations stipulating a limit of 95g CO_2/km for new passenger vehicles and 147g CO_2/km for vans from 2020 onwards with the subsequent changes: - From 2025 onwards, these will further be adjusted to a 15% emissions reduction below a 2021 baseline for both cars and vans - From 2030, these will further be adjusted to a 37.5% reduction below the 2021 baseline
	2023 Zero Emission Vehicle mandate (2024)	This mandate requires 80% of new cars and 70% of new vans sold in Great Britain to be zero emission by 2030, increasing to 100% by 2035.
Buildings	Heat and Buildings Strategy (2021) (+)	This strategy outlines the government's intention to make all new heating systems to be 'net-zero compatible' by 2035 through a ban of new natural gas boilers. In September 2023 the government announced that this will only cover around 80% of UK homes. In the meantime, the government aims to install 600,000 heat pumps per year by 2028 and reducing costs for heat pumps by 25-50% by 2030. The strategy further outlines action areas for supply chain improvements for domestic heat pump production, increased R&D, and hydrogen-based heating applications.
	Energy White Paper (2020) (+) supported by Ten Point Plan for a Green Industrial Revolution (2020) (+)	These policies include the following relevant measures: - Implementation of the Future Home Standard for new residential buildings (timeline not defined) - 600,000 heat pump installations per year by 2028

Sector	Policies [3] (marked with '(+)' when mentioned in the NDC document)	Description
		- Extension of Green Homes Grant Voucher and Local Authority Delivery schemes by one year (for 2021)
Industry	Industrial Decarbonisation Strategy United Kingdom (2021)	This strategy outlines the government's intention to reduce industry sector emissions by around 66% by 2035 and at least 90% by 2050, both compared to 2018 baseline. For this purpose, the strategy outlines several policy actions in the industry sector and non-GHG targets. On the latter, the government aims for 3 Mt CO_2 captured through Carbon Capture, Usage and Storage (CCUS) and around 20 TWh switching to low carbon fuels by 2030.
	Hydrogen Strategy United Kingdom (2021)	The strategy outlines the government's plans to develop hydrogen production and use in the UK. For 2030, among other targets, the government aims to achieve 1 GW of low carbon production capacity by 2025 and 5GW post-2030.
	Energy White Paper (2020) (+) supported by Ten Point Plan for a Green Industrial Revolution (2020) (+)	These policies include the following relevant measures: - GBP 1 billion up to 2025 to facilitate the deployment of CCUS in - two industrial clusters by the mid-2020s, and a further two clusters by 2030 - Target to develop 5GW of low-carbon hydrogen production capacity by 2030 and create a Net Zero Hydrogen Fund of GBP 240 million - Support of four low carbon clusters by 2030 and at least one fully net-zero cluster by 2040
	Industrial Decarbonisation and Energy Efficiency Action Plans (2017)	Voluntary commitments by the government, industry, and other parties to accelerate decarbonisation and to improve energy efficiency in the industry sector.
	Industrial Strategy (2017)	This strategy outlines an investment of GBP 162 million in innovation in low-carbon industry with a key focus on a reduction of energy use.
	Carbon Reduction Commitment Energy Efficiency Scheme (2010)	This mandatory scheme for large businesses aims to improve energy efficiency by mandating that businesses to measure their energy consumption and put in place cost-effective energy savings measures.
Agriculture and Forestry	Woodland Carbon Guarantee (2019) [1]	This policy sets out a £50 million incentive scheme to increase the planting trees rate across England. Working with Woodland Carbon Units (WCU), the scheme allows landowners to sell the carbon credits generated to either the government or to the open market up to 2055/56.
	England Trees Action Plan 2021 to 2024 (2021) [1]	This plan sets out the government's long-term vision for the treescape it wants to see in England by 2050 and beyond. It provides a strategic framework for implementing the Nature for Climate Fund and outlines over 80 policy actions the government is taking over this Parliament to help deliver this vision.
	England Peat Action Plan (2021) [1]	This document seeks to make the country's peatlands meet their Net Zero contribution, but also contribute to wider environmental goals. It calls for responsible management and enhancement of restoration efforts.
	Tree Planting Taskforce to oversee planting of millions of trees across our four nations	To protect and restore nature by conducting a rapid review of the Environmental Improvement Plan to meet legal commitments, including the Environment Act goal of achieving 16.5% tree cover by 2050. It has also pledged to reestablish international leadership on

Sector	Policies [3] (marked with '(+)' when mentioned in the NDC document)	Description
		nature and climate, advancing efforts to protect 30% of land and seas for nature by 2030 and appointing the first Special Representative for Nature to drive this agenda forward.

[1] Not quantified in IIASA model projections. [2] Not quantified in NewClimate Institute projections. [3] Not quantified in PBL IMAGE model projections.

United States of America (USA)

Table A-2823: Overview of key climate change mitigation policies in the USA.

Sector	Policies (marked with '(+)' when mentioned in the NDC document)	Description
Cross-cutting	One Big Beautiful Bill Act (2025)	This act phases out tax credits from the 2022 Inflation Reduction Act for the deployment of clean energy: specifically for the buildout of wind and solar generation capacity, the uptake of electric vehicles, and the scaling of domestic clean technology manufacturing. At the same time, the act rolls back regulation and expands tax incentives for oil and gas production. The act also rescinds unobligated federal funding for climate action and clean energy from the 2022 Inflation Reduction Act and the 2021 Infrastructure Investment and Jobs Act. The act removes the non-compliance mechanism for the Corporate Average Fuel Economy Standards, in effect annulling the standards.
	Inflation Reduction Act (2022) [2) 5)]	This act provides tax credits, grants, and loans (between USD 800bn and USD 1.2tn) to develop and deploy clean energy technologies and investments that are critical for decarbonising the economy. Renewable energy, energy storage, electric vehicles, energy efficiency upgrades, advanced manufacturing, and large-scale zero-emissions demonstration projects are investment foci of the act.
	Infrastructure Investment and Jobs Act (or Bipartisan Infrastructure Law) (2021) [1)]	This act comprises investments in a wide range of areas (totalling USD 1.2tn) that can indirectly enable the transition to a low-carbon economy, including the development of EV charging infrastructure, upgrading the power grid, and improving energy efficiency and electrification in buildings.
Energy Supply	New Source Performance Standards for Greenhouse Gas Emissions from New, Modified, and Reconstructed Fossil Fuel-Fired Electric Generating Units (2024) [4) 5)]	The emissions standards apply to new, modified, and reconstructed fossil gas-, oil-, coal-fired power plants. The standards mandate plants to capture 90% of emitted CO_2 using CCS by 2032.
	Emission Guidelines for Greenhouse Gas Emissions From Existing Fossil Fuel-Fired Electric Generating Units (2024) [4) 5)]	The emissions guidelines apply to existing coal-fired power plants that will operate beyond 2032. Plants that operate beyond 2039 need to capture 90% of emitted CO_2 using CCS by 2032. Plants that retired before 2039 must reduce emissions equivalent to co-firing 40% by natural gas.
	Methane waste prevention rule (2016) [2)]	This policy sets out specific standards for oil and gas production to reduce CH_4 emissions by 35% from 2014 levels by 2025. The November 2018 amendment removed requirements of the 2016 rule.

Sector	Policies (marked with '(+)' when mentioned in the NDC document)	Description
	Bipartisan Budget Act (2018) [1]	This act provides a tax credit for carbon dioxide captured through CCS (section 45Q), including carbon dioxide used for enhanced oil recovery.
	Renewable Portfolio Standards [1]	31 Renewable Portfolio Standards (RPS) in place at a state level.
Transport	Multi-Pollutant Emissions Standards for passenger cars, light-duty trucks, and medium-duty vehicles (2024) [4] [5]	The standards will phase-in in 2027 through 2032 and set fleetwide CO_2 emissions targets for 2032 for light-duty vehicles of 85g CO_2/mile and for medium-duty vehicles of 274g CO_2/mile. The standards set further targets for non-methane organic gases (NMOG), NO_X, PM, and other criteria pollutants.
	Corporate Average Fuel Economy Standards for Passenger Cars and Light Trucks for Model Years 2027 and Beyond (CAFE) (2024) [4] [5]	The standards require that fuel economy increase 2% per year for model years 2027-2031 for passenger cars and 2% per year for model years 2029-2031 for light trucks, achieving a light-duty fleetwide average of 50.4 mpg in 2031.
	Fuel Efficiency Standards for Heavy-Duty Pickup Trucks and Vans for Model Years 2030 and Beyond (2024) [4] [5]	The standards require that fuel efficiency increases 10% per year for model years 2030-2032 and 8% per year for model years 2033-2035, achieving a fleetwide average of 35mpg by 2035.
	Renewable Fuel Standard Program [1] [2]	This program requires a certain volume of renewable fuel be used to replace or reduce the quantity of fossil fuel in transportation and jet fuel (as well as home heating oil). Beginning in 2023, the program sets individual volume targets for specific renewable fuels.
Buildings	Better Buildings Challenge (commercial buildings) [2]	This policy sets out a target to increase energy efficiency in commercial and industrial buildings by 20% by 2020.
	Energy Star Tax credits for buildings (2022) [1]	Tax credits for energy efficiency products and solar energy systems.
	Building Energy Codes Program	This program sets out efficiency codes adopted at a state level.
Industry	CHIPS and Science Act (2022) [1] [2]	This act authorises USD 67bn in funding for the DOE to conduct scientific research and development of clean energy and advanced computing and manufacturing.
	Curbing emissions of hydrofluorocarbons (HFCs) (2018)	As of April 2018, the USA EPA has announced that it will not enforce HFC regulations under the Significant New Alternatives Policy Program (SNAP). In 2021, the Biden Administration requested the USA Senate's consent to ratify the Kigali Amendment, which aims to phase down hydrofluorocarbons (HFCs) worldwide.
	American Innovation and Manufacturing Act (AIM) (2021)	This Act directs the USA Environmental Protection Agency (EPA) to phase down the production and consumption of HFCs. The rule aims to gradually reduce the production and imports of HFCs by 85% over the following 15 years after its implementation (2021–2036).
Agriculture and Forestry	Forest Ecosystem Restoration and Hazardous Fuels Reduction Programs (2000) [1] [2] [3]	These programs set out a mix of actions to increase forest resilience, reduce wildfires, and increase the area of set aside forests.
	Healthy Forests Restoration Act of 2003 (Public Law 108–148) (2022) [1] [2] [3]	This Act aims to improve the capacity to conduct hazardous fuels reduction projects on National Forest System lands, to enhance efforts to protect watersheds and to address threats to forest and rangeland health, including catastrophic wildfire, across the

Sector	Policies (marked with '(+)' when mentioned in the NDC document)	Description
		landscape, and for other purposes. The Act notably seeks to enhance carbon sequestration capabilities.
	Plan to Conserve Global Forests: Critical Carbon Sinks (2021) [1) 2) 3)]	This plan sets out to Incentivize Forest and ecosystem conservation and forest landscape restoration; Catalyse private sector investment, finance, and action to conserve critical carbon sinks.
	The Forest Legacy and Community Forest Programs [1) 2) 3)]	The Forest Legacy Program (FLP) is a federally funded and state-administered program that supports efforts to protect private forest lands that are environmentally, economically and socially critical.
	Urban and Community Forestry Program [1) 2) 3)]	The Forest Service Urban & Community Forestry Program is a technical, financial, and educational assistance program, delivering nature-based solutions to ensure a resilient and equitable tree canopy.

[1)] Not quantified in PBL IMAGE model projections. [2)] Not quantified in NewClimate Institute projections. [3)] Not quantified in IIASA model projections. [4)] Assumed to be repealed in NewClimate Institute projections. [5)] Assumed to be repealed in PBL's projections.

Viet Nam

Table A-2924: Overview of key climate change mitigation policies in Viet Nam.

Sector	Policies [3] (marked with '(+)' when mentioned in the NDC document)	Description
Cross-cutting	Decision No. 2139/QD-TTg approving The National Climate Change Strategy (2011)	This strategy sets out a target to reduce 20% GHG emissions from agriculture; to increase forest coverage to 45%; hydropower plants' capacity reaches 20,000 MW+; to increase share of renewables to 11% by 2050; 90% of industry using cleaner production and reduction energy consumption.
	Decision 1393/QD-TTg implementing the Green Growth Strategy (2012) (+)	This strategy sets out a target to reduce intensity of GHG emissions per GDP unit by 1-1.5% per year until 2020 and between 1.5-2% between 2020 and 2050.
	Decision No. 896/QD-TTg on approving the National Strategy for Climate Change until 2050 (2022)	The Strategy reiterates the 1.5°C temperature goal. It also highlights the importance of achieving net zero emissions by 2050 as an essential goal for the world.
	Decision No. 942/QD-TTg on approving Action Plan for Methane Emissions Reduction by 2030 (2022)	The policy aims to reduce methane emissions across multiple sectors by at least 30% below 2020 levels by 2030, with specific reduction targets set for each sector. By 2025, emissions should not exceed 96.4 million metric tons of CO_2e, while by 2030, the goal is to limit emissions to 77.9 million metric tons of CO_2e.
	National Action Plan for Circular Economy by 2035 (2025)	Aims to shift the country toward sustainable production and consumption models, optimizing natural resource use, reducing waste, and enhancing environmental protection. It outlines strategies for integrating circular economy (CE) principles into industries such as agriculture, energy, manufacturing, construction, and waste management.
Energy Supply	Power Development Plan 8 (PDP8) (+) (2023)	Under PDP8, wind, solar, hydropower and biomass will provide 48% of Viet Nam's installed capacity by 2030, with this share rising to around 66-71% in 2050. PDP8 still allows the completion of eleven coal-fired power plants that were already included in the revised PDP7, but plans that by 2050, all coal power is phased out.
	Resolution No 55NQ/TW on the orientation of the National Energy Development Strategy of Viet Nam to 2030 (2020) (+) [1]	This policy sets out a target to scale down coal-fired power generation. It also outlines 15-20% proportion of renewables in the energy mix by 2030 and aims to reduce 15% of GHG emissions by 2030 and 20% by 2040 from an unspecified BAU.
	Decision No. 11/2017/QD-TTg (Solar support mechanism – Feed-in tariff) (2017) [1]	Although this decision has ended in 2019, it was amended in April 2020 and entered into force in July 2020 (Circular No. 18) and regulates the support mechanism (feed-in tariff) for solar installations.
Transport	Action Plan (2016-2020)	This plan sets out a target to mix at least 5% of bioethanol in gasoline and energy labelling for LDVs and motorcycles.
	Action programme on green energy transformation, reducing carbon and methane emissions in the transport sector (2022-2050) [1]	This programme sets out a transition roadmap for Viet Nam's transport sector, aiming for a complete green transport network with net-zero greenhouse gas emissions by 2050.
Buildings	National Energy Efficiency Programme (VNEEP) for the period of 2019 – 2030	This policy outlines mandatory energy labelling and minimum energy efficiency standards roadmap for equipment and appliances.

Sector	Policies [3] (marked with '(+)' when mentioned in the NDC document)	Description
Industry	National Energy Efficiency Programme (VNEEP) for the period of 2019 – 2030	This policy sets out energy savings targets for specific sectors, such as the chemical, cement and also for the new industrial parks.
Agriculture and Forestry	Forestry Law (2017) (+) [2]	This law regulates the management of forests.
	Tree Planting Plan (2020) [2]	This plan sets out the target to plant 1 billion trees by 2025.
	Decision No. 523/QD-TTg dated April 01, 2021 of the Prime Minister approving Viet Nam's forestry development strategy for the 2021-2030 period, with a vision toward 2050 (2021) [2]	This strategy sets out the following targets: The growth rate of forestry production value will be 5% to 5.5%/year; Planting of production forests will be about 340,000 ha/year by 2030; The value of incomes earned from production forests will increase 1.5 times by 2025 and twice per area unit by 2030, as compared to 2020; By 2025, the average income of ethnic minority people working in forestry will increase more than twice compared to 2020, etc.
	Sustainable forestry development programme by 2025 (2021) [2]	This policy sets out the following targets: Protecting the existing forest coverage in a sustainable manner and developing new areas in 2021-2025; strictly managing the transfer of forest use into other purposes, maintaining stably the national forest coverage at 42 per cent; while increasing productivity and forest quality to meet demands of materials for production and protection and environment protection, and to preserving biodiversity.
	National Plan to implement the Glasgow Declaration on Forests and Land Use (2025)	Aim to halt and reverse forest loss and land degradation by 2030. The plan, approved by Decision No. 993/QD-TTg, focuses on sustainable agricultural and rural development, greenhouse gas emission reduction, climate change adaptation, and biodiversity conservation. It includes specific targets for restoring degraded natural forests and certifying sustainable forest management areas.

[1] Not quantified in NewClimate Institute projections. [2] Not quantified in IIASA model projections. [3] Not quantified in PBL IMAGE model projections.

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