

# Country Profiles




The  
**Food and Land Use  
Coalition**





CORE PARTNER

UN Sustainable Development  
Solutions Network



# Argentina

Emissions	Climate Commitment Status
<p><b>0.8%</b> of global emissions<sup>1</sup></p>  <p>Agriculture = 119.5 MtCO<sub>2</sub>eq in 2012<sup>2</sup> or 35% of total emissions excluding LULUCF <span style="color: red;">↑</span> +9% since 1990</p> <p><b>90.5</b> MtCO<sub>2</sub>eq LULUCF emissions in 2012<sup>3</sup></p> <p>Net source of emissions</p>	<p><b>NDC update submitted<sup>4</sup></b> <span style="color: green;">✓</span></p> <p><b>LTS not yet submitted</b> <span style="color: red;">✗</span></p> <p><b>CAT rating<sup>5</sup></b> <span style="color: red;">HIGHLY INSUFFICIENT</span></p> <p><b>Net zero commitment:</b> Net zero emissions by 2050 (<a href="#">Climate Ambition Summit</a>); Net zero CO<sub>2</sub> by 2050 (<a href="#">unsubmitted long-term strategy</a>); Carbon neutral development by 2050 (Source: <a href="#">Second NDC</a>)</p> <p><b>Net zero details:</b></p> <p><b>Date:</b> 2050</p> <p><b>Legal status:</b> In policy document</p> <p><b>Gases covered:</b> Uncertain</p> <p><b>Credits allowed:</b> Uncertain</p>
How action-oriented are the NDCs in the food and land sector?	
Criteria	NDC Assessment
<p><b>Specific policy priorities or actions for agriculture and food:</b></p> <ul style="list-style-type: none"> <li>Agriculture is mentioned throughout the NDC, with a dedicated Agriculture, Livestock and Forests section under the description of Argentina's national context, the description of Argentina's 2030 vision and a table on priority lines for mitigation</li> <li>Food processing is highlighted as the main internal economic sector, with agriculture also being important</li> <li>Strong focus on the use of new technologies and the diversification of systems and productive practices to increase yields of livestock and agriculture production, without significant expansion of the effective land area cultivated; development of public policy instruments to generate incentives for innovative agricultural intensification, new technologies and practices</li> <li>Food security is stated as one of the 15 principles on which the NDC is based, that guide the design, implementation, monitoring and evaluating of all national adaptation and mitigation actions</li> <li>Focus on the sustainable management of agroecosystems</li> <li>Sustainable strengthening of the fishery subsector by 2030 mentioned</li> <li>Crop rotation, conservation of productive lands and territorial planning are noted as three priority axes</li> <li>Includes the submission of the Second Adaptation Communication, stating that the development of fire, flood and drought prevention for agriculture, livestock and forestry will be strengthened by 2030</li> <li>Vulnerabilities and adverse impacts of climate change on different regions are detailed, including an increase in agricultural pests and soil erosion, affecting agricultural-livestock productive activities</li> </ul>	<p><span style="color: green;">▲ ▲</span></p> <p><b>High:</b> NDC provides <b>indications of specific orientations</b> pursued by the Party in different agricultural and food sub-sectors</p>
<p><b>Specific policy priorities or actions for LULUCF:</b></p> <ul style="list-style-type: none"> <li>Forests are mentioned throughout the NDC, including a section on Agriculture, Livestock and Forests in the section on Argentina's 2030 vision, and through a list of priority lines for mitigation. Aim to have an integrated forestry sector, endowed with adequate industrial development that contributes to the growth of regional economies and contributes to the mitigation potential from forestry</li> <li>The NDC envisions that by 2030, ecosystem protection policies will have been enhanced (forests, wetlands, oceans, among others), deforestation will have been drastically reduced and cultivated forests will have been boosted; the area of forest plantations will be increased by 2030</li> <li>References to land-use planning activities across the country and emissions from the forestry and other land use subsector</li> <li>Aim to build capacity for the sustainable management and preservation of forests based on a social inclusion approach. Implementation of planning and monitoring policies is outlined</li> <li>Law No. 26,331 on Minimum Budgets for Environmental Protection of the Native Forests in place to substantially reduce the deforestation rate</li> <li>Afforestation, sustainable forest management and fire prevention are noted as three priority axes requiring high capacity building and/or financing needs</li> <li>On adaptation, NDC mentions the impact of climate change on forests and the deepening of fire and flood prevention measures by 2030</li> <li>Promotion of Ecosystem-based Adaptation (EbA) for the protection of ecosystems with significant carbon content, for carbon absorption and storage capacity; ecosystem-based adaptation is stated as one of the 15 principles on which the NDC is based, that guide the design, implementation, monitoring and evaluating of all national adaptation and mitigation actions</li> <li>The NDC describes a specific policy tied to actions and priorities in the sector, but no further information is provided on detailed targets</li> </ul>	<p><span style="color: green;">▲ ▲</span></p> <p><b>High:</b> NDC provides <b>indications of specific orientations</b> pursued by the Party in different agricultural and food sub-sectors</p>
<p><b>Key policies in the NDC supporting priorities:</b></p> <p><b>Agriculture and food:</b></p> <ul style="list-style-type: none"> <li>N/A</li> </ul> <p><b>LULUCF:</b></p> <ul style="list-style-type: none"> <li>National Law N ° 26,331 on Minimum Budgets for the Environmental Protection of Native Forests</li> <li>Forest Watershed Plans and Plans, Integrales Comunitarios (PIC),</li> <li>National Forest Management Plan with Integrated Livestock (MBGI)</li> </ul>	<p><span style="color: green;">▲ ▲</span></p> <p><b>High:</b> NDC lists <b>sectoral policies</b> related to <b>either</b> agriculture and food and LULUCF which are directly linked to actions/orientations</p>

Criteria		NDC Assessment
<b>Dedicated financial resources associated with policies or action:</b> <ul style="list-style-type: none"> <li>National Law No. 27,520 on Minimum Budgets for Adaptation and Mitigation to Global Climate Change (Climate Change Law) is mentioned but no further details on financing are provided</li> <li>National Law N° 26,331 on Minimum Budgets for the Environmental Protection of Native Forests is mentioned but no further details on financing are provided</li> <li>Information on financing needs for agriculture and forestry is provided in Table 43</li> </ul>		 <b>Medium:</b> NDC provides a <b>general indication</b> on existing or planned public funding to finance mitigation policies and actions in <b>either</b> agriculture and food or LULUCF
<b>Spatial information for mitigation provided in the NDC:</b> <ul style="list-style-type: none"> <li>No information related to mitigation</li> <li>One of the key adaptation measures is the planification of a territorial planning for the use of land in a sustainable way; this is also mentioned in National Law N° 27,520 on Minimum Budgets for Adaptation and Mitigation to Global Climate Change</li> <li>Aim to strengthen national scientific technological systems by 2030 to generate improvements in the mapping of climate vulnerabilities and risks</li> <li>Argentina's NDC includes targets for mapping the areas most vulnerable to desertification due to climatic factors in future scenarios, as well as maps of main vulnerabilities and threats of the Argentine Republic in the face of the adverse effects of climate change</li> <li>Territorial planning is mentioned throughout the NDC, with crop rotation, conservation of productive lands and territorial planning noted as three priority axes; the NDC notes that all levels of sub-national agencies will have instruments for territorial and environmental planning, which prioritise the conservation and sustainable use of natural resources and in particular, the efficient use of the soil</li> </ul>		 <b>High:</b> NDC includes a <b>map</b> that has the potential to guide land-use planning, if combined with other data layers or if <b>underpinned by a policy commitment</b> . E.g. Map of biological corridors
<b>Technology details provided in the NDC:</b> <ul style="list-style-type: none"> <li>The NDC references incentives and the development of new technologies towards innovative agricultural intensification and sustainable food systems; it has a strong focus on new technologies to increase production and yields and diversify production systems and practices without significant expansion of the effective land area cultivated</li> <li>Information on technology transfer needs for agriculture and forestry is provided in Table 43, including the need for the integration of the conservation of the environmental services of native forests with socio-economic development, through articulation of usage schemes and forest fire prevention, the development of sustainable and resilient management of agroecosystems, the development of instruments for the prevention and transfer of climate risk and emergency care in the agricultural production and measures that promote research, development and capacity building for adaptation to change climate in the agricultural sector</li> <li>While technological needs are often discussed in the NDC, the information remains at a generic level and no specific focus on a subsector of technologies is provided</li> </ul>		 <b>Medium:</b> NDC provides a <b>general indication of technological development needs or plans</b> related to agriculture, food or LULUCF
What specific policy measures are included in the NDCs regarding critical food and land transitions?		
Critical transition	Details	NDC Assessment
Healthy diets	<ul style="list-style-type: none"> <li>By 2030 the Argentine Republic will achieve inclusive, supportive, stable, federal, sovereign and dynamic social and economic development</li> <li>The main challenges to be addressed include the significant reduction of multidimensional and extreme poverty, the eradication of hunger and all forms of malnutrition, the increase of the resilience of people and social groups in vulnerable situations against to the adverse effects of climate change, etc</li> </ul>	 NDC provides inexplicit or unclear information on the critical transition (topic is mentioned, but not as a policy action)
Productive and regenerative agriculture	<ul style="list-style-type: none"> <li>Sector measures include sustainable and resilient management of agroecosystems that contribute to the achievement of food security and reduces the vulnerability of agricultural production and the resilience of agroecosystems.</li> <li>Carry out a sustainable and resilient management of agroecosystems that contribute to the achievement of food security in the face of the impacts of climate change</li> </ul>	 NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition

What specific policy measures are included in the NDCs regarding critical food and land transitions?		
Critical transition	Details	NDC Assessment
<b>Protecting and restoring nature</b>	<ul style="list-style-type: none"> <li>Dedicated section on biodiversity and ecosystems, local biodiversity of the country, promotion of biodiverse cities, measures to strengthen the adaptive management of natural resources with an ecosystem approach to ensure the conservation and sustainable use of biodiversity, including terrestrial and aquatic ecosystems</li> <li>The combination of programmed public policy measures and actions will result in a network of companies that will respect the human right to a healthy environment and the sustainable use and conservation of ecosystems, paying special attention to the close and sensitive relationship of these ecosystems with indigenous peoples, Afro-descendant communities, and rural and peasant populations. market mechanisms must guarantee full respect for national and provincial legislation, as well as be in harmony with the approaches and safeguards corresponding to REDD +</li> <li>By 2030, ecosystem protection policies (forests, wetlands, oceans, among others) will have been strengthened. In forestry, deforestation will have been drastically reduced and cultivated forests will have been boosted</li> <li>The implementation of Law No. 26,331 on Minimum Budgets for the Environmental Protection of Native Forests will be strengthened, the deforestation rate will be substantially reduced, and planning projects on a landscape scale will be increased through Forest Watershed Plans and Plans. Integrales Comunitarios (PIC), the National Forest Management Plan with Integrated Livestock (MBGI) will be implemented</li> <li>IBA 3 also included the REDD + Technical Annex 46, which describes the results achieved by the Argentine Republic in reducing emissions from deforestation for the 2014-2016 period</li> </ul>	<p>●</p> <p>NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition</p>
<b>A healthy and productive ocean</b>	<ul style="list-style-type: none"> <li>NDC emphasises measures to address climate change and the oceans. Develop sustainable and climate-resilient river and maritime transport infrastructure. Ecosystem protection policies (forests, wetlands, oceans, among others) will have been enhanced</li> <li>Regarding cooperation and marine scientific research activities, the Argentine Republic will generate valuable information to address climate change and the oceans. The work and scientific conclusions will serve as the basis for the planning and implementation of public policies that can address the particularities of the impacts of climate change on Argentine maritime spaces and coastal areas</li> <li>Mitigation goals for risk prevention and reduction in fishing production areas. By 2030, the fishing activity will be strengthened in a sustainable way, contributing to food security</li> </ul>	<p>●</p> <p>NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition</p>
<b>Diversifying protein supply</b>	<ul style="list-style-type: none"> <li>N/A</li> </ul>	<p>●</p> <p>NDC does not mention any detail on the critical transition</p>
<b>Reducing food loss and waste</b>	<ul style="list-style-type: none"> <li>Waste management, new infrastructure for the integral management of solid waste is carried out properly, within a framework of innovative practices using the circular economy as one of the available tools (food waste is included in solid waste)</li> <li>From the analysis of the composition of the municipal solid waste entered into the sanitary landfills, the content of potentially compostable materials with percentages greater than 40%</li> <li>By 2030, and with the aim of guaranteeing the minimisation of waste generation, improvements in sustainable consumption and production will be adopted, the circular economy will be promoted as one of the available tools, among others, to achieve sustainable development</li> </ul>	<p>●</p> <p>NDC provides inexplicit or unclear information on the critical transition (topic is mentioned, but not as a policy action)</p>
<b>Local loops and linkages</b>	<ul style="list-style-type: none"> <li>By 2030, and with the aim of guaranteeing the minimisation of waste generation, improvements in sustainable consumption and production will be adopted, the circular economy will be promoted as one of the available tools, among others, to achieve sustainable development</li> <li>Public policy instruments will be put into operation that generate incentives for innovative agricultural intensification, promoting the implementation of new technologies and practices, will be promoted to consolidate a resilient and sustainable food system</li> </ul>	<p>●</p> <p>NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition</p>
<b>Digital revolution</b>	<ul style="list-style-type: none"> <li>More effective tools for monitoring and planning will be adopted, and sustainable forest use will be promoted by adding greater competitiveness in timber and non-timber value chains; the strengthening of the National System for Early Warning and Emergency Monitoring (SINAME) will increase the probability and effectiveness of decision-making mechanisms for risk management</li> <li>Livestock and agriculture will have increased their yields due to the use of new technologies based on the knowledge economy, the diversification of production systems and practices, increasing production without significant expansion of the effective area of cultivated land; table 43 under technology transfer for agriculture and forestry. Financing and technology transfer for climate change mitigation and adaptation measures</li> </ul>	<p>●</p> <p>NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition</p>

Critical transition	Details	NDC Assessment
<b>Stronger rural livelihoods</b>	<ul style="list-style-type: none"> <li>The Argentine Republic will consider the economic and social consequences thereof, in such a way as to guarantee a just transition; by 2030, the environmental dimension will be incorporated into collective bargaining, regulations and compliance with worker protection protocols and various employment programmes, promoting the creation of new sustainable jobs; it will be guaranteed that workers have better access to resources (credits, technologies, adequate supplies and training, among others), which will allow them to adapt their activities to climate change</li> <li>Strengthen the design and maintenance of sustainable and climate-resilient transport infrastructure, including railways, highways (including bridges and tunnels), rural roads, ports and airports</li> <li>Addresses climate impacts in rural communities, e.g. flooding</li> </ul>	<p>●</p> <p>NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition</p>
<b>Gender and demography</b>	<ul style="list-style-type: none"> <li>Gender and inequality gaps are mainstreamed throughout the NDC, including in plans to develop gender-informed policies</li> <li>The development of gender and diversity mainstreaming processes can integrate mitigation and adaptation aspects, at least for sectors and / or measures with clear co-benefits, generating, among others: opportunities to improve women's income and LGBTI + in productive activities -including in the energy and agricultural sector-, improving access, inclusion and participation in decision-making -including various aspects of adaptation, such as public services, health, livelihoods, etc</li> <li>Ties were strengthened with the Ministry of Women, Gender and Diversity, in order to define lines of joint work; and contacts were initiated with technical teams from other countries that allowed the sharing of strategies, methods and instruments for the incorporation of the gender perspective; these actions also made it possible to establish potential work commitments at the regional level to advance on gender issues and climate policies</li> </ul>	<p>●</p> <p>NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition</p>

## What specific institutional arrangements for climate have countries put in place?

### Dedicated body in place:

- National Cabinet of Climate Change (GNCC) as a national governance body for coordinated and consensual design of climate change adaptation and mitigation policies
- National Information System on Climate Change, as a tool for central transparency and promotion of information

### Consultation processes:

- The NDC states that articulation and participation were central in the process of its preparation.
- Result of the joint work of 15 working groups of the national public administration, roundtables of federal articulation and working meetings with different sectors of society, with the coordination of the National Cabinet of Climate Change (GNCC)

## SUMMARY AND KEY OPPORTUNITIES FOR FUTURE NDCs AND NATIONAL IMPLEMENTATION


### Summary of the NDC analysis:





- The NDC rates "high" across many criteria, as it provides specific indications of actions and orientations in the food and land sector, that could allow national and subnational actors to identify any implementation gaps and inform the subsequent NDC development process. The implementation of the priority axes can also provide the basis of stocktaking in future NDCs.
- While the NDC provides information on planned orientations in the AFOLU sector across both mitigation and adaptation, in particular in the LULUCF sector, information is still broadly lacking on specific means of implementation, indicating how and when the foreseen actions will be put in place and subsequently evaluated.
- Specific national policies to support stated priorities are described for the LULUCF sector, with an indication of the role of Law N ° 26,331 on Minimum Budgets for the Environmental Protection of Native Forests in decreasing the annual percentage of loss of native forest. In the agriculture sector, while the NDC emphasises the development of public policy instruments to generate incentives for innovative agricultural intensification, new technologies and practices, it does not explicit these instruments and associated policies.
- With regards to funding, the NDC references the Laws on "Minimum Budgets for the Environmental Protection of Native Forests" and "Minimum Budgets for Adaptation and Mitigation to Global Climate Change (Climate Change Law)" but provides no further information on the type or duration of public investments to be mobilised, nor the mechanisms by which minimum budgetary funds are used to achieve specific orientations. Financing needs for different actions in the AFOLU sector are outlined in Table 43. This will enable national actors and future NDCs to track progress against needs.
- The need for and the use of spatial information is described in the NDC, but it is limited to adaptation. This includes potentially actionable maps for adaptation. The NDC notes that the Climate Change Law No. 27,520 strengthens national climate policy and subnational territorial planning.
- The need for technological innovation is mentioned, with few specific details on the means of development (institutionally or financially) of these innovations. No specific focus on a subsector of technologies is provided.
- The NDC addresses the implementation of key transitions well. It covers all the transitions except for the diversification of protein supply, with essential actions associated to seven of them. The NDC covers many cross-cutting issues and includes specific targets, policies, funding or ministries associated with the sector. In particular, it includes specific targets for reducing deforestation and reducing emissions from deforestation. It also discusses the strengthening of the implementation of Law No. 26,331 on Minimum Budgets for the Environmental Protection of Native Forests

## REFERENCES

- Source: ClimateWatch, accessed 30 August 2021. <https://www.climatewatchdata.org/compare-all-targets?>
- Source: UNFCCC, Greenhouse Gas Inventory Data, accessed 30 August 2021. [https://di.unfccc.int/detailed\\_data\\_by\\_party](https://di.unfccc.int/detailed_data_by_party)
- Source: UNFCCC, Greenhouse Gas Inventory Data, accessed 30 August 2021. [https://di.unfccc.int/detailed\\_data\\_by\\_party](https://di.unfccc.int/detailed_data_by_party)
- Submitted 29 December 2020. Source: UNFCCC. [https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Argentina%20Second/Argentina\\_Segunda%20Contribuci%C3%B3n%20Nacional.pdf](https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Argentina%20Second/Argentina_Segunda%20Contribuci%C3%B3n%20Nacional.pdf)
- Climate Action Tracker, accessed 15 September 2021. <https://climateactiontracker.org/countries/argentina/>

# Australia

Emissions	Climate Commitment Status								
<p><b>1.3%</b> of global emissions<sup>1</sup></p>  <p>Agriculture = 69.8 MtCO<sub>2</sub>eq in 2012<sup>2</sup> or 13% of total emissions excluding LULUCF ↓ -18% since 1990</p> <p><b>-26.3</b> MtCO<sub>2</sub>eq LULUCF emissions in 2012<sup>3</sup></p> <p>Net sink of emissions</p>	<p><b>2020 update submitted<sup>4</sup></b> ✓</p> <p><b>LTS not yet submitted</b> ✗</p> <p><b>CAT rating<sup>5</sup></b> <b>HIGHLY INSUFFICIENT</b></p> <p><b>Net zero commitment:</b> Net zero emissions "as soon as possible" (Source: <a href="#">2020 NDC</a>)</p> <p><b>Net zero details:</b></p> <table> <tr> <td>Date:</td><td>Uncertain</td></tr> <tr> <td>Legal status:</td><td>In policy document</td></tr> <tr> <td>Gases covered:</td><td>Uncertain</td></tr> <tr> <td>Credits allowed:</td><td>Uncertain</td></tr> </table>	Date:	Uncertain	Legal status:	In policy document	Gases covered:	Uncertain	Credits allowed:	Uncertain
Date:	Uncertain								
Legal status:	In policy document								
Gases covered:	Uncertain								
Credits allowed:	Uncertain								
How action-oriented are the NDCs in the food and land sector?									
Criteria	NDC Assessment								
<p><b>Specific policy priorities or actions for agriculture and food:</b></p> <ul style="list-style-type: none"> <li>The NDC provides a general update on newly announced policies and measures, and a snapshot of progress on policies and measures outlined in the 2015 NDC</li> <li>Strong focus on public investment in new and emerging low emission technologies and the substitution of "existing higher emission technologies and practices with cleaner, more efficient and lower cost technologies" and bringing these low emissions technologies to economic parity with existing technologies</li> <li>The NDC does not include a specific agriculture section but indicates soil carbon as one of five priority technologies</li> <li>As of September 2020, a new Technology Co-Investment Fund will be designed to support businesses in the agriculture, manufacturing, industrial and transport sectors to adopt technologies that increase productivity and reduce emissions</li> <li>Significant methodological improvements for measuring emissions from the sector are noted</li> </ul>	<p>▲ <b>Medium:</b> NDC mentions <b>generic orientations of actions, commitment or strategy</b> in the agriculture and food sector but provides little detail of specific sub-sector orientations pursued by the Party</p>								
<p><b>Specific policy priorities or actions for LULUCF:</b></p> <ul style="list-style-type: none"> <li>NDC does not explicitly mention mitigation from LULUCF but notes significant methodological improvements in the estimation of synthetic GHG and fugitive emissions, and emissions from LULUCF and wetlands</li> <li>Australia's low emissions technology investment priorities includes carbon capture and storage, which could have an impact on land use, but no details are provided</li> <li>Section on adaptation and resilience mentioning domestic investments of over \$15 billion in natural resource management, water infrastructure, drought and disaster resilience and recovery</li> </ul>	<p>○ <b>Low:</b> NDC does not cover LULUCF or <b>provides no detail on general or specific orientations</b>, or only in contextual manner</p>								
<p><b>Key policies in the NDC supporting priorities:</b></p> <p><b>Agriculture and food:</b></p> <ul style="list-style-type: none"> <li>The NDC mentions the Technology Co -Investment Fund that supports businesses in agriculture and other sectors, but this is not a sectoral policy</li> </ul> <p><b>LULUCF:</b></p> <ul style="list-style-type: none"> <li>N/A</li> </ul>	<p>○ <b>Low:</b> NDC does not list any sectoral policy related to agriculture, food or LULUCF</p>								
<p><b>Dedicated financial resources associated with policies or action:</b></p> <ul style="list-style-type: none"> <li>NDC mentions the Technology Co -Investment Fund that supports businesses in agriculture and other sectors</li> <li>Australia's Technology Investment Roadmap will guide the deployment of an estimated \$18 billion from the Australian Government and \$50 billion from the private sector; an unspecified part of this will be dedicated to soil carbon technologies</li> <li>Domestic investments with respect to adaptation of over \$15 billion in natural resource management, water infrastructure, drought and disaster resilience and recovery, including \$369 million in climate science and adaptation research and services</li> </ul>	<p>▲ <b>Medium:</b> NDC provides a <b>general indication</b> on existing or planned public funding to finance mitigation policies and actions in <b>either agriculture and food or LULUCF</b></p>								
<p><b>Spatial information for mitigation provided in the NDC:</b></p> <ul style="list-style-type: none"> <li>N/A</li> </ul>	<p>○ <b>Low:</b> NDC does not <b>provide any information on spatial planning to support adaptation or mitigation actions in the food and land sectors</b> in the form of maps or indications of spatial data</p>								

Criteria		NDC Assessment
<b>Technology details provided in the NDC:</b> <ul style="list-style-type: none"> <li>The Technology Co-Investment Fund will support businesses in the agriculture, manufacturing, industrial and transport sectors to adopt technologies that increase productivity and reduce emissions</li> <li>The first Low Emissions Technology Statement was released on 22 September 2020 and includes soil carbon as one of the 5 key priorities</li> <li>Australia's Technology Investment Roadmap will guide the deployment of an estimated \$18 billion from the Australian Government and \$50 billion from the private sector; an unspecified part of this will be dedicated to soil carbon technologies</li> </ul>		 <b>Medium:</b> NDC provides a <b>general indication of technological development needs or plans</b> related to agriculture, food or LULUCF
What specific policy measures are included in the NDCs regarding critical food and land transitions?		
Critical transition	Details	NDC Assessment
Healthy diets	<ul style="list-style-type: none"> <li>N/A</li> </ul>	 NDC does not mention any detail on the critical transition
Productive and regenerative agriculture	<ul style="list-style-type: none"> <li>New Technology Co-Investment Fund to support businesses in the agriculture, manufacturing, industrial and transport sectors to adopt technologies that increase productivity and reduce emissions</li> </ul>	 NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition
Protecting and restoring nature	<ul style="list-style-type: none"> <li>N/A</li> </ul>	 NDC does not mention any detail on the critical transition
A healthy and productive ocean	<ul style="list-style-type: none"> <li>N/A</li> </ul>	 NDC does not mention any detail on the critical transition
Diversifying protein supply	<ul style="list-style-type: none"> <li>N/A</li> </ul>	 NDC does not mention any detail on the critical transition
Reducing food loss and waste	<ul style="list-style-type: none"> <li>N/A</li> </ul>	 NDC does not mention any detail on the critical transition
Local loops and linkages	<ul style="list-style-type: none"> <li>N/A</li> </ul>	 NDC does not mention any detail on the critical transition
Digital revolution	<ul style="list-style-type: none"> <li>New Technology Co-Investment Fund to support businesses in the agriculture, manufacturing, industrial and transport sectors to adopt technologies that increase productivity and reduce emissions. Additional listed measures to support decarbonisation include a Carbon Capture, Use and Storage Development Fund to support investment in pilot carbon capture projects.</li> </ul>	 NDC provides inexplicit or unclear information on the critical transition (topic is mentioned, but not as a policy action)
Stronger rural livelihoods	<ul style="list-style-type: none"> <li>N/A</li> </ul>	 NDC does not mention any detail on the critical transition
Gender and demography	<ul style="list-style-type: none"> <li>N/A</li> </ul>	 NDC does not mention any detail on the critical transition

## What specific institutional arrangements for climate have countries put in place?

### Dedicated body in place:

- A Technology Investment Advisory Council comprising experts from business, investment and the research community will advise the development of annual Low Emissions Technology Statements to support the goals of the Technology Investment Roadmap

### Consultation processes:

- No information

## SUMMARY AND KEY OPPORTUNITIES FOR FUTURE NDCs AND NATIONAL IMPLEMENTATION

### Summary of the NDC analysis:


- The NDC provides few and generic indications of actions to be taken in the food and land sector. Only two orientations are mentioned: (1) a focus on soil carbon as one of the key priority areas for technology development, and (2) the development of a Technology co-investment Fund to help businesses across sectors, including agriculture. No orientations are provided in the LULUCF sector.
- No policies are mentioned beyond a generic description of the Technology Investment Fund to support businesses in the agriculture, manufacturing, industrial and transport sectors to adopt technologies that increase productivity and reduce emissions. No additional details are provided.
- No mention is made of the use of spatial planning or spatial information.
- Information is provided on domestic investments for adaptation as well as soil carbon technologies, though no further detail is provided on means to finance the reduction of emissions or increase of sinks in the food and land sector.
- The NDC does not address key transitions well. While the NDC addresses agriculture, technology and financing, it provides little detail on specific targets, indicators and policies.

## REFERENCES

1. Source: ClimateWatch, accessed 30 August 2021. <https://www.climatewatchdata.org/compare-all-targets?>
2. Source: UNFCCC, Greenhouse Gas Inventory Data, accessed 30 August 2021. [https://di.unfccc.int/detailed\\_data\\_by\\_party](https://di.unfccc.int/detailed_data_by_party)
3. Source: UNFCCC, Greenhouse Gas Inventory Data, accessed 30 August 2021. [https://di.unfccc.int/detailed\\_data\\_by\\_party](https://di.unfccc.int/detailed_data_by_party)
4. Submitted 31 December 2020. Source: UNFCCC. <https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Australia%20First/Australia%20NDC%20recommunication%20FINAL.PDF>
5. Climate Action Tracker, accessed 15 September 2021. <https://climateactiontracker.org/countries/australia/>



# Brazil

Emissions	Climate Commitment Status
<p><b>2.9%</b> of global emissions<sup>1</sup></p>  <p>Agriculture = 439.2 MtCO<sub>2</sub>eq in 2016<sup>2</sup> or 43% of total emissions excluding LULUCF <span style="color: red;">↑</span> +53% since 1990</p> <p><b>290.9</b> MtCO<sub>2</sub>eq LULUCF emissions in 2016<sup>3</sup></p> <p>Net source of emissions</p>	<p><b>2020 update submitted<sup>4</sup></b> <span style="color: green;">✓</span></p> <p><b>LTS not yet submitted</b> <span style="color: red;">✗</span></p> <p><b>CAT rating<sup>5</sup></b> <span style="color: red;">HIGHLY INSUFFICIENT</span></p> <p><b>Net zero commitment:</b> Indicative long-term objective of reaching climate neutrality in 2060 (Source: <a href="#">Updated NDC</a>)</p> <p><b>Net zero details:</b></p> <p><b>Date:</b> 2060</p> <p><b>Legal status:</b> In policy document</p> <p><b>Gases covered:</b> Uncertain</p> <p><b>Credits allowed:</b> Uncertain, probably yes ("the year in which climate neutrality may be achieved, will, however, depend on the proper functioning of the market mechanisms provided for in the Paris Agreement")</p>
How action-oriented are the NDCs in the food and land sector?	
Criteria	NDC Assessment
<p><b>Specific policy priorities or actions for agriculture and food:</b></p> <ul style="list-style-type: none"> <li>The NDC does not include a specific agriculture section, but information is provided in the form of the description of a specific policy, the Low Carbon Agriculture Plan (ABC)</li> <li>The Low Carbon Agriculture Plan (ABC) is described as allocating more than R\$ 17 billion (\$3 billion USD) to various mitigation measures in the agricultural and animal husbandry sector, including recovery of degraded pastures; biological nitrogen fixation, increased accumulation of soil organic matter, no tillage system, crop-livestock-forestry integration and agroforestry systems, and forest planting</li> </ul>	<p><span style="color: green;">▲ ▲</span></p> <p><b>High:</b> NDC provides <b>indications of specific orientations</b> pursued by the Party in different agricultural and food sub-sectors</p>
<p><b>Specific policy priorities or actions for LULUCF:</b></p> <ul style="list-style-type: none"> <li>The NDC does not explicitly mention mitigation from LULUCF but notes that Brazil has one of the world's most protective land-use legislations, requiring landowners to set aside 20-80% of their properties' area for preservation to conserve riparian forests and other fragile ecosystems; it specifies that protected areas, mandatorily set aside areas, and conserved areas account for over 60% of the country's territory</li> <li>The mitigation measures from Brazil's Low Carbon Agriculture Plan (ABC) mentioned in the NDC include agroforestry systems, forest planting, in addition to other mitigation measures in the agriculture sector</li> <li>The NDC places a strong focus on the importance of voluntary cooperation mechanisms; Brazil's Floresta+ Programme, which provides the framework for the payment of environmental services, includes a component that refers to the voluntary carbon market, to foster investments in forest conservation projects</li> <li>On adaptation, the NDC highlights that as of 2021, Brazil will require at least US\$ 10 billion per year to address the numerous challenges it faces, including the conservation of native vegetation in its various biomes</li> <li>While the NDC mentions a sectoral policy partially concerning the LULUCF sector, it provides little detail on actions in specific sub-sectors</li> </ul>	<p><span style="color: green;">▲</span></p> <p><b>Medium:</b> NDC mentions <b>generic orientations of actions, commitment or strategy</b> in the LULUCF sector but provides little detail of specific sub-sector orientations pursued by the Party</p>
<p><b>Key policies in the NDC supporting priorities:</b></p> <p><b>Agriculture and food:</b></p> <ul style="list-style-type: none"> <li>Low Carbon Agriculture Plan (ABC)</li> </ul> <p><b>LULUCF:</b></p> <ul style="list-style-type: none"> <li>Low Carbon Agriculture Plan (ABC)</li> <li>Floresta+ Programme</li> </ul>	<p><span style="color: green;">▲ ▲ ▲</span></p> <p><b>Very high:</b> NDC lists <b>sectoral policies</b> related to <b>both</b> agriculture and food and LULUCF which are <b>directly linked to actions/orientations</b></p>
<p><b>Dedicated financial resources associated with policies or action:</b></p> <ul style="list-style-type: none"> <li>Brazil's Low Carbon Agriculture Plan (ABC) is mentioned, allocating more than R\$ 17 billion (\$3 billion USD) to various mitigation measures in the agricultural and animal husbandry sector. The plan includes recovery of degraded pastures; biological nitrogen fixation, increased accumulation of soil organic matter, no tillage system, crop-livestock-forestry integration and agroforestry systems, and forest planting.</li> <li>NDC references the need to foster investments in forest conservation projects</li> </ul>	<p><span style="color: green;">▲ ▲</span></p> <p><b>High:</b> NDC provides <b>specific details</b> (including amounts) on existing or planned public funding to finance mitigation policies and actions in <b>either agriculture and food or LULUCF</b></p>
<p><b>Spatial information for mitigation provided in the NDC:</b></p> <ul style="list-style-type: none"> <li>N/A</li> </ul>	<p><span style="color: red;">○</span></p> <p><b>Low:</b> NDC does not provide <b>any information on spatial planning to support adaptation or mitigation actions in the food and land sectors</b> in the form of maps or indications of spatial data</p>

Criteria		NDC Assessment
<b>Technology details provided in the NDC:</b> <ul style="list-style-type: none"> <li>N/A</li> </ul>		○ <b>Low:</b> NDC does not provide any detail on technological innovation related to the agriculture, food and land sectors
What specific policy measures are included in the NDCs regarding critical food and land transitions?		
Critical transition	Details	NDC Assessment
Healthy diets	<ul style="list-style-type: none"> <li>N/A</li> </ul>	● NDC does not mention any detail on the critical transition
Productive and regenerative agriculture	<ul style="list-style-type: none"> <li>The Low Carbon Agriculture Plan (ABC) has allocated over R\$ 17 billion to a wide range of mitigation measures in the agricultural and animal husbandry sector, such as no tillage system; crop-livestock-forestry integration and agroforestry systems; and forest planting</li> </ul>	● NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition
Protecting and restoring nature	<ul style="list-style-type: none"> <li>Brazil has 30% of its territory covered by protected areas, comprising both Conservation Units and Indigenous Peoples' Lands; it also has one of the world's most protective land-use legislations, which requires landowners to set aside for preservation between 20% and 80% of their respective properties' area, in addition to conserving riparian forests and other fragile ecosystems</li> <li>Protected areas, together with areas mandatorily set aside for preservation in private farms, total 50% of the national territory; put together, protected areas, mandatorily set aside areas and conserved areas amount to more than 60% of the Brazilian territory</li> </ul>	● NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition
A healthy and productive ocean	<ul style="list-style-type: none"> <li>N/A</li> </ul>	● NDC does not mention any detail on the critical transition
Diversifying protein supply	<ul style="list-style-type: none"> <li>N/A</li> </ul>	● NDC does not mention any detail on the critical transition
Reducing food loss and waste	<ul style="list-style-type: none"> <li>N/A</li> </ul>	● NDC does not mention any detail on the critical transition
Local loops and linkages	<ul style="list-style-type: none"> <li>N/A</li> </ul>	● NDC does not mention any detail on the critical transition
Digital revolution	<ul style="list-style-type: none"> <li>N/A</li> </ul>	● NDC does not mention any detail on the critical transition
Stronger rural livelihoods	<ul style="list-style-type: none"> <li>N/A</li> </ul>	● NDC does not mention any detail on the critical transition
Gender and demography	<ul style="list-style-type: none"> <li>Brazilian Constitution establish ample rights and guarantees for all Brazilian citizens, paying due attention to the special needs of women and indigenous peoples; Brazil is also a party to the ILO Convention 169 on Indigenous and Tribal Peoples</li> </ul>	● NDC provides inexplicit or unclear information on the critical transition (topic is mentioned, but not as a policy action)

## What specific institutional arrangements for climate have countries put in place?

### Dedicated body in place:

- Inter-ministerial Committee on Climate Change

### Consultation processes:

- The institutional interaction between government and civil society took place through the Brazilian Forum on Climate change

## SUMMARY

### Summary of the NDC analysis:

- While the NDC rates "high" across many categories, it lacks detail compared to other NDCs with the same rating.
- The bulk of the information on actions in the AFOLU sector comes from two sentences on the "Low Carbon Agriculture Plan (ABC)". In this mention the NDC provides some specific orientations for the agricultural sector, and vague, generic orientations for the LULUCF sector, mentioning reforestation while not addressing deforestation for example.
- The NDC mentions two policies tied to the agriculture and land use sector, and it rates "very high" in this category. However, it still provides little detail on how these policies will support specific actions in the field compared to other NDCs with the same rating.
- The NDC provides specific indications on funding allocated to the Low Carbon Agriculture Plan, although it does not provide further detail on the distribution between the agriculture and the land use and forestry component.
- No detail is provided on the need for and use of spatial information and the use of technology to drive change.
- The NDC only addresses three of the critical transitions analysed. It discusses its land-use legislations which requires landowners to set aside for preservation between 20% and 80% of their respective properties' area, in addition to conserving riparian forests and other fragile ecosystems.










## REFERENCES

1. Source: ClimateWatch, accessed 30 August 2021. <https://www.climatewatchdata.org/compare-all-targets?>
2. Source: UNFCCC, Greenhouse Gas Inventory Data, accessed 30 August 2021. [https://di.unfccc.int/detailed\\_data\\_by\\_party](https://di.unfccc.int/detailed_data_by_party)
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4. Submitted 9 December 2020, including Explanatory letter; Source: UNFCCC. [https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Brazil%20First/Brazil%20First%20NDC%20\(Updated%20submission\).pdf](https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Brazil%20First/Brazil%20First%20NDC%20(Updated%20submission).pdf) and [https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Brazil%20First/Explanatory%20Letter\\_Brazil.pdf](https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Brazil%20First/Explanatory%20Letter_Brazil.pdf)
5. Climate Action Tracker, accessed 15 September 2021. <https://climateactiontracker.org/countries/brazil/>



# Canada

Emissions	Climate Commitment Status								
<p><b>1.6%</b> of global emissions<sup>1</sup></p>  <p>Agriculture = 59.1 MtCO<sub>2</sub>eq in 2019<sup>2</sup> or 8% of total emissions excluding LULUCF  ↑ +26% since 1990</p> <p><b>9.9</b> MtCO<sub>2</sub>eq LULUCF emissions in 2019<sup>3</sup></p> <p>Net source of emissions</p>	<p><b>2020 update submitted<sup>4</sup></b> ✓</p> <p><b>LTS submitted in 2016<sup>5</sup></b> ✓</p> <p><b>CAT rating<sup>6</sup></b> <b>HIGHLY INSUFFICIENT</b></p> <p><b>Net zero commitment:</b> Achieve net-zero greenhouse gas emissions by the year 2050 (Source: <a href="#">Canadian Net Zero Accountability Law</a> and <a href="#">Leaders Summit on Climate</a>)</p> <p><b>Net zero details:</b></p> <table> <tr> <td>Date:</td><td>2050</td></tr> <tr> <td>Legal status:</td><td>In law</td></tr> <tr> <td>Gases covered:</td><td>All greenhouse gases</td></tr> <tr> <td>Credits allowed:</td><td>Uncertain</td></tr> </table>	Date:	2050	Legal status:	In law	Gases covered:	All greenhouse gases	Credits allowed:	Uncertain
Date:	2050								
Legal status:	In law								
Gases covered:	All greenhouse gases								
Credits allowed:	Uncertain								
How action-oriented are the NDCs in the food and land sector?									
Criteria	NDC Assessment								
<p><b>Specific policy priorities or actions for agriculture and food:</b></p> <ul style="list-style-type: none"> <li>Specific actions and policies in the agriculture and food sector are included, as well as investments affecting this sector; in particular, the document details specific actions to be undertaken under Canada's Strengthened Climate Plan:</li> </ul> <ol style="list-style-type: none"> <li>Further reduce emissions in the agricultural sector by: <ul style="list-style-type: none"> <li>investing \$165.7 million to support clean technologies in the agriculture sector;</li> <li>supporting on-farm climate action (e.g., improve nitrogen management, increase adoption of cover cropping) through increased investments in agricultural climate solutions;</li> <li>setting a national emissions reduction target for emissions from fertilisers of 30% below 2020 levels by 2030</li> </ul> </li> <li>Provide climate action programmes for farmers, including the \$185 million Agricultural Climate Solutions Programme and the \$165 million Agricultural Clean Technology Programme with an additional \$200 million to launch immediate, on-farm climate action, targeting projects that accelerate emission reductions by improving nitrogen management, increasing adoption of cover cropping, and normalizing rotational grazing</li> </ol> <ul style="list-style-type: none"> <li>Sustainable agricultural management is also mentioned as a key action at the subnational level in the provinces of Manitoba and Prince Edward Island</li> <li>Regarding adaptation, the province of Saskatchewan's focus on climate resilience and adaptation includes a focus on Natural systems related to "how we grow crops, harvest forests and protect water systems"</li> </ul>	<p>▲ ▲ ▲</p> <p><b>Very high:</b> NDC provides <b>specific orientations</b> pursued by the Party in different agricultural and food sub-sectors, including specific targets <b>and means of implementation (such as policies or funding associated to them)</b></p>								
<p><b>Specific policy priorities or actions for LULUCF:</b></p> <ul style="list-style-type: none"> <li>The NDC does not have a dedicated LULUCF sector but lists specific actions, policies and investments. Exhaustive detail is given on the carbon accounting for LULUCF</li> <li>The document details specific actions to be undertaken under Canada's Strengthened Climate Plan:</li> </ul> <ol style="list-style-type: none"> <li>Invest more than \$3 billion over 10 years to plant two billion trees. To further boost carbon sequestration, Canada is investing \$631 million to restore and enhance wetlands, peatlands, grasslands and agricultural lands, as well as to improve land management practices, and conserve carbon-rich ecosystems.</li> <li>Increase funding for Indigenous Protected and Conserved Areas and Indigenous Guardians programmes with a portion of the recent investments of \$2.3 billion in Canada's Nature Legacy Initiative, to help address the biodiversity crisis, fight climate change, and protect and create jobs.</li> </ol> <ul style="list-style-type: none"> <li>The Government of Canada is committed to protecting 25% of the land and 25% of the oceans in Canada by 2025 and working towards 30% of each by 2030</li> <li>The province of Manitoba commits to investing annually in carbon sinks with extensive fiscal supports for forestry management, tree planting programmes, permanent cover and construction of wetlands.</li> <li>Regarding adaptation, the province of Saskatchewan's focus on climate resilience and adaptation includes a focus on Natural systems related to "how we grow crops, harvest forests and protect water systems"</li> </ul>	<p>▲ ▲ ▲</p> <p><b>Very high:</b> NDC provides <b>specific orientations</b> pursued by the Party in different LULUCF sub-sectors, including specific targets <b>and means of implementation (such as policies or funding associated to them)</b></p>								
<p><b>Key policies in the NDC supporting priorities:</b></p> <p><b>Agriculture and food:</b></p> <ul style="list-style-type: none"> <li>A Healthy Environment and a Healthy Economy - Canada's Strengthened Climate Plan (including specific actions in the AFOLU sector described in the previous columns)</li> <li>Agricultural Climate Solutions Programme</li> <li>Agricultural Clean Technology Programme</li> </ul> <p><b>LULUCF:</b></p> <ul style="list-style-type: none"> <li>A Healthy Environment and a Healthy Economy - Canada's Strengthened Climate Plan (including specific actions in the AFOLU sector described in the previous columns)</li> <li>While Canada's Strengthened Climate Plan states actions in the sector, it is not a sectoral policy supporting the implementation of such actions</li> </ul>	<p>▲ ▲</p> <p><b>High:</b> NDC lists <b>policies</b> related to either agriculture and food or LULUCF <b>which are directly linked to actions/orientations</b></p>								

Criteria		NDC Assessment
<b>Dedicated financial resources associated with policies or action:</b> <ul style="list-style-type: none"> <li>• \$165.7 million to support clean technologies in the agriculture sector</li> <li>• \$185 million Agricultural Climate Solutions Programme and the \$165 million Agricultural Clean Technology Programme with an additional \$200 million to launch immediate, on-farm climate action, targeting projects that accelerate emission reductions</li> <li>• \$3 billion over 10 years to plant two billion trees</li> <li>• \$631 million to restore and enhance wetlands, peatlands, grasslands and agricultural lands, as well as to improve land management practices, and conserve carbon-rich ecosystems</li> <li>• Increase funding for Indigenous Protected and Conserved Areas and Indigenous Guardians programmes with a portion of the recent investments of \$2.3 billion in Canada's Nature Legacy Initiative, to help address the biodiversity crisis, fight climate change, and protect and create jobs</li> </ul>		 <p><b>Very high:</b> NDC provides <b>specific details</b> (including amounts) on public funding to finance mitigation policies and actions in <b>both agriculture and food and LULUCF</b></p>
<b>Spatial information for mitigation provided in the NDC:</b> <ul style="list-style-type: none"> <li>• N/A</li> </ul>		 <p><b>Low:</b> NDC <b>does not provide any information on spatial planning to support adaptation or mitigation actions in the food and land sectors</b> in the form of maps or indications of spatial data</p>
<b>Technology details provided in the NDC:</b> <ul style="list-style-type: none"> <li>• The NDC pledges \$165.7 million to support clean technologies in the agriculture sector under the Agricultural Clean Technology Programme, but no further detail or mention of specific technological subsectors are provided</li> <li>• Expedite decarbonisation projects with large emitters and scale up clean technology through the Strategic Innovation Fund's \$8-billion Net-Zero Accelerator Fund</li> </ul>		 <p><b>Medium:</b> NDC provides a <b>general indication of technological development needs or plans</b> related to agriculture, food or LULUCF</p>
What specific policy measures are included in the NDCs regarding critical food and land transitions?		
Critical transition	Details	NDC Assessment
Healthy diets	<ul style="list-style-type: none"> <li>• N/A</li> </ul>	 <p>NDC does not mention any detail on the critical transition</p>
Productive and regenerative agriculture	<ul style="list-style-type: none"> <li>• Reduce emissions in the agricultural sector by investing \$165.7 million to support clean technologies in the agriculture sector, supporting on-farm climate action (e.g., improve nitrogen management, increase adoption of cover cropping) through increased investments in agricultural climate solutions, and setting a national emissions reduction target for emissions from fertilisers of 30% below 2020 levels by 2030</li> </ul>	 <p>NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition</p>
Protecting and restoring nature	<ul style="list-style-type: none"> <li>• The climate crisis necessitates immediate, transformative action built on the recognition, respect, and safeguarding of First Nations governance, rights, and jurisdiction, advancing the Government of Canada's commitment to positioning First Nations climate leadership as a cornerstone of its climate efforts</li> <li>• The Métis Nation and Canada are beginning to discuss the implementation of shared priorities and remain committed to the recognition of rights, respect, cooperation and partnership on a Nation-to-Nation basis</li> <li>• Increase funding for Indigenous Protected and Conserved Areas and Indigenous Guardians programmes with a portion of the recent investments of \$2.3 billion in Canada's Nature Legacy Initiative, to help address the biodiversity crisis, fight climate change, and protect and create jobs. Invest more than \$3 billion over 10 years to plant two billion trees</li> <li>• To further boost carbon sequestration, Canada is investing \$631 million to restore and enhance wetlands, peatlands, grasslands and agricultural lands, as well as to improve land management practices, and conserve carbon-rich ecosystems</li> </ul>	 <p>NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition</p>
A healthy and productive ocean	<ul style="list-style-type: none"> <li>• The Government of Canada is committed to protecting 25% of the land and 25% of the oceans in Canada by 2025 and working towards 30% of each by 2030</li> </ul>	 <p>NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition</p>
Diversifying protein supply	<ul style="list-style-type: none"> <li>• N/A</li> </ul>	 <p>NDC does not mention any detail on the critical transition</p>
Reducing food loss and waste	<ul style="list-style-type: none"> <li>• Phasing out food and organic waste sent to landfill by 2030</li> <li>• Establishing national methane regulations for large landfills and taking additional measures to reduce and better use waste at these sites</li> </ul>	 <p>NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition</p>

What specific policy measures are included in the NDCs regarding critical food and land transitions?		
Critical transition	Details	NDC Assessment
Local loops and linkages	<ul style="list-style-type: none"> <li>The province of British Columbia will seek out continued reductions in transportations, buildings, and industries, while exploring new opportunities for reductions through negative emissions technology, the bioeconomy and the circular economy/waste</li> </ul>	<p>●</p> <p>NDC provides inexplicit or unclear information on the critical transition (topic is mentioned, but not as a policy action)</p>
Digital revolution	<ul style="list-style-type: none"> <li>The 2030 Plan for a Green Economy (PGE) is Quebec's climate policy framework that will be implemented through five-year plans that will be reviewed annually and include technological innovations. Scale up clean technology through the Strategic Innovation Fund's \$8-billion Net-Zero Accelerator Fund. Canada's carbon modeling to estimate and report emissions and removals from forest land is based on forest inventory information that includes forest ages and age-dependent growth rates. Changes in forest age-class structures due to management, conservation actions, or natural disturbances are reflected in the estimates of emissions and removals</li> <li>Further reduce emissions in the agricultural sector by investing \$165.7 million to support clean technologies in the agriculture sector, supporting on-farm climate action (e.g., improve nitrogen management, increase adoption of cover cropping) through increased investments in agricultural climate solutions, and setting a national emissions reduction target for emissions from fertilisers of 30% below 2020 levels by 2030</li> <li>Saskatchewan's climate change strategy commits the provincial government to track and report across all areas of focus to convey progress in making our province more resilient to climate change. The report tracks the status and trends, including increasing the total protected areas in Saskatchewan, decreasing energy consumption in government-owned buildings</li> <li>NDC has a section on Transparency and Ongoing Evaluation which includes monitoring and reporting mostly for climate mitigation</li> </ul>	<p>●</p> <p>NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition</p>
Stronger rural livelihoods	<ul style="list-style-type: none"> <li>Provide climate action programmes for farmers, including the \$185 million Agricultural Climate Solutions Programme and the \$165 million Agricultural Clean Technology Programme with an additional \$200 million to launch immediate, on-farm climate action, targeting projects that accelerate emission reductions by improving nitrogen management, increasing adoption of cover cropping, and normalizing rotational grazing. The Government of Canada is committed to a just transition, to ensuring that Canada transitions to a net-zero emissions economy in a way that promotes economic diversification and jobs</li> <li>The Government will conduct additional GBA+ analyses for each policy and programme to maximise positive benefits for those most impacted by the negative effects of climate change, including low-income Canadians, women, Indigenous communities, and people living in rural and remote areas</li> <li>The Ontario government is also expanding access to natural gas across the province to help keep the cost of energy low for families, businesses and farmers. Phase 2 of the Natural Gas Expansion Programme, created under the Access to Natural Gas Act (2018), will allocate more than \$234 million to support approximately 8,750 connections in 43 rural, northern and Indigenous communities</li> </ul>	<p>●</p> <p>NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition</p>
Gender and demography	<ul style="list-style-type: none"> <li>Canada supports the UNFCCC Gender Action Plan to further advance women-led and gender responsive climate action at national and multilateral levels. The plan will support women's participation in climate negotiations, strengthen gender-responsive policy development, and raise awareness of gender and climate change issues</li> <li>The Government of Canada is committed to using Gender Based Analysis Plus (GBA+), an analytical process that provides a rigorous method to assess systemic inequalities, across the federal government to advance gender equality in Canada. Canada's latest climate plan, A Healthy Environment and a Healthy Economy, was informed by a gender-based analysis plus (GBA+), which assesses how diverse groups of women, men and non-binary people may experience policies, programmes and initiatives</li> </ul>	<p>●</p> <p>NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition</p>
What specific institutional arrangements for climate have countries put in place?		
<p><b>Dedicated body in place:</b></p> <ul style="list-style-type: none"> <li>Intersectoral Commission of Climate Change</li> </ul> <p><b>Consultation processes:</b></p> <ul style="list-style-type: none"> <li>Ministry-organised technical roundtables with other agencies, private sector, academics and civil society</li> <li>At the sub-national level, the government organised workshops with the regional nodes of climate change, involving a wide range of stakeholders (government entities, regional and local governments, NGOs, community associations, unions, businesses, academics, and others)</li> <li>Public consultation to obtain feedback on the NDC, goals and targets, and a survey targeted at specific groups to collect technical inputs for the NDC revision and update</li> <li>Ten dialogues with community groups, including afrodescendents, farmers, indigenous groups, youth and women groups</li> </ul>		



## SUMMARY

### Summary of the NDC analysis:

- The NDC provides extensive detail on orientations in the food and land sector, including some specific targets, and actions at the national and subnational level
- Some detail on the implementation of these orientations and actions is provided, though not consistently. For instance, while some specific policies linked to actions in the agricultural sector are listed, this is not the case for policies specifically linked to the LULUCF sector. Non-sectoral, generic policies which include actions in the AFOLU sector are mentioned, in particular Canada's Strengthened Climate Plan and the Pan Canadian Framework on Clean Growth and Climate Change
- The NDC provides extensive detail on funding for the actions to be undertaken in the AFOLU sector, for both agriculture and LULUCF
- No details are provided on the need for and use of spatial information
- The need for technological development in the sector is reflected in the NDC in particular through the mention of the Agricultural Clean Technology Programme, to which a specific budget is allocated, however the NDC does not elaborate on which technologies are envisaged nor which need to be developed.
- The NDC addresses the implementation of the critical transitions well, covering eight of the ten transitions analysed. The NDC provides extensive details on the transitions and associated policy actions and commitments. The association with concrete funding to the essential actions to implement the transitions is a major strength in this NDC. The details of the means of implementation for the ocean protection target seem to be lacking.
- Key transitions on "productive and regenerative agriculture", "protecting and restoring nature", "digital revolution" and "stronger rural livelihoods" are particularly well addressed through targets and programmes including: the Agricultural Climate Solutions Programme, the Agricultural Clean Technology Programme, the Indigenous Protected and Conserved Areas and Indigenous Guardians programmes, and the target to protect 25% of the land and ocean by 2030.

## REFERENCES

1. Source: ClimateWatch, accessed 30 August 2021. <https://www.climatewatchdata.org/compare-all-targets?>
2. Source: UNFCCC, Greenhouse Gas Inventory Data, accessed 30 August 2021. [https://di.unfccc.int/detailed\\_data\\_by\\_party](https://di.unfccc.int/detailed_data_by_party)
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6. Climate Action Tracker, accessed 15 September 2021. <https://climateactiontracker.org/countries/canada/>

# Colombia

Emissions	Climate Commitment Status								
<b>0.6%</b> of global emissions <sup>1</sup>	<p><b>2020 update submitted<sup>2</sup></b> ✓</p> <p><b>LTS not yet submitted</b> ✗</p> <p>An initial roadmap was released for the Colombian Long-Term Strategy (LTS) to reach “carbon neutrality”. The updated NDC was developed in parallel with the development of Colombia’s 2050 strategy for carbon neutrality.<sup>3</sup></p> <p><b>CAT rating<sup>4</sup></b> <b>HIGHLY INSUFFICIENT</b></p> <p><b>Net zero commitment:</b> The NDC aims to initiate a decrease in emissions between 2027 and 2030 towards carbon-neutrality by mid-century (2020 NDC). The government launched a strategy to reach climate neutrality by 2050 (Colombia Carbono Neutral Strategy).</p> <p><b>Net zero details:</b></p> <table> <tr> <td>Date:</td><td>2050</td></tr> <tr> <td>Legal status:</td><td>In policy document</td></tr> <tr> <td>Gases covered:</td><td>Uncertain</td></tr> <tr> <td>Credits allowed:</td><td>Uncertain</td></tr> </table>	Date:	2050	Legal status:	In policy document	Gases covered:	Uncertain	Credits allowed:	Uncertain
Date:	2050								
Legal status:	In policy document								
Gases covered:	Uncertain								
Credits allowed:	Uncertain								
How action-oriented are the NDCs in the food and land sector?									
Criteria	NDC Assessment								
<p><b>Specific policy priorities or actions for agriculture and food:</b></p> <ul style="list-style-type: none"> <li>• Actions in the agricultural sector are detailed extensively throughout Colombia’s NDC, including specific targets and measures; mitigation measures detailed for agriculture and rural development, including: <ul style="list-style-type: none"> <li>• Reducing GHG emissions from livestock production and increasing carbon removals from farming agri-ecosystems through regional guidelines to intensify productivity and maximise efficiency</li> <li>• Strategies of emission reduction in the life cycle of cacao production</li> <li>• Strategies for mitigation for the production, harvest, and post-harvest of coffee, including the implementation of agroforestry systems in coffee farms</li> </ul> </li> <li>• Food security is a cross-cutting issue in the NDC</li> <li>• Support needed for the development and transfer of technology, which includes improved methods for estimating and measuring water demand in the agricultural sector</li> <li>• Mass adoption of technology for rice production</li> <li>• Mainstreaming climate change has been a priority reflected in the incorporation of climate change in the formal instruments for sectoral and territorial planning, through the formulation of Comprehensive Plans for Climate Change Management at the sectoral (PIGCCS) and territorial (PIGCCT) levels Sectoral plans are developed for six priority sectors, including agriculture; these plans will contain climate change considerations in their planning processes and adaptation actions</li> <li>• The NDC includes a mitigation measure to promote plantations of permanent crops, with high amount of biomass (primarily rubber, cocoa and commercial forestry)</li> <li>• 30 adaptation targets are included, 10 of which relate to AFOLU and 3 specifically to agriculture: <ul style="list-style-type: none"> <li>• to include climate change considerations in agricultural planning instruments and implementation of adaptation activities</li> <li>• to improve the capacities of ten agricultural subsectors (rice, corn, potatoes, beef cattle, dairy cattle, sugar cane, cocoa, bananas, coffee and sugar cane) to adapt to climate change.</li> <li>• The three natural regions with the greatest agricultural potential will receive agroclimatic information to support agricultural decision making</li> </ul> </li> </ul>	<p>▲ ▲ ▲</p> <p><b>Very high:</b> NDC provides <b>specific orientations</b> pursued by the Party in different agricultural and food sub-sectors, including specific targets <b>and means of implementation (such as policies or funding associated to them)</b></p>								
<p><b>Specific policy priorities or actions for LULUCF:</b></p> <ul style="list-style-type: none"> <li>• The NDC addresses the forestry sector various times and includes a specific deforestation goal</li> <li>• The NDC pays special attention to protected areas, conservation and restoration of strategic ecosystems, such as moorland (paramos), mangroves, wetlands, coral reefs, glaciers, oceans and tropical forests</li> <li>• Concrete actions include: the creation of the National Council to Combat Deforestation and other Associated Environmental Crimes in 2019, the signing of the Joint Intent Declaration on Deforestation Reduction and Sustainable Development in 2015 (endorsed in 2019)</li> <li>• Increasing the area for cocoa cultivation under agroforestry systems to 150.000 ha, as well as rehabilitating another 80.000 ha to improve their carbon stocks</li> <li>• Strategies for mitigation for the production, harvest, and post-harvest of coffee. This includes implementing agroforestry systems in coffee farms (specific targets in hectares are mentioned)</li> <li>• Acceleration of restoration of degraded or destroyed areas from the forest ecosystem</li> </ul>	<p>▲ ▲ ▲</p> <p><b>Very high:</b> NDC provides <b>specific orientations</b> pursued by the Party in different LULUCF sub-sectors, including specific targets <b>and means of implementation (such as policies or funding associated to them)</b></p>								

How action-oriented are the NDCs in the food and land sector?		
Criteria		NDC Assessment
<b>Specific policy priorities or actions for LULUCF (cont'd):</b> <ul style="list-style-type: none"> <li>Reduction of deforestation, across all sectors with a goal to reduce the rate of deforestation to 50,000 ha / year by 2030. This trajectory envisages an expected deforestation trend of 155,000 ha/year in 2022 and 100,000 ha/year in 2025</li> <li>Includes a mitigation measure to promote plantations of permanent crops, with high amount of biomass (primarily rubber, cocoa and commercial forestry)</li> <li>Deforestation is monitored through the System of Monitoring of Forests and Carbon</li> <li>The NDC details various existing and new land use plans for adaptation to climate change and disaster risk management</li> <li>There are 30 adaptation targets, out of which 10 are related to the AFOLU sector. Five of these relate specifically to land use targets, including through developing management plans and tools, defining recovery measures to improve the integrity of protected areas, defining restoration strategies and managing risk from forest fires</li> </ul>		<p>▲▲▲</p> <p><b>Very high:</b> NDC provides <b>specific orientations</b> pursued by the Party in different LULUCF sub-sectors, <b>including specific targets and means of implementation (such as policies or funding associated to them)</b></p>
<b>Key policies in the NDC supporting priorities:</b> <b>Agriculture and food:</b> <ul style="list-style-type: none"> <li>Sectoral plans mentioned (PIGCCS), including one for agriculture</li> <li>Different subnational territorial plans (PIGCCT) are mentioned in Annex M1 related to agriculture and food measures.</li> </ul> <b>LULUCF:</b> <ul style="list-style-type: none"> <li>Comprehensive Strategy for Deforestation Control and Forest Management</li> <li>Different subnational territorial plans (PIGCCT) are mentioned in Annex M1 related to LULUCF</li> </ul>		<p>▲▲▲</p> <p><b>Very high:</b> NDC lists policies related to <b>both</b> agriculture and food and LULUCF which are <b>directly linked to actions/orientations</b></p>
<b>Dedicated financial resources associated with policies or action:</b> <ul style="list-style-type: none"> <li>Annex A3 provides details on the needs for external financial support for specific actions, but no information is available on existing or planned public financing of these projects</li> <li>For every action, Annex A3 provides details on the amount of finance needed, the type of financial instruments, the use of finance and the responsible institution; this includes USD 85 million for the development of a project on low-emission and climate resilient agriculture, financing for agroclimatic technical roundtables at the subnational level, USD 20 million for a project on the sustainable management of mangroves, and financing for different strategies and actions to prevent forest fires</li> </ul>		<p>○</p> <p><b>Low:</b> NDC <b>does not provide any detail</b> on public funding to mitigation actions in the agriculture, food and land sectors</p>
<b>Spatial information for mitigation provided in the NDC:</b> <ul style="list-style-type: none"> <li>No spatial information related to mitigation</li> <li>On adaptation, the NDC states that Colombia has strengthened their understanding of the country's vulnerability and risks to climate change through initiatives such as the vulnerability and risk analysis to climate change of the floodplains of the Magdalena-Cauca macro-basin; this allowed the country to develop high quality hazard, vulnerability, and risk maps</li> <li>The NDC includes 3 maps of climate vulnerability and risks due to climate change, with three more present in the annex</li> <li>The NDC often references to the "Planes de Ordenamiento Territorial - POT" (Territorial Planning Plans) and their importance in climate adaptation</li> </ul>		<p>▲▲</p> <p><b>High:</b> NDC <b>includes a map</b> that has the potential to guide land-use planning, if combined with other data layers or if <b>underpinned by a policy commitment</b>. E.g. Map of biological corridors</p>
<b>Technology details provided in the NDC:</b> <ul style="list-style-type: none"> <li>Support needs: Innovation for the structuring of a technological package focused on the reconversion and restoration of agricultural activities in the páramos region</li> <li>Technology Package containing designs and strategies for ecological restoration with a view to replacing activities</li> <li>Mass adoption of technology for rice production</li> <li>Adoption of new technology to reduce the impact of the production of coffee and "panela"</li> <li>Implementation of technologies to abate N2O emissions from the production of fertilisers</li> </ul>		<p>▲▲</p> <p><b>High:</b> NDC provides <b>detail focus areas of technological development needs or plans</b> related to agriculture, food or LULUCF</p>
What specific policy measures are included in the NDCs regarding critical food and land transitions?		
Critical transition	Details	NDC Assessment
Healthy diets	<ul style="list-style-type: none"> <li>Dedicated section on nutrition, including prevalence of deficiency in energy intake in the population, coexistence of poverty and malnutrition, and a Food and Nutritional Security Observatory of Colombia for cassava, rice, banana, sugar cane, potato, corn, beans, coffee, as well as associated risks. Policy: National Food and Nutrition Security Plan 2012-2019</li> </ul>	<p>●</p> <p>NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition</p>



What specific policy measures are included in the NDCs regarding critical food and land transitions?		
Critical transition	Details	NDC Assessment
<b>Productive and regenerative agriculture</b>	<ul style="list-style-type: none"> <li>Various strategies and plans for agriculture included throughout NDC</li> <li>Climate-smart agriculture: Climate-smart coffee growing pilot programme in the Serranía del Perijá and the Sierra Nevada de Santa Marta.</li> <li>Strategies to reduce GHG emissions in the life cycle of cocoa production: increase in the area dedicated to cocoa cultivation under agroforestry systems, as well as its renewal and rehabilitation, to increase the carbon stock, implement agroforestry systems on the farms where coffee is grown</li> <li>Quantification of ecosystem services for the energy mining sector</li> </ul>	<p>●</p> <p>NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition</p>
<b>Protecting and restoring nature</b>	<ul style="list-style-type: none"> <li>Dedicated section on water, ecosystems, and biodiversity, local biodiversity of the country, measures for the conservation of biodiversity through the protection of ecosystems and their ecosystem services. Nature-Based Solutions (NBS) measures are prioritised in climate change adaptation inventories</li> <li>5 livestock production systems improved in 11,666 hectares of pasture with conversion to AgroSilvoPastoriles System (SASP)</li> <li>Environmental conversion of traditional livestock systems to sustainable livestock</li> <li>Implement at least six pilot projects for conservation, protection or management in the watersheds and / or supply sources of municipalities most susceptible to water shortages and carry out their monitoring in order to evaluate their effectiveness and replicability</li> </ul>	<p>●</p> <p>NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition</p>
<b>A healthy and productive ocean</b>	<ul style="list-style-type: none"> <li>The NDC's adaptation and mitigation measures, special attention is paid to protected areas, as well as to the conservation and restoration of strategic ecosystems such as paramos, mangroves, wetlands, coral reefs, glaciers, oceans and tropical forests, in recognition of their intrinsic value and the environmental services they provide for Colombia and the world; marine ecosystems are a priority in the NDC particularly in the management of mangroves</li> <li>27. 50% update and implementation of the National programme for sustainable use, management and conservation of mangrove ecosystems by 2030: Reduce the vulnerability of blue carbon ecosystems, with an emphasis on mangroves, through preservation, sustainable use and restoration strategies, as well as the formulation and implementation of management instruments, as measures that contribute to adaptation to the climate change</li> </ul>	<p>●</p> <p>NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition</p>
<b>Diversifying protein supply</b>	<ul style="list-style-type: none"> <li>No information in NDC</li> </ul>	<p>●</p> <p>NDC does not mention any detail on the critical transition</p>
<b>Reducing food loss and waste</b>	<ul style="list-style-type: none"> <li>Recovery of waste in the agricultural subsector, use of 84,019 tons of organic waste generated in poultry processes: Implementation of recovery techniques for the decomposition of organic material, such as composting, expanding the coverage of good practices and proper management techniques</li> <li>Measures framed in the comprehensive management of municipal solid waste that are related to complementary activities to final disposal, within the framework of the PIGCCS (includes organic waste)</li> </ul>	<p>●</p> <p>NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition</p>
<b>Local loops and linkages</b>	<ul style="list-style-type: none"> <li>Colombia published in 2019 its National Circular Economy Strategy, to address the negative impact on health and ecosystems of the linear management of extraction, transformation, consumption and disposal resources, as well as its contribution to climate change.</li> <li>Dedicated circular economy section but no explicit mention of the food and land sector</li> </ul>	<p>●</p> <p>NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition</p>
<b>Digital revolution</b>	<ul style="list-style-type: none"> <li>By 2030 the country will have an Integrating Information System on Vulnerability, Risk and Adaptation to climate change (SIIVRA), which will allow monitoring and evaluating adaptation to climate change in Colombia articulated with the National Climate Change Information System (SNICC)</li> <li>Given its particular conditions, the goal of reducing emissions from deforestation part of the NDC is calculated independently and in a unified manner at the national level in line with the projections of the NREF until 2030 and will be monitored from the Forest and Carbon Monitoring System (SMBYC)</li> <li>Geographic Information System (GIS) that is integrated into the PIGCCS monitoring, reporting and verification system - MRV</li> <li>Support needs: Innovation for the structuring of a technological package focused on the reconversion and restoration of agricultural activities in the páramos region. Technology Package containing designs and strategies for ecological restoration with a view to replacing activities</li> <li>Implement at least six (6) pilot projects for conservation, protection or management in the watersheds and / or supply sources of municipalities most susceptible to water shortages and carry out their monitoring in order to evaluate their effectiveness and replicability</li> <li>MRV systems are incorporated throughout the NDC</li> </ul>	<p>●</p> <p>NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition</p>

Critical transition	Details	NDC Assessment
<b>Stronger rural livelihoods</b>	<ul style="list-style-type: none"> <li>Detailed gender and institutional capacity gap analyses were conducted to inform NDC updating process</li> <li>Across all sectors, a gender-responsive approach will be adopted and vulnerable groups and communities will be considered to ensure equity in sharing benefits that arise</li> <li>Policy interventions to assess the proportion of women shared development and management role in irrigation systems</li> </ul>	<p>●</p> <p>NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition</p>
<b>Gender and demography</b>	<ul style="list-style-type: none"> <li>In recognition of the differentiated impact that climate change has on women and men, and the central role played by women in aspects such as agricultural production, food security and resilience in communities, Colombia has committed to orient the mainstreaming of the approach gender in the country's public policy; includes the National Public Policy on Gender Equality, which will be deepened in the next five years to explicitly include climate change considerations, under the objectives and priority areas of the Improved Version of the Lima Work Programme and its Action Plan for Gender</li> </ul>	<p>●</p> <p>NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition</p>

## What specific institutional arrangements for climate have countries put in place?

### Dedicated body in place:

- Intersectoral Commission on Climate Change (Comisión Intersectoral de Cambio Climático, CICC)
- Colombia's national system of climate change (SISCLIMA) (298 decree of 2016), which includes 9 regional nodes of climate change, in charge of coordinating the implementation of mitigation and adaptation measures. Alongside the regional nodes, SISCLIMA also created the intersectoral commission of climate change

### Consultation processes:

- Technical roundtables and workshops were carried out with the relevant ministries and entities from the public and private sectors, academia and civil society, giving priority to the sectors that will be responsible for the implementation of the measures and those that will be affected by it
- At the local level, workshops were organised by the Regional Nodes on Climate Change. Wider public participation mechanisms included a public consultation and public surveys for specialised public. These fed into the revision round of the updated NDC
- Ten dialogues were carried out with marginalised groups of afrodescendants, farmers, indigenous peoples, youth and women

## SUMMARY

### Summary of the NDC analysis:

- Overall, the NDC rates high across many categories, meaning that it provides specific indications of actions to reduce emissions in the AFOLU sector, as well as information on policies, spatial information and technology development and needs to make progress against these actions and implement the NDC. Detailed strategies, actions and specific targets are provided both for agriculture and LULUCF, at the national and territorial (subnational) levels, leading to a "very high" rating for these categories. This includes providing information on baselines and targets, relevant strategies and/or plans to implement the envisioned actions, and the relevant institutions in charge of the implementation. For example, climate change plans at the sectorial (PIGCCS) and territorial (PIGCCT) level are mentioned throughout the document, often related to actions in the AFOLU sector.
- While the NDC provides detailed information on external financing needs for different actions and orientations in the AFOLU sector (Annex A3), it provides little or no detail on public financing of mitigation actions nor on national budgetary plans to meet the NDC objectives in the sector. It is unclear which of the actions described are conditional on external support.
- The use of and need for spatial planning in climate adaptation is mentioned in the NDC, and potentially actionable maps on climate risk and vulnerability at the subnational level are provided in Annex A2. The need for new technologies both in agriculture and LULUCF is mentioned throughout the NDC, albeit not systematically.
- The NDC covers all the critical transitions analysed except for diversification of proteins, and it references specific policies, targets, associated funding for nearly all transitions.
- The critical transition on "a healthy and productive ocean" is covered well in the NDC, with actions including implementing at least six pilot projects for conservation, protection or management in the watersheds and/or supply sources of municipalities most susceptible to water shortages. This includes monitoring and evaluation of such projects. The "digital revolution" transition is also tackled well in terms of a Forest and Carbon Monitoring System which is used to track emissions reductions from deforestation.







## REFERENCES

- Source: ClimateWatch, accessed 30 August 2021. <https://www.climatewatchdata.org/compare-all-targets?>
- Submitted 30 December 2020. Source: UNFCCC. <https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Colombia%20First/NDC%20actualizada%20de%20Colombia.pdf>
- <https://e2050colombia.com/>
- Climate Action Tracker, accessed 15 September 2021. <https://climateactiontracker.org/countries/colombia/>

# Ethiopia

Emissions	Climate Commitment Status
<p><b>0.4%</b> of global emissions<sup>1</sup></p>  <p>Agriculture = 67.2 MtCO<sub>2</sub>eq in 2013<sup>2</sup> or 71% of total emissions excluding LULUCF  ↑ +90% since 1990</p> <p><b>25.5</b> MtCO<sub>2</sub>eq LULUCF emissions in 2013<sup>3</sup></p> <p>Net source of emissions</p>	<p><b>2020 update submitted<sup>4</sup></b> ✓</p> <p><b>LTS not yet submitted</b> ✗</p> <p><b>CAT rating<sup>5</sup></b> <b>ALMOST SUFFICIENT</b></p> <p><b>Net zero commitment:</b> No official commitment</p>
How action-oriented are the NDCs in the food and land sector?	
Criteria	NDC Assessment
<p><b>Specific policy priorities or actions for agriculture and food:</b></p> <ul style="list-style-type: none"> <li>The NDC covers the agricultural sector in detail, with a dedicated mitigation section; the agricultural sector, particularly the livestock sector, is the biggest source of emissions and will continue to be under any mitigation scenario</li> <li>The livestock sector represents the second most important sector for emissions abatement after the LUCF sector; emissions from the sector will be reduced by 0,92% unconditionally, and up to 7,6% under the conditional scenario, but they will keep growing overall</li> <li>Planned actions in the livestock sector under existing policies include: <ul style="list-style-type: none"> <li>Dairy, red meat and poultry intervention packages (enhancing efficiency and productivity in livestock subsector)</li> <li>Agricultural mechanisation (replacing cattle/oxen with tractors for farmers and smallholders)</li> <li>Increase in the share of poultry (replacing non-dairy cattle stock with chickens (supply side) and inducing a demand shift from beef to chicken)</li> <li>Oilseed feeding (improved feeding to reduce emissions from enteric fermentation)</li> <li>Sustainable agriculture (increasing the share of agricultural land under sustainable management practices, reducing pre-harvest losses and land converted for agricultural infrastructure)</li> </ul> </li> <li>The NDC states that GHG emissions from crop production and managed soils contribute only 3%, therefore all relevant policy action is taken in the livestock subsector</li> <li>Ethiopia's major climate change adaptation commitments are in the AFOLU sector; this includes measures such as climate- smart agriculture; livestock diversification; drought-resistant animal breeding; rangeland management; improved drought-resistant crop varieties; crop and livestock insurance (detailed actions, indicators and targets are available in Annex 2 of the NDC).</li> </ul>	<p>▲ ▲ ▲</p> <p><b>Very high:</b> NDC provides <b>specific orientations</b> pursued by the Party in different agricultural and food sub-sectors, including specific targets <b>and means of implementation (such as policies or funding associated to them)</b></p>
<p><b>Specific policy priorities or actions for LULUCF:</b></p> <ul style="list-style-type: none"> <li>The NDC covers the land-use change and forestry (LUCF) sector in detail, with a dedicated mitigation section; it states that the LUCF sector is the second biggest source of emissions and offers the biggest mitigation potential, with planned policies potentially leading to a reduction of 34,6% compared to BAU under the unconditional scenario and 171% under the conditional scenario; the conditional scenario would shift the LUCF sector from the second biggest source of emissions to a net sink in 2030</li> <li>The NDC outlines that the potential for net emission removals in LUCF can be realised through massive reforestation and restoration of a total of up to 15 million hectares (ha) as a long-term forestry sector goal, based on Ethiopia's Forest Sector Development Plan, the Green Legacy Initiative and Reducing Emissions from Deforestation and Forest Degradation (REDD+) strategic actions. This will increase forest cover to 30% of the national territory by 2030</li> <li>The NDC details planned actions in the LUCF sector under existing policies on: <ol style="list-style-type: none"> <li>Grassland improvement: Carbon sequestration through grassland improvement and Lowlands Livelihoods Resilience Project</li> <li>Reducing residential biomass use: Fuel switch, with a shift from unsustainable biomass energy demand to electric stoves, renewable biofuels (e.g. residues), and biomass efficiency, through improved cookstoves</li> <li>Reforestation of 3 million ha of land by 2030 (conditional pathway), 20% moist Afromontane, 60% dry Afromontane, 10% Acacia-Commiphora, 10% Combretum-Terminalia)</li> <li>Restoration of 5 million ha of land by 2030 and 9 million Ha by 2050 (conditional pathway), 10% moist Afromontane, 60% dry Afromontane, 10% Acacia-Commiphora, 20% Combretum-Terminalia)</li> </ol> </li> <li>Ethiopia's major climate change adaptation commitments are in the AFOLU sector; this includes measures such as ecosystem-based adaptation; sustainable forest management; community-based forest management and conservation, afforestation and reforestation programmes.</li> </ul>	<p>▲ ▲ ▲</p> <p><b>Very high:</b> NDC provides <b>specific orientations</b> pursued by the Party in different LULUCF sub-sectors, including specific targets <b>and means of implementation (such as policies or funding associated to them)</b></p>



Criteria		NDC Assessment
<b>Key policies in the NDC supporting priorities:</b> <b>Agriculture and food:</b> <ul style="list-style-type: none"> <li>• Climate Resilient Green Economy (CRGE) – This is a strategy for agriculture and forestry</li> <li>• Agriculture Growth Programme (AGP)</li> <li>• Livestock Master Plan (LMP)</li> <li>• Livestock and Fisheries Sector Plan (LFSP)</li> <li>• Climate Resilience Strategy for Agriculture and Forestry (2015)</li> <li>• 10-year development programme (10YDP)</li> <li>• National Adaptation Plan (2017)</li> </ul> <b>LULUCF:</b> <ul style="list-style-type: none"> <li>• Climate Resilient Green Economy (CRGE) – This is a strategy for agriculture and forestry</li> <li>• Sustainable Land Management Programme (SLMP)</li> <li>• Ethiopia's Forest Sector Development Plan, the Green Legacy Initiative and Reducing Emissions from Deforestation and Forest Degradation (REDD+) strategic actions</li> <li>• National Adaptation Plan (2017)</li> </ul>		 <b>Very high:</b> NDC lists policies related to both agriculture and food and LULUCF which are directly linked to actions/orientations
<b>Dedicated financial resources associated with policies or action:</b> <ul style="list-style-type: none"> <li>• Ethiopia is committed to invest USD 63.2 billion by 2030 on mitigation and adaptation measures (mostly on agriculture and LUCF measures). This is the amount necessary to reach the unconditional targets (20% of the total)</li> <li>• The conditional targets (80% of the total) will require USD 252.8 billion by 2030 which should be received from international climate finance sources</li> <li>• No information is provided on which share of the funding will be dedicated to action in the AFOLU sector</li> </ul>		 <b>Medium:</b> NDC provides a <b>general indication</b> on existing or planned public funding to finance mitigation policies and actions in <b>either agriculture and food or LULUCF</b>
<b>Spatial information for mitigation provided in the NDC:</b> <ul style="list-style-type: none"> <li>• N/A</li> </ul>		 <b>Low:</b> NDC <b>does not provide any information on spatial planning to support adaptation or mitigation actions in the food and land sectors</b> in the form of maps or indications of spatial data
<b>Technology details provided in the NDC:</b> <ul style="list-style-type: none"> <li>• The NDC stresses that technology transfer is key to reaching the conditional targets of the NDC</li> <li>• Planned actions on agricultural mitigation include agricultural mechanisation (replacing cattle/oxen with tractors for farmers and smallholders)</li> </ul>		 <b>Medium:</b> NDC provides a general indication of technological development needs or plans related to agriculture, food or LULUCF
What specific policy measures are included in the NDCs regarding critical food and land transitions?		
Critical transition	Details	NDC Assessment
Healthy diets	<ul style="list-style-type: none"> <li>• N/A</li> </ul>	 NDC does not mention any detail on the critical transition
Productive and regenerative agriculture	<ul style="list-style-type: none"> <li>• Enhance food security by improving agricultural productivity in a climate-smart manner</li> <li>• Integrating climate change adaptation and expansion of agroforestry, expand the use of improved crop varieties with climate resilient characteristics through improved seed coverage</li> <li>• Ethiopia will further expand and prioritise measures such as climate-smart agriculture, livestock diversification, drought resistance animal breeding, rangeland management, improved drought resistant crop varieties, and more.</li> <li>• Agricultural Growth Programme (AGP), Livestock Master Plan (LMP), Livestock and Fisheries Sector Plan (LFSP)</li> </ul>	 NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition

What specific policy measures are included in the NDCs regarding critical food and land transitions?		
Critical transition	Details	NDC Assessment
<b>Protecting and restoring nature</b>	<ul style="list-style-type: none"> <li>Rehabilitation of degraded lands and restoration of degraded forestland through natural regeneration to enhance landscape-based climate resilience; the governments potential for net emission removals in LUCF can be realised through massive reforestation and restoration of a total of up to 15 million hectares as a long-term forestry sector goal, based on Ethiopia's REDD+ strategic actions. Ethiopia has a Climate Resilience Strategy for Agriculture and Forestry (2015)</li> <li>Reforestation of 3 mill ha of land by 2030</li> </ul>	<p>●</p> <p>NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition</p>
<b>A healthy and productive ocean</b>	<ul style="list-style-type: none"> <li>Livestock and Fisheries Sector Plan (LFSP)</li> </ul>	<p>●</p> <p>NDC provides inexplicit or unclear information on the critical transition (topic is mentioned, but not as a policy action)</p>
<b>Diversifying protein supply</b>	<ul style="list-style-type: none"> <li>Commitment to diversify livestock and animal mix, including the promotion of poultry and small ruminants</li> </ul>	<p>●</p> <p>NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition</p>
<b>Reducing food loss and waste</b>	<ul style="list-style-type: none"> <li>Waste generation policy interventions: reducing emissions from reduced waste generation rate per capita, reducing emissions by aggressively diverting organic materials from landfills, i.e., waste separation and composting; lead institution: Ministry of Urban Development and Construction, and Ministry of Water Irrigation and Electricity</li> <li>The waste sector accounts for relevant emission sources from municipal solid waste generation, decomposition of organic components of waste on landfills, wastewater, and solid waste incineration</li> </ul>	<p>●</p> <p>NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition</p>
<b>Local loops and linkages</b>	<ul style="list-style-type: none"> <li>N/A</li> </ul>	<p>●</p> <p>NDC does not mention any detail on the critical transition</p>
<b>Digital revolution</b>	<ul style="list-style-type: none"> <li>Section on Mitigation Measuring, Reporting and Verification (MRV) and Adaptation Monitoring and Evaluation (M&amp;E)</li> <li>Enhance accessibility and availability of data through state-of-the-art technology</li> <li>Integration of MRV/M&amp;E with general national statistical data management system</li> <li>Catalyse technology transfer including for land use management</li> <li>Strengthen crop disease and pest monitoring framework in vulnerable areas. Enhance water quality monitoring coverage</li> <li>Adaptation actions undertaken: adding actions or measures to strengthen implementation (policy, institutional arrangements, resource mobilisation, training, and capacity building and technology)</li> </ul>	<p>●</p> <p>NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition</p>
<b>Stronger rural livelihoods</b>	<ul style="list-style-type: none"> <li>Nearly 80% of the population lives in rural areas where most are smallholders who practice low input and low output farming in very fragmented land; mitigation and adaptation activities have been included in the sectoral plans and various initiatives including Agricultural Growth Programme (AGP), Livestock Master Plan (LMP), Livestock and Fisheries Sector Plan (LFSP), Sustainable Land Management Programme (SLMP) are critical programmes in the agriculture sector and the national adaptation plan</li> <li>The SLMP mainstreams the green economy needs into sectoral programmes and has been configured to the safety net programmes.</li> <li>Policy intervention for livestock sector: replace cattle/oxen with tractors for farmers and smallholders</li> <li>Strengthen drought and crop insurance mechanisms for climate risk management</li> </ul>	<p>●</p> <p>NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition</p>
<b>Gender and demography</b>	<ul style="list-style-type: none"> <li>Detailed gender and institutional capacity gap analyses were conducted to inform NDC updating process</li> <li>Across all sectors, a gender-responsive approach will be adopted and vulnerable groups and communities will be considered to ensure equity in sharing benefits that arise</li> <li>Policy interventions to assess the proportion of women shared development and management role in irrigation systems</li> </ul>	<p>●</p> <p>NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition</p>

## What specific institutional arrangements for climate have countries put in place?

### Dedicated body in place:

- The Environment, Forest and Climate Change Commission (EFCCC) is the lead agency for the coordination of Ethiopia's response to climate change and is the national focal point to the UNFCCC; it formulates environmental laws and standards; and develops, coordinates and guarantees the implementation of sectoral programmes and plans. "The institutional arrangements reflect a cross-sectoral, multi-disciplinary approach organised through bodies like the inter-ministerial and management committee and allows for regional engagement" (these bodies are not further described)

### Consultation processes:

- Public participation was integral to the preparation of the NDC and the 10-Year Development Plan upon which it is based. Consultations with line ministries and workshops with a wide range of sector representatives were held to agree on actions, indicators and targets. Consultation with non-state actors and donors were also held as part of finalising the NDC document

## SUMMARY


### Summary of the NDC analysis:











- The NDC provides extensive detail on orientations in the food and land sector, with agriculture and LUCF being the two biggest sources of emissions and expected to provide the biggest mitigation benefits. Actions are described in detail, with clear targets under different mitigation scenarios.
- Several national policies supporting these actions are mentioned and explicitly linked to them.
- The document provides details on funding for the NDC, including on which part will come from national budgets and which is conditional on external support. However, there is no clear indication on which percentage will be dedicated to actions in the AFOLU sector.
- No information is provided on the need for and use of spatial information and only generic information is available on the use of technology in agriculture.
- The NDC covers many of the critical transitions analysed and includes a combination of relevant policies, targets and interventions to support the implementation of these transitions. Under the transition on "food loss and waste", the NDC takes it a step further including policy interventions as well as the lead institutions involved (Ministry of Urban Development and Construction, and Ministry of Water Irrigation and Electricity).
- Under the critical transition on "stronger rural livelihoods", the NDC addresses smallholder farmers in rural areas and associated mitigation and adaptation activities that have been included in sectoral plans to support the agricultural sector, for instance the Agricultural Growth Programme.

## REFERENCES

1. Source: ClimateWatch, accessed 30 August 2021. <https://www.climatewatchdata.org/compare-all-targets?>
2. Source: UNFCCC, Greenhouse Gas Inventory Data, accessed 30 August 2021. [https://di.unfccc.int/detailed\\_data\\_by\\_party](https://di.unfccc.int/detailed_data_by_party)
3. Source: UNFCCC, Greenhouse Gas Inventory Data, accessed 30 August 2021. [https://di.unfccc.int/detailed\\_data\\_by\\_party](https://di.unfccc.int/detailed_data_by_party)
4. Submitted 23 July 2021. Source: UNFCCC. [https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Ethiopia%20First/Ethiopia%27s%20updated%20NDC%20JULY%202021%20Submission\\_.pdf](https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Ethiopia%20First/Ethiopia%27s%20updated%20NDC%20JULY%202021%20Submission_.pdf)
5. Source Climate Action Tracker, accessed 15 September 2021. <https://climateactiontracker.org/climate-target-update-tracker/ethiopia/>

# European Union

Emissions	Climate Commitment Status
<p><b>6.8%</b> of global emissions<sup>1</sup></p>  <p>Agriculture = 427.6 MtCO<sub>2</sub>eq in 2019<sup>2</sup> or 11% of total emissions excluding LULUCF  ↓ -20% since 1990</p> <p><b>-243.1</b> MtCO<sub>2</sub>eq LULUCF emissions in 2019<sup>3</sup></p> <p>Net sink of emissions</p>	<p><b>2020 update submitted<sup>4</sup></b> ✓</p> <p><b>LTS submitted in 2020<sup>5</sup></b> ✓</p> <p><b>CAT rating<sup>6</sup></b> <b>INSUFFICIENT</b></p> <p><b>Net zero commitment:</b> Union-wide emissions and removals of greenhouse gases regulated in Union law shall be balanced at the latest by 2050 (<a href="#">EU Climate Law</a>)</p> <p><b>Net zero details:</b></p> <p><b>Date:</b> 2050</p> <p><b>Legal status:</b> In law (EU Climate Law)</p> <p><b>Gases covered:</b> All GHGs</p> <p><b>Credits allowed:</b> Target to be achieved domestically</p>
How action-oriented are the NDCs in the food and land sector?	
Criteria	NDC Assessment
<p><b>Specific policy priorities or actions for agriculture and food:</b></p> <ul style="list-style-type: none"> <li>The NDC does not include a specific agriculture section but the Effort Sharing and LULUCF Regulations are mentioned, the scope of which includes aspects related to agriculture (though this is not specified in the NDC)</li> <li>Waste, circular economy and fluorinated gas legislation are also mentioned though not described. These could have an impact on the agriculture and food sectors</li> </ul>	<p>○</p> <p><b>Low:</b> NDC does not cover agriculture and food or provides no detail on general or specific orientations, or only in contextual manner.</p>
<p><b>Specific policy priorities or actions for LULUCF:</b></p> <ul style="list-style-type: none"> <li>Various mentions of the LULUCF sector are made throughout the NDC, including descriptions of new policies and the update and improvement of accounting rules; the policy framework identifies net accounted emissions and removals, contributing to the aim of enhancing the EU's net land sinks in the long-term</li> <li>Specifically, the EU adopted a new regulation on greenhouse gas emissions and removals from LULUCF that sets a binding commitment for each Member State to ensure that accounted emissions from land use are at a minimum compensated by an equivalent accounted removal of CO<sub>2</sub> from the atmosphere through action in the sector</li> <li>The EU's NDC details how the reference indicators for LULUCF are constructed and defined and includes details of the LULUCF categories and pools included</li> </ul>	<p>▲</p> <p><b>Medium:</b> NDC mentions <b>generic orientations of actions, commitment or strategy</b> in the LULUCF sector but provides little detail of specific sub-sector orientations pursued by the Party</p>
<p><b>Key policies in the NDC supporting priorities:</b></p> <p><b>Agriculture and food:</b></p> <ul style="list-style-type: none"> <li>Regulation (EU) No 517/2014 of the European Parliament and of the Council of 16 April 2014 on fluorinated greenhouse gases</li> </ul> <p><b>LULUCF:</b></p> <ul style="list-style-type: none"> <li>Regulation (EU) 2018/841 on the inclusion of greenhouse gas emissions and removals from land use, land use change and forestry in the 2030 climate and energy framework</li> </ul>	<p>▲ ▲</p> <p><b>High:</b> NDC lists sectoral policies related to either agriculture and food or LULUCF which are directly linked to actions/orientations</p>
<p><b>Dedicated financial resources associated with policies or action:</b></p> <ul style="list-style-type: none"> <li>N/A</li> </ul>	<p>○</p> <p><b>Low:</b> NDC does not provide any detail on public funding to mitigation actions in the agriculture, food and land sectors</p>
<p><b>Spatial information for mitigation provided in the NDC:</b></p> <ul style="list-style-type: none"> <li>N/A</li> </ul>	<p>○</p> <p><b>Low:</b> NDC does not provide any information on spatial planning to support adaptation or mitigation actions in the food and land sectors in the form of maps or indications of spatial data</p>
<p><b>Technology details provided in the NDC:</b></p> <ul style="list-style-type: none"> <li>N/A</li> </ul>	<p>○</p> <p><b>Low:</b> NDC does not provide any detail on technological innovation related to the agriculture, food and land sectors</p>

What specific policy measures are included in the NDCs regarding critical food and land transitions?		
Critical transition	Details	NDC Assessment
Healthy diets	<ul style="list-style-type: none"> <li>N/A</li> </ul>	 NDC does not mention any detail on the critical transition
Productive and regenerative agriculture	<ul style="list-style-type: none"> <li>Agriculture listed in IPCC sectors covered</li> </ul>	 NDC does not mention any detail on the critical transition
Protecting and restoring nature	<ul style="list-style-type: none"> <li>NDC mentions the joint climate-biodiversity crises, the role of nature-based solutions (NBS) in solving global challenges such as biodiversity loss and ecosystem degradation</li> </ul>	 NDC provides inexplicit or unclear information on the critical transition (topic is mentioned, but not as a policy action)
A healthy and productive ocean	<ul style="list-style-type: none"> <li>N/A</li> </ul>	 NDC does not mention any detail on the critical transition
Diversifying protein supply	<ul style="list-style-type: none"> <li>N/A</li> </ul>	 NDC does not mention any detail on the critical transition
Reducing food loss and waste	<ul style="list-style-type: none"> <li>Waste legislation was reviewed, tightening landfilling and recycling targets and increasing the circularity of the EU economy; 65% of all municipal waste should be recycled, while reducing landfilling of municipal waste to 10% by 2030</li> </ul>	 NDC provides inexplicit or unclear information on the critical transition (topic is mentioned, but not as a policy action)
Local loops and linkages	<ul style="list-style-type: none"> <li>Waste legislation was reviewed, tightening landfilling, and recycling targets and increasing the circularity of the EU economy</li> </ul>	 NDC provides inexplicit or unclear information on the critical transition (topic is mentioned, but not as a policy action)
Digital revolution	<ul style="list-style-type: none"> <li>The Regulation on the Governance of the Energy Union and Climate Action improves the governance of EU climate and energy policy by putting in place a reliable EU-wide reporting and monitoring framework for the period 2021 to 2030; Member States have prepared Integrated National Energy and Climate Plans for the period 2021 to 2030 that include their national contributions to achieve the combined energy and climate targets as well as related commitments under the Paris Agreement</li> </ul>	 NDC does not mention any detail on the critical transition
Stronger rural livelihoods	<ul style="list-style-type: none"> <li>EU leaders agreed further that "[i]n order to address the social and economic consequences of the objective of reaching climate neutrality by 2050 and the Union's new 2030 climate target, a Just Transition Mechanism, including a Just Transition Fund, will be created"</li> </ul>	 NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition
Gender and demography	<ul style="list-style-type: none"> <li>NDC is prepared in the context of the EU's commitment to gender equality and cross-cutting priorities such as the European Pact on Gender Equality and the commitment to create and maximise synergies between the social, environmental, and economic dimensions of sustainable development; as the Council of the European Union has highlighted, nature-based solutions play an important role to solve global challenges such as biodiversity loss and ecosystems degradation, poverty, hunger, health, water scarcity and drought, gender inequality, disaster risk reduction and climate change</li> </ul>	 NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition



## What specific institutional arrangements for climate have countries put in place?

### Dedicated body in place:

- N/A

### Consultation processes:

- The NDC target is based on stakeholder input collected through a public consultation (all EU legislative acts are subject to a public consultation before adoption)

## SUMMARY

### Summary of the NDC analysis:

- The NDC provides relatively little detail on actions and orientations in the food and land sector. While emissions reductions in traded and non-traded sectors are mentioned, in particular through the Effort Sharing Regulation, the agriculture sector itself is not highlighted in the document. No further policies directly linked to agriculture are mentioned.
- The NDC addresses emissions of fluorinated gases, including banning the use of F-gases in many new types of equipment, and preventing emissions of F-gases from existing equipment
- More detail is provided on the LULUCF sector, including through the description of the legally binding Regulation on GHG emissions from LULUCF.
- The NDC does not mention funding, spatial information or technologies related to the AFOLU sector.
- The NDC addresses six critical transitions in the sector, however mostly in an inexplicit or unclear manner. While this does not mean that ambitious policies are not being developed at EU level, the NDC remains vague and does not refer specifically to how these policies will support meeting the EU decarbonisation objective outlined in its NDC.
- The NDC is one of the few to mention the joint climate-biodiversity crisis and the role of nature-based solutions in solving global challenges, but with no clear strategy to address it. Under the "digital revolution" transition, the NDC mentions an EU-wide reporting and monitoring framework but not in relation to the AFOLU sector.
- The NDC briefly discusses a Just Transition Fund that will be created to address the social and economic consequences of the objective of reaching climate neutrality by 2050 and the Union's new 2030 climate target but it is unclear the extent to which this will support stronger rural livelihoods, and the mechanisms by which the fund will be distributed.

## REFERENCES







1. Source: ClimateWatch, accessed 30 August 2021. <https://www.climatewatchdata.org/compare-all-targets?>
2. Source: UNFCCC, Greenhouse Gas Inventory Data, accessed 30 August 2021. [https://di.unfccc.int/detailed\\_data\\_by\\_party](https://di.unfccc.int/detailed_data_by_party)
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4. Submitted 18 December 2020. Source: UNFCCC. [https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/European%20Union%20First/EU\\_NDC\\_Submission\\_December%202020.pdf](https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/European%20Union%20First/EU_NDC_Submission_December%202020.pdf)
5. Submitted 06 March 2020. Source: UNFCCC. <https://unfccc.int/sites/default/files/resource/HR-03-06-2020%20EU%20Submission%20on%20Long%20term%20strategy.pdf>
6. Source : Climate Action Tracker, accessed 15 September 2021. <https://climateactiontracker.org/countries/eu/>

# Indonesia

Emissions	Climate Commitment Status								
<b>3.5%</b> of global emissions <sup>1</sup>	<p><b>2020 update submitted<sup>2</sup></b> ✓</p> <p><b>LTS submitted in 2021<sup>3</sup></b> ✓</p> <p><b>CAT rating<sup>4</sup></b> <b>HIGHLY INSUFFICIENT</b></p> <p><b>Net zero commitment:</b> No official commitment. The LTS explores scenarios and opportunities "to rapidly progress towards net-zero emission in 2060 or sooner" (<a href="#">Indonesia Long-Term Strategy for Low Carbon and Climate Resilience 2050</a>)</p> <p><b>Net zero details:</b></p> <table> <tr> <td><b>Date:</b></td><td>2060</td></tr> <tr> <td><b>Legal status:</b></td><td>In policy document</td></tr> <tr> <td><b>Gases covered:</b></td><td>Uncertain</td></tr> <tr> <td><b>Credits allowed:</b></td><td>Uncertain</td></tr> </table>	<b>Date:</b>	2060	<b>Legal status:</b>	In policy document	<b>Gases covered:</b>	Uncertain	<b>Credits allowed:</b>	Uncertain
<b>Date:</b>	2060								
<b>Legal status:</b>	In policy document								
<b>Gases covered:</b>	Uncertain								
<b>Credits allowed:</b>	Uncertain								

## How action-oriented are the NDCs in the food and land sector?

Criteria	NDC Assessment
<p><b>Specific policy priorities or actions for agriculture and food:</b></p> <ul style="list-style-type: none"> <li>The NDC covers agriculture with dedicated sections in Annex I on mitigation measures and Annex II on adaptation measures; the increase in agricultural productivity is a key component of the NDC in this sector</li> <li>Detailed targets and actions are described for 3 scenarios (BAU, unconditional mitigation and conditional mitigation). These include targets on: <ul style="list-style-type: none"> <li>increasing the land dedicated to low-emissions crops</li> <li>the implementation of water-efficient concept in water management</li> <li>manure management for biogas</li> <li>feed supplement for cattle.</li> </ul> </li> <li>"Sustainable agriculture and plantations" is identified as one of the key adaptation programmes; key strategies include: <ul style="list-style-type: none"> <li>Mainstreaming/integrating climate change adaptation into agricultural sector, especially for strategic commodities</li> <li>Development and implementation of climate adaptive technologies for sustainable production of agricultural crops and plantations</li> </ul> </li> <li>Specific actions under these strategies include: identification of best practices for farmer's economic empowerment, Enhancing management and provision of ecosystem services in agricultural sector, development of financing scheme for agriculture, improved culture techniques, seeds and water management</li> <li>While the NDC presents specific mitigation targets in the sector, it provides no information on means of implementation associated to them (such as policies or financial resources)</li> </ul>	<p>▲ ▲</p> <p><b>High:</b> NDC provides <b>indications of specific orientations</b> pursued by the Party in different agricultural and food sub-sectors</p>
<p><b>Specific policy priorities or actions for LULUCF:</b></p> <ul style="list-style-type: none"> <li>The NDC provides extensive information on LULUCF and states that most emissions (63%) are the result of land-use change and peat and forest fires; the country has set up a target by 2030 in peat lands restoration of 2 million ha and rehabilitation of degraded land of 12 million ha; REDD+ activities remain as an important component of the NDC target from the land-use sector</li> <li>The NDC is to be implemented through actions including "effective land use and spatial planning, sustainable forest management which include social forestry programme, restoring functions of degraded ecosystems including wetland ecosystems"; specifically, mitigation actions in the LULUCF sector will focus on deforestation rate, forest degradation, land degradation and peatland restoration</li> <li>Specific targets and actions are described for three scenarios (BAU, unconditional mitigation and conditional mitigation); these include targets on: halting deforestation, controlling illegal logging, improved timber plantation, increasing carbon sequestration and land rehabilitation, rewetting and revegetation of peatland, and more</li> <li>The NDC details Indonesia's steps to reduce emissions from the land sector by instituting a moratorium on the clearing of primary forests and by reducing deforestation and forest degradation, restoring ecosystem functions, as well as sustainable management of forest; the efforts include social forestry through active participation of the sub national governments, private sector, small and medium enterprises, civil society organisations, local communities and adat communities (Indonesia: Masyarakat Hukum Adat), and women – in both the planning and implementation stages</li> <li>Key adaptation strategies include: reduction of deforestation and forest degradation, land conservation, utilisation of degraded land for renewable energy and social forestry, through actions including: <ul style="list-style-type: none"> <li>Mainstreaming/Integrating climate change adaptation in forest management to support mitigation actions and enhancement of economic resilience of communities living in/surrounding forests</li> <li>Developing and implementing environmentally friendly technologies (EFT) in production forest management and social forestry</li> <li>Avoiding conversion of productive lands for other uses</li> <li>Developing and implementing climate adaptive technologies to support sustainable land management practices</li> <li>Integrated programme on rehabilitation of degraded land and development of biomass energy</li> <li>Enhancing engagement of local and adat communities in social forestry development process.</li> <li>Strengthening implementation of landscape approach in social forestry</li> </ul> </li> </ul>	<p>▲ ▲ ▲</p> <p><b>Very high:</b> NDC provides <b>specific orientations</b> pursued by the Party in different LULUCF sub-sectors, <b>including specific targets and means of implementation (such as policies or funding associated to them)</b></p>

How action-oriented are the NDCs in the food and land sector?		
Criteria		NDC Assessment
<b>Key policies in the NDC supporting priorities:</b> <b>Agriculture and food:</b> <ul style="list-style-type: none"> <li>National Medium-Term Development Plan (RPJMN) - vague focus on climate mitigation and adaptation, including agriculture</li> </ul> <b>LULUCF:</b> <ul style="list-style-type: none"> <li>RKTN (Long-Term National Forestry Plan 2011-2030)</li> </ul>		 <b>Medium:</b> NDC lists <b>sectoral</b> policies related to either agriculture and food or LULUCF, but these are not directly linked to actions/orientations
<b>Dedicated financial resources associated with policies or action:</b> <ul style="list-style-type: none"> <li>A commitment on the "Development of financing scheme for agriculture" is mentioned in Annex 2 on adaptation</li> <li>Under the means of implementation, the NDC reports that the latest financial assessment estimates that USD 322.86 billion will be needed for the implementation of mitigation actions</li> <li>Indonesia has established a national agency for environmental fund management (Id. Badan Pengelola Dana Lingkungan Hidup/BPDLH); BPDLH is mandated to manage and mobilise finance for environment and allowed to mobilise climate finance from various sources both national and international sources, private and public sources, bilateral and multilateral channels</li> <li>Since its establishment in October 2019, BPDLH has managed reforestation fund from domestic sources (forest levy paid by private sectors) and initiated REDD+ result-based payment from international sources</li> </ul>		 <b>Medium:</b> NDC provides a general indication on existing or planned public funding to finance mitigation policies and actions in either agriculture and food or LULUCF
<b>Spatial information for mitigation provided in the NDC:</b> <ul style="list-style-type: none"> <li>Frequent mentions of the use of and need for spatial planning, mostly focused on adaptation.</li> <li>One of the principles of the NDC is "recognizing the needs to integrate climate change into development and spatial planning" and the NDC states that it "will be implemented through effective land use and spatial planning"</li> <li>Key adaptations actions described in Annex II include: <ul style="list-style-type: none"> <li>Integrating watershed management into Local Spatial Planning</li> <li>Facilitate, oversight, enforcement and compliance to spatial plan (on the conversion of productive land)</li> <li>Strengthening implementation of regulations relating to Spatial Planning (on land conservation)</li> <li>Identification of highly vulnerable areas in local spatial and land use planning efforts (in the context of social and livelihood resilience)</li> <li>Mainstreaming adaptation into spatial planning and strengthening compliance in the implementation of spatial plan. (in the context of human settlements)</li> </ul> </li> </ul>		 <b>Medium:</b> NDC provides information on spatial planning related to climate mitigation and adaptation and/or includes a non-actionable map, i.e. one that is not useful in isolation or when combined with other data layers to inform policy. E.g. Map of administrative regions
<b>Technology details provided in the NDC:</b> <ul style="list-style-type: none"> <li>Technology development and transfer needs are detailed in the means of implementations section, but without a specific focus on AFOLU</li> <li>Regarding adaptation, the NDC highlights the development and implementation of climate adaptive technologies for sustainable production of agricultural crops and plantations; this includes improved protection from pests and disease, R&amp;D to produce new genetically improved seeds, cultural techniques for higher productivity, integrated cropping calendar, improved water management</li> <li>Development and implementation of environmentally friendly technologies (EFT) in production forest management</li> <li>Implementation of environmentally friendly technologies (EFT) in social forestry. Key actions include: Creating enabling environment for EFT, Identification, development and implementation of best practices applicable for social forestry)</li> </ul>		 <b>High:</b> NDC provides <b>detail focus areas of technological development needs or plans</b> related to agriculture, food or LULUCF
What specific policy measures are included in the NDCs regarding critical food and land transitions?		
Critical transition	Details	NDC Assessment
Healthy diets	<ul style="list-style-type: none"> <li>N/A</li> </ul>	 NDC does not mention any detail on the critical transition
Productive and regenerative agriculture	<ul style="list-style-type: none"> <li>Identification, development and implementation of best practices for farmers' economic empowerment</li> <li>Enhancing management and provision of ecosystem services in agricultural sector</li> <li>Development of financing scheme for agriculture</li> <li>Improve agricultural crops protection from pests and diseases</li> <li>R&amp;D to produce high quality (genetically improved) seeds and cultural techniques to increase productivity</li> <li>Improved water management systems for increasing resilience to climate change.</li> <li>Application of integrated cropping calendar</li> </ul>	 NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition

What specific policy measures are included in the NDCs regarding critical food and land transitions?		
Critical transition	Details	NDC Assessment
<b>Protecting and restoring nature</b>	<ul style="list-style-type: none"> <li>• BPD LH, a national agency for environmental fund management, has managed reforestation fund from domestic sources (forest levy paid by private sectors) and initiated REDD+ result-based payment from international sources</li> <li>• Indonesia will continue to work on Article 5 of the Paris Agreement that sends clear political signal on the recognition of the roles of forest and REDD+; existing COP decisions has provided sufficient guidance to implement and support REDD+ implementation; as policy approaches and positive incentives, REDD+ should be able to support the achievement of Indonesia's emission reduction target in forestry sector</li> <li>• Strengthening implementation of deforestation reduction efforts</li> <li>• Sustainable utilisation of non-wood products by local and adat communities.</li> <li>• Identification, development and implementation of best practices and local wisdom in utilisation of natural forest resources.</li> <li>• Integrated rehabilitation of degraded land and soil and water conservation</li> <li>• Facilitate, oversight, enforcement and compliance to spatial plan</li> <li>• Strengthening implementation of regulations relating to Spatial Planning</li> <li>• Application of soil and water conservation technology using mechanic and vegetation methods</li> <li>• Identification, development and implementation of best practices</li> <li>• in land utilisation and management</li> </ul>	<p>●</p> <p>NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition</p>
<b>A healthy and productive ocean</b>	<ul style="list-style-type: none"> <li>• Implementation of ecosystem-based adaptation in coastal zone development</li> <li>• Implementation of integrated management of mangrove ecosystem</li> <li>• Enhance coastal zone and ocean pollution control, including marine litter and plastic debris</li> <li>• Increase communication, Education and Public Awareness (CEPA) on the important role of coastal ecosystem protection in natural disaster impact reduction</li> <li>• Restoration of degraded coastal zone as essential ecosystem.</li> <li>• Improve livelihood of communities living in or depending on coastal areas.</li> </ul>	<p>●</p> <p>NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition</p>
<b>Diversifying protein supply</b>	<ul style="list-style-type: none"> <li>• N/A</li> </ul>	<p>●</p> <p>NDC does not mention any detail on the critical transition</p>
<b>Reducing food loss and waste</b>	<ul style="list-style-type: none"> <li>• For the waste management sector, the Government of Indonesia is committed to develop a comprehensive strategy to improve policy and institutional capacity at the local level, enhance management capacity of urban wastewater, reduce landfill waste by promoting the "Reduce, Reuse, Recycle" approach, and the utilisation of waste and garbage into energy production</li> <li>• National Policy and Strategy on Solid Waste Management</li> </ul>	<p>●</p> <p>NDC provides inexplicit or unclear information on the critical transition (topic is mentioned, but not as a policy action)</p>
<b>Local loops and linkages</b>	<ul style="list-style-type: none"> <li>• N/A</li> </ul>	<p>●</p> <p>NDC does not mention any detail on the critical transition</p>
<b>Digital revolution</b>	<ul style="list-style-type: none"> <li>• As part of the implementation of Article 13 of the Paris Agreement, Indonesia applies an Integrated National Transparency framework, through: (a) National Registry System (Id. Sistem Registry Nasional/SRN) for mitigation, adaptation and means of implementation both from national and international sources; (b) National GHGs Inventory System (SIGN-SMART); (c) MRV system for mitigation including REDD+; (d) Safeguards Information System for REDD+ (SIS-REDD+); and (e) Information Systems on vulnerability (SIDIK) and joint adaptation and mitigation at the Village level (PROKLIM)</li> <li>• Issuance of regulations such as regulations on SRN, REDD+, MRV, and establishment of a roster of experts, methodological panel, and inter-ministerial team for monitoring and evaluation of NDC implementation</li> </ul>	<p>●</p> <p>NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition</p>

Critical transition	Details	NDC Assessment
<b>Stronger rural livelihoods</b>	<ul style="list-style-type: none"> <li>Indonesia considers the importance of just transition of the workforce and the creation of decent work and quality jobs for an effective and inclusive transition to low greenhouse gas emission and climate resilient development</li> <li>1. addressing challenges faced by sectors, cities and regions in transitioning to low carbon development and in ensuring a decent future for workers affected by the transition.</li> <li>2. promoting low greenhouse gas emission and sustainable economic activities that will create quality jobs in cities and regions.</li> <li>3. enhancing capacity of workforces to facilitate access to decent work and quality jobs, taking into account gender and inter-generational equalities, as well as the needs of vulnerable groups.</li> <li>4. enhancing participatory public dialogue to foster high employment rates, adequate social protection, labour standards and wellbeing of workers and their communities</li> <li>In the first term of President Joko Widodo administration, priority actions within the national Nawa Cita (Nine Priority Agendas) framework were determined and implemented, which includes protecting Indonesia's citizens, encouraging rural and regional development</li> <li>The preparation of the NDC has taken into account the Sustainable Development Goals (SDGs) particularly on taking urgent action to combat climate change and its impacts, access to affordable, reliable, and renewable energy for all</li> </ul>	<p>●</p> <p>NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition</p>
<b>Gender and demography</b>	<ul style="list-style-type: none"> <li>On gender issues, Indonesia has an advanced policy relating to gender equality and gender balance. Mapping gender issues in climate change in all development sectors will be crucial in implementing the policy; enhancing role of women in development and strengthening women's capacity and leadership in climate change have been initiated and will be continued as part of the NDC implementation and development of LTS</li> <li>In line with the Paris Agreement, Indonesia respects, promotes and considers its obligation on human rights, the right to health, the right of adat communities (Indonesia: Masyarakat Hukum Adat), local communities, migrants, children, youth, elders, persons with different abilities, and people in vulnerable situations; as well as the right to development, including gender equality, empowerment of women and intergenerational equalities</li> </ul>	<p>●</p> <p>NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition</p>

## What specific institutional arrangements for climate have countries put in place?

### Dedicated body in place:

- Directorate General of Climate Change, under the Ministry of Environment and Forestry which serves as the National Focal Point for the UNFCCC

### Consultation processes:

- The Government conducted consultations with stakeholders representing Ministries and other government institutions, academia, scientists, private sector, and civil society organisations; these consultations included workshops and consultations organised at both the national and provincial levels, as well as bilateral meetings with key sectors

## SUMMARY

### Summary of the NDC analysis:


- The NDC provides detail on planned orientations and actions in the food and land sector, both in mitigation and adaptation. Orientations and actions are described for both the agriculture and LULUCF sectors for three mitigation scenarios, and specific targets are set for each scenario. However, few policies supporting these priorities are listed, and the link with these sectors is not explicitly drawn. The NDC mentions the Long-Term National Forestry Plan 2011-2030 (RKTN) and the existence of wood production targets, but no further detail is given on how this would contribute to the stated mitigation measures.
- Spatial planning is frequently mentioned, and the NDC hints at its use in developing mitigation and adaptation actions, but no actionable maps are provided. The NDC provides information on the technologies necessary to take actions in the sector, albeit with no detail on how these technologies are to be developed.
- The NDC addresses seven critical transitions in the sector, with essential actions associated to six of them. The NDC includes specific frameworks, mechanisms, and strategies across sectors including: development of financing schemes for agriculture, integrated rehabilitation of degraded land and soil and water conservation, implementation of integrated management of mangrove ecosystem, and an MRV system for mitigation including REDD+.
- The NDC addresses the "digital revolution" critical transition well by including an Integrated National Transparency framework for climate mitigation and adaptation, an MRV system for mitigation including REDD+, and a Safeguards Information System for REDD+

## REFERENCES


- Source: ClimateWatch, accessed 30 August 2021. <https://www.climatewatchdata.org/compare-all-targets?>
- Submitted 22 July 2021. Source: UNFCCC. <https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Indonesia%20First/Updated%20NDC%20Indonesia%202021%20-%20corrected%20version.pdf>
- Submitted 22 July 2021. Source: UNFCCC. [https://unfccc.int/sites/default/files/resource/Indonesia\\_LTS-LCCR\\_2021.pdf](https://unfccc.int/sites/default/files/resource/Indonesia_LTS-LCCR_2021.pdf)
- Source: Climate Action Tracker, accessed 15 September 2021. An update to the overall rating is pending, but CAT released a preliminary analysis of the updated NDC noting that it did not increase the target's ambition. <https://climateactiontracker.org/climate-target-update-tracker/indonesia/>




# Japan











Emissions	Climate Commitment Status
<p><b>2.4%</b> of global emissions<sup>1</sup></p>  <p>Agriculture = 31.7 MtCO<sub>2</sub>eq in 2019<sup>2</sup> or 3% of total emissions excluding LULUCF  ↓ -14% since 1990</p> <p><b>-50.1</b> MtCO<sub>2</sub>eq LULUCF emissions in 2019<sup>3</sup></p> <p>Net sink of emissions</p>	<p><b>2020 update submitted<sup>4</sup></b> ✓</p> <p><b>LTS submitted in 2019<sup>5</sup></b> ✓</p> <p><b>CAT rating<sup>6</sup></b> <b>INSUFFICIENT</b></p> <p><b>Net zero commitment:</b> By 2050 Japan will aim to reduce greenhouse gas emissions to net-zero, that is, to realise a carbon-neutral, decarbonised society (<a href="#">Policy Speech by the Prime Minister to the 203rd Session of the Diet</a> and <a href="#">Law on Promotion of Global Warming Countermeasures</a>)</p> <p><b>Net zero details:</b></p> <p><b>Date:</b> 2050</p> <p><b>Legal status:</b> In law (Law on Promotion of Global Warming Countermeasures)</p> <p><b>Gases covered:</b> CO<sub>2</sub>, CH<sub>4</sub>, SF<sub>6</sub>, HFCs, PFCs</p> <p><b>Credits allowed:</b> Likely. No mention in the law but the long-term strategy submitted to the UNFCCC describes a Joint Crediting Mechanism through which "Japan will contribute to measures to address climate change on a global scale" by facilitating the diffusion of low-carbon technologies. The contributions developed through this mechanism will be used to achieve Japan's emission reduction target.</p>
How action-oriented are the NDCs in the food and land sector?	
Criteria	NDC Assessment
<p><b>Specific policy priorities or actions for agriculture and food:</b></p> <ul style="list-style-type: none"> <li>The NDC does not include a specific section on mitigation actions in the agriculture and food sector but specific actions are mentioned in the document: <ul style="list-style-type: none"> <li>Measures to reduce CH<sub>4</sub> from paddy rice fields and N<sub>2</sub>O emissions from fertiliser application in agricultural soils</li> <li>Measures to introduce energy efficiency and conservation farming machinery (listed)</li> <li>Promotion of soil management leading to the increase of carbon stock in cropland, promotion of revegetation</li> </ul> </li> </ul>	<p>▲ ▲</p> <p><b>High:</b> NDC provides <b>indications of specific orientations</b> pursued by the Party in different agricultural and food sub-sectors</p>
<p><b>Specific policy priorities or actions for LULUCF:</b></p> <ul style="list-style-type: none"> <li>Explicit references to LULUCF are made throughout Japan's NDC, including a dedicated section on removals by LULUCF and the definition of specific targets and measures; the NDC specifies that removals by LULUCF are in line with approaches equivalent to those under the Kyoto Protocol</li> <li>The target for LULUCF removals is set to about 37 Mt CO<sub>2</sub> by 2030, divided into 27.8 MtCO<sub>2</sub> through forest management and 9 MtCO<sub>2</sub> through cropland management, grazing land management and revegetation</li> <li>The measures listed to achieve this are the promotion of forest management/forestry industry measures, of soil management leading to the increase of carbon stock in cropland, and of revegetation by FY 2030</li> <li>No further detail is given on specific actions or policies to achieve the promotion of these measures</li> <li>While the NDC presents specific mitigation targets in the sector, it provides no information on means of implementation associated to them (such as policies or financial resources)</li> </ul>	<p>▲ ▲</p> <p><b>High:</b> NDC provides indications of specific orientations pursued by the Party in different LULUCF sub-sectors</p>
<p><b>Key policies in the NDC supporting priorities:</b></p> <p><b>Agriculture and food:</b></p> <ul style="list-style-type: none"> <li>N/A</li> </ul> <p><b>LULUCF:</b></p> <ul style="list-style-type: none"> <li>N/A</li> </ul>	<p>○</p> <p><b>Low:</b> NDC does not list any <b>sectoral</b> policy related to agriculture, food or LULUCF</p>
<p><b>Dedicated financial resources associated with policies or action:</b></p> <ul style="list-style-type: none"> <li>N/A</li> </ul>	<p>○</p> <p><b>Low:</b> NDC does not provide any detail on public funding to mitigation actions in the agriculture, food and land sectors</p>

Criteria		NDC Assessment
<b>Spatial information for mitigation provided in the NDC:</b> <ul style="list-style-type: none"> <li>N/A</li> </ul>		<p>○</p> <p><b>Low:</b> NDC does not provide any information on spatial planning to support adaptation or mitigation actions in the food and land sectors in the form of maps or indications of spatial data</p>
<b>Technology details provided in the NDC:</b> <ul style="list-style-type: none"> <li>The NDC refers to targets under the country's Long-Term Strategy to achieve a decarbonised society through disruptive innovations such as artificial photosynthesis and other carbon capture, use and storage technologies, however no specific technology tied to the food and land sector is mentioned</li> <li>The NDC mentions the "introduction of refrigerant control technology (F-gases)" which may be related to the food sector, but the link is not made explicit</li> </ul>		<p>○</p> <p><b>Low:</b> NDC does not provide any detail on technological innovation related to the agriculture, food and land sectors</p>
What specific policy measures are included in the NDCs regarding critical food and land transitions?		
Critical transition	Details	NDC Assessment
Healthy diets	<ul style="list-style-type: none"> <li>N/A</li> </ul>	<p>●</p> <p>NDC does not mention any detail on the critical transition</p>
Productive and regenerative agriculture	<ul style="list-style-type: none"> <li>Agriculture listed in IPCC sectors covered, measures to reduce CH<sub>4</sub> and N<sub>2</sub>O emissions from agricultural soils</li> <li>Measures which form the basis for the bottom-up calculation of the GHG emission reduction target</li> <li>Measures to introduce energy efficiency and conservation farming machinery,</li> <li>Promotion of soil management leading to the increase of carbon stock in cropland, Promotion of revegetation</li> </ul>	<p>●</p> <p>NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition</p>
Protecting and restoring nature	<ul style="list-style-type: none"> <li>Promote measures for greenhouse gas removals through the promotion of forest management/forestry industry measures</li> </ul>	<p>●</p> <p>NDC provides inexplicit or unclear information on the critical transition (topic is mentioned, but not as a policy action)</p>
A healthy and productive ocean	<ul style="list-style-type: none"> <li>N/A</li> </ul>	<p>●</p> <p>NDC does not mention any detail on the critical transition</p>
Diversifying protein supply	<ul style="list-style-type: none"> <li>N/A</li> </ul>	<p>●</p> <p>NDC does not mention any detail on the critical transition</p>
Reducing food loss and waste	<ul style="list-style-type: none"> <li>Reduction of municipal solid waste disposed of by direct landfill, reduction of municipal solid waste incineration. Introduction of semi-aerobic landfill system for final disposal site of municipal solid waste</li> </ul>	<p>●</p> <p>NDC provides inexplicit or unclear information on the critical transition (topic is mentioned, but not as a policy action)</p>
Local loops and linkages	<ul style="list-style-type: none"> <li>N/A</li> </ul>	<p>●</p> <p>NDC does not mention any detail on the critical transition</p>
Digital revolution	<ul style="list-style-type: none"> <li>Japan will strive to achieve a "decarbonised society" as close as possible to 2050 with disruptive innovations, such as artificial photosynthesis and other CCUS technologies and realisation of a hydrogen society</li> <li>Japan will, together with all major emitters, undertake domestic emission reductions and also contribute to reducing global greenhouse gas (GHG) emissions through Japan's leading technologies and support for developing countries. Introduction of technology which uses CO<sub>2</sub> as a feedstock; introduction of semi-aerobic landfill system for final disposal site of municipal solid waste</li> </ul>	<p>●</p> <p>NDC provides inexplicit or unclear information on the critical transition (topic is mentioned, but not as a policy action)</p>
Stronger rural livelihoods	<ul style="list-style-type: none"> <li>Introduction of energy efficiency and conservation farming machinery</li> </ul>	<p>●</p> <p>NDC provides inexplicit or unclear information on the critical transition (topic is mentioned, but not as a policy action)</p>

What specific policy measures are included in the NDCs regarding critical food and land transitions?		
Critical transition	Details	NDC Assessment
Gender and demography	<ul style="list-style-type: none"> <li>N/A</li> </ul>	 <p>NDC does not mention any detail on the critical transition</p>
What specific institutional arrangements for climate have countries put in place?		
<p><b>Dedicated body in place:</b></p> <ul style="list-style-type: none"> <li>Joint Experts' Meeting of the Central Environment Council (Subcommittee on Global Warming Measurement after 2020, Global Environment Committee) and the Industrial Structure Council (INDC working group, Global Environment Subcommittee, Committee on Industrial Science and Technology Policy and Environment)</li> </ul> <p><b>Consultation processes:</b></p> <ul style="list-style-type: none"> <li>The discussions of the Joint Experts' Meeting were open to public consultation</li> </ul>		
SUMMARY		
<p><b>Summary of the NDC analysis:</b></p> <ul style="list-style-type: none"> <li>The NDC provides some specific detail on actions and orientations in the food and land sector but lacks detail for it to provide a framework for national implementation.</li> <li>Agriculture and food are never explicitly mentioned in the NDC, however some specific mitigation measures (e.g. to reduce CH<sub>4</sub> emissions from rice and N<sub>2</sub>O emissions from fertilisers) are described. More detail is provided for the LULUCF sector to which a section is dedicated. Here, specific removal targets and actions to be taken are described. However, no policies are listed to support these orientations, nor is information provided on funding and resources, spatial information or technology.</li> <li>The NDC addresses five critical transitions all inexplicitly, except for the transition on "digital revolution". Most of the critical transition have little detail and no dedicated commitments or strategies to implement them.</li> <li>Strategies to reduce waste are detailed, including new technologies and waste management systems. However, this seems to be more related to waste disposal techniques than reduction of waste itself. Strategies to achieve a decarbonised society through new technology is detailed, and addresses developing disruptive technology such as artificial photosynthesis.</li> </ul>		
REFERENCES		
<ol style="list-style-type: none"> <li>Source: ClimateWatch, accessed 30 August 2021. <a href="https://www.climatewatchdata.org/compare-all-targets?">https://www.climatewatchdata.org/compare-all-targets?</a></li> <li>Source: UNFCCC, Greenhouse Gas Inventory Data, accessed 30 August 2021. <a href="https://di.unfccc.int/detailed_data_by_party">https://di.unfccc.int/detailed_data_by_party</a></li> <li>Source: UNFCCC, Greenhouse Gas Inventory Data, accessed 30 August 2021. <a href="https://di.unfccc.int/detailed_data_by_party">https://di.unfccc.int/detailed_data_by_party</a></li> <li>This analysis refers to the update to the NDC submitted on 31 March 2020 (Source: UNFCCC) which has since been archived. Japan has since submitted a new and strengthened update on 12 October 2021 (which was after the cut-off date of 30 September 2021 set for this policy brief). <a href="https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Japan%20First/SUBMISSION%20OF%20JAPAN%27S%20NATIONALLY%20DETERMINED%20CONTRIBUTION%20(NDC).PDF">https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Japan%20First/SUBMISSION%20OF%20JAPAN%27S%20NATIONALLY%20DETERMINED%20CONTRIBUTION%20(NDC).PDF</a></li> <li>Submitted 26 June 2019. Source: UNFCCC. <a href="https://unfccc.int/sites/default/files/resource/The%20Long-term%20Strategy%20under%20the%20Paris%20Agreement.pdf">https://unfccc.int/sites/default/files/resource/The%20Long-term%20Strategy%20under%20the%20Paris%20Agreement.pdf</a></li> <li>Source: Climate Action Tracker, accessed 15 September 2021. This rating refers to the newest update to the NDC submitted by Japan on 12 October 2021, which ranks "insufficient". The analysis instead refers to the previous update submitted on 31 March 2020 which CAT still rates "highly insufficient". <a href="https://climateactiontracker.org/countries/japan/">https://climateactiontracker.org/countries/japan/</a></li> </ol>		

# Republic of Korea

Emissions	Climate Commitment Status
<p><b>1.4%</b> of global emissions<sup>1</sup></p>  <p>Agriculture = 21.3 MtCO<sub>2</sub>eq in 2016<sup>2</sup> or 3% of total emissions excluding LULUCF Stable since 1990</p> <p><b>-44.5</b> MtCO<sub>2</sub>eq LULUCF emissions in 2016<sup>3</sup></p> <p>Net sink of emissions</p>	<p><b>2020 update submitted</b><sup>4</sup> ✓</p> <p><b>LTS submitted in 2020</b><sup>5</sup> ✓</p> <p><b>CAT rating</b><sup>6</sup> <b>HIGHLY INSUFFICIENT</b></p> <p><b>Net zero commitment:</b> To reach carbon neutrality by 2050 (<a href="#">2050 Carbon Neutral Strategy</a>)</p> <p><b>Net zero details:</b></p> <p><b>Date:</b> 2050</p> <p><b>Legal status:</b> In policy document</p> <p><b>Gases covered:</b> All GHGs</p> <p><b>Credits allowed:</b> Yes. The strategy mentions the Korean ETS and the possibility to "use overseas carbon offsets to earn carbon credits in compliance with the Paris Agreement"</p>
How action-oriented are the NDCs in the food and land sector?	
Criteria	NDC Assessment
<p><b>Specific policy priorities or actions for agriculture and food:</b></p> <ul style="list-style-type: none"> <li>The NDC focuses strongly on the Korean Green New Deal for the implementation of its mitigation and adaptation actions, but the food and land sector is not covered</li> <li>The NDC mentions that Korea's 2020 Climate Change Assessment Report, which focuses on the impact of climate change and vulnerabilities, covers the agriculture and fishery sector</li> </ul>	<p>○</p> <p><b>Low:</b> NDC does not cover agriculture and food or provides no detail on general or specific orientations, or only in contextual manner.</p>
<p><b>Specific policy priorities or actions for LULUCF:</b></p> <ul style="list-style-type: none"> <li>LULUCF is mentioned in the NDC, mainly in reference to accounting, categorisation, and methodology; while the LULUCF sector is covered in the target, it is excluded from the baseline</li> <li>The NDC states that forestation projects will be carried out to increase capacity of carbon sinks in the forest sector; it adds that the Republic of Korea continues to practice sustainable forest management, not confined to a specific age-class, to ensure its forests serve as reliable carbon sinks</li> <li>The NDC confirms that the Republic of Korea intends to use voluntary cooperation under Article 6 of the Paris Agreement as a complementary measure to its domestic mitigation efforts including LULUCF to achieve its target</li> <li>No specific targets or measures were included</li> </ul>	<p>▲</p> <p><b>Medium:</b> NDC mentions generic orientations of actions, commitment or strategy in the LULUCF sector but provides little detail of specific sub-sector orientations pursued by the Party</p>
<p><b>Key policies in the NDC supporting priorities:</b></p> <p><b>Agriculture and food:</b></p> <ul style="list-style-type: none"> <li>Korea's 2020 Climate Change Assessment Report (impact of climate change and vulnerabilities) covers the agriculture and fishery sector</li> </ul> <p><b>LULUCF:</b></p> <ul style="list-style-type: none"> <li>2003 Good Practice Guidance for LULUCF (GPG LULUCF)</li> </ul>	<p>○</p> <p><b>Low:</b> NDC does not list any <b>sectoral</b> policy related to agriculture, food or LULUCF</p>
<p><b>Dedicated financial resources associated with policies or action:</b></p> <ul style="list-style-type: none"> <li>The NDC references the 73,4 trillion KRW [roughly 62 billion USD] to be invested by 2025 under the Korean Green Deal, however the AFOLU sector is not included in the target sectors</li> </ul>	<p>○</p> <p><b>Low:</b> NDC does not provide any detail on public funding to mitigation actions in the agriculture, food and land sectors</p>
<p><b>Spatial information for mitigation provided in the NDC:</b></p> <ul style="list-style-type: none"> <li>The only mention of spatial data is in the context of urban transitions, with the NDC stating that "The Green New Deal is underpinned by 3 key pillars" with one being "green transition in cities/spatial planning/living infrastructure; in this mention, spatial planning relates to the urban environment rather than to agriculture and land use.</li> </ul>	<p>○</p> <p><b>Low:</b> NDC does not provide any information on spatial planning to support adaptation or mitigation actions in the food and land sectors in the form of maps or indications of spatial data</p>
<p><b>Technology details provided in the NDC:</b></p> <ul style="list-style-type: none"> <li>N/A</li> </ul>	<p>○</p> <p><b>Low:</b> NDC does not provide any detail on technological innovation related to the agriculture, food and land sectors</p>

What specific policy measures are included in the NDCs regarding critical food and land transitions?		
Critical transition	Details	NDC Assessment
Healthy diets	<ul style="list-style-type: none"> <li>N/A</li> </ul>	 NDC does not mention any detail on the critical transition
Productive and regenerative agriculture	<ul style="list-style-type: none"> <li>Agriculture listed in IPCC sectors covered</li> <li>In July 2020, the 2020 Korea's Climate Change Assessment Report, a comprehensive survey on the impact of climate change and vulnerabilities in such sectors as water management, ecosystem, health, and agriculture and fishery, was published</li> <li>The 2006 IPCC Guidelines are applied for rice cultivation and agricultural soils in agriculture sector</li> </ul>	 NDC does not mention any detail on the critical transition
Protecting and restoring nature	<ul style="list-style-type: none"> <li>In July 2020, the 2020 Korea's Climate Change Assessment Report, a comprehensive survey on the impact of climate change and vulnerabilities in such sectors as water management, ecosystem, health, and agriculture and fishery, was published</li> <li>Forestation projects will be carried out to increase capacity of carbon sinks in the forest sector. The Republic of Korea continues to practice sustainable forest management, not confined to a specific age-class, to ensure its forests serve as reliable carbon sinks</li> </ul>	 NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition
A healthy and productive ocean	<ul style="list-style-type: none"> <li>N/A</li> </ul>	 NDC does not mention any detail on the critical transition
Diversifying protein supply	<ul style="list-style-type: none"> <li>N/A</li> </ul>	 NDC does not mention any detail on the critical transition
Reducing food loss and waste	<ul style="list-style-type: none"> <li>Minimise single use waste items, solid waste disposal on land, wastewater, waste incineration</li> </ul>	 NDC provides inexplicit or unclear information on the critical transition (topic is mentioned, but not as a policy action)
Local loops and linkages	<ul style="list-style-type: none"> <li>N/A</li> </ul>	 NDC does not mention any detail on the critical transition
Digital revolution	<ul style="list-style-type: none"> <li>The government will support energy efficiency projects and new mitigation technology development projects; the Republic of Korea plans to significantly scale up R&amp;D investments for core emissions reduction technologies, e.g., renewable energy, zero emission vehicles and hydrogen technologies</li> <li>The Office for Government Policy Coordination and the Ministry of Environment will analyze and assess the mitigation performance of each ministry every year under the principle of transparency, timeliness, responsibility, and open communication and release the assessment results to the public; For effective monitoring and assessment, the government plans to estimate provisional GHG emissions and release such information on an annual basis</li> </ul>	 NDC does not mention any detail on the critical transition
Stronger rural livelihoods	<ul style="list-style-type: none"> <li>The Green New Deal is underpinned by 3 key pillars; green transition in cities/spatial planning/living infrastructure; the next 5 years of implementing the Green New Deal will serve as a lever for achieving the updated NDC including the 2030 national GHG reduction target and green transition toward carbon neutrality</li> </ul>	 NDC does not mention any detail on the critical transition
Gender and demography	<ul style="list-style-type: none"> <li>N/A</li> </ul>	 NDC does not mention any detail on the critical transition



## What specific institutional arrangements for climate have countries put in place?

### Dedicated body in place:

- Inter-ministerial coordination for setting a 2030 national GHG reduction target with the Greenhouse Gas Inventory and Research Centre of Korea (GIR), which operated a joint working group comprising expert agencies from each sector to conduct technical analysis for setting the target
- Post-2020 Public-Private Joint Commission to engage with the private sector and civil society
- Committee on Green Growth involved in the review of the update to the NDC

### Consultation processes:

- The Post-2020 Public-Private Joint Commission was formed to collect broader inputs from the private sector in drawing up the target; the commission consists of representatives from civil society and industries and was tasked with reviewing the result of the technical analysis delivered by the joint working group and collecting public opinions through public hearings and parliamentary discussions
- Civil society also played a role in pointing out that the 2030 Roadmap should serve to incentivise companies sufficiently to develop their investment plans for emissions reduction and to increase the role of domestic reduction rather than relying on mitigation efforts in overseas countries as suggested in the 2030 Roadmap

## SUMMARY

### Summary of the NDC analysis:







- The NDC provides little information on actions in the agricultural and food sector and generic orientations in the LULUCF sector. The document does not include any details on funding, policies, spatial information or use of technology directly tied to the food and land sector.
- The NDC only addresses four critical transitions and all in an inexplicit manner. Although the transition on "protecting and restoring nature" lists some essential actions, it lacks significant detail and only mentions a commitment to conduct forestation projects including sustainable forest management. Overall, little detail and no dedicated commitments or strategies are associated to the critical transitions.
- Out of all the critical transitions, "protecting and restoring nature" most directly relates to the land sector, in particular mentioning forestation projects and sustainable forest management practices. However, the NDC lacks detail of specific current or planned policies and actions to achieve these, as well as indication of any targets and monitoring means.

## REFERENCES

1. Source: ClimateWatch, accessed 30 August 2021. <https://www.climatewatchdata.org/compare-all-targets?>
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# Mexico

Emissions	Climate Commitment Status
<p><b>1.4%</b> of global emissions<sup>1</sup></p>  <p>Agriculture = 70.4 MtCO<sub>2</sub>eq in 2013<sup>2</sup> or 12% of total emissions excluding LULUCF  ↑ +3% since 1990</p> <p><b>-32.3</b> MtCO<sub>2</sub>eq LULUCF emissions in 2013<sup>3</sup>  Net source of emissions</p>	<p><b>2020 update submitted</b><sup>4</sup> ✓</p> <p><b>LTS submitted in 2016</b><sup>5</sup> ✓</p> <p><b>CAT rating</b><sup>6</sup> <b>HIGHLY INSUFFICIENT</b></p> <p><b>Net zero commitment:</b> No official commitment</p>
How action-oriented are the NDCs in the food and land sector?	
Criteria	NDC Assessment
<p><b>Specific policy priorities or actions for agriculture and food:</b></p> <ul style="list-style-type: none"> <li>Agriculture and Livestock are considered a key sector of economic activity in the NDC, and form one of five priority axes for mitigation (Axis B. Resilient production systems and food safety); the orientations of action given pertain to adaptation rather than mitigation</li> <li>While no specific targets are mentioned, the NDC addresses the inclusion of agricultural considerations in the country's governance framework and lists a range of policies <ul style="list-style-type: none"> <li>agricultural practices will be designed considering environmental and climatic variables, which will allow their territorialisation in the most vulnerable areas of the country, strengthening activities based on scientific knowledge, research and its application with traditional knowledge</li> <li>The foreseen actions consider best agricultural and conservation practices, the promotion of agroforestry and agroecological systems, the reduction of agricultural fires and the promotion of bio-digester technologies for a sustainable treatment of livestock residues</li> </ul> </li> <li>The NDC details adaptation actions related to "resilient production systems and food safety": <ol style="list-style-type: none"> <li>Promote sustainable production and consumption practices, conservation of genetic resources and the recovery of biocultural landscapes</li> <li>Incorporate climate change risk into value chains and investment plans of productive sectors.</li> <li>Contribute to the prevention and management of pests and diseases in domestic animal species and vegetable crops aggravated by climate change</li> <li>Strengthen environmental policy instruments and implement actions to ensure the protection of native crops relevant to agriculture and food security from the potential impacts of climate change</li> <li>Promote financing mechanisms that address the negative impacts of climate change on the primary productive sector</li> </ol> </li> <li>The NDC outlines that agricultural environmental policy instruments have been strengthened through cross-organisational collaboration of a number of federal agencies in close collaboration with state and municipal governments, to allow better integration of mitigation and adaptation actions: ensuring the protection of native agriculture crops from the potential impacts of climate change, involving the use of scientific and traditional knowledge, the promotion of agro-forestry practices, the reduction of agricultural fires, and the promotion of bio-digester technologies for a sustainable treatment of livestock residues</li> </ul>	<p>▲ ▲</p> <p><b>High:</b> NDC provides <b>indications of specific orientations</b> pursued by the Party in different agricultural and food sub-sectors</p>
<p><b>Specific policy priorities or actions for LULUCF:</b></p> <ul style="list-style-type: none"> <li>The Mexican NDC dedicates a specific section to LULUCF under the mitigation component, considered a key economic activity. Great detail given on methodological and definitional aspects of LULUCF</li> <li>The NDC notes that Mexico pledges to strengthen the strategy towards reaching a net zero deforestation rate by 2030 under the National Strategy to Reduce Emissions from Deforestation and Forest Degradation (ENAREDD+); it also includes the business as usual (BAU) baseline for LULUCF emissions</li> <li>The NDC notes the high synergies with adaptation, and impact on the lives of rural communities and biodiversity conservation. Action axis C, entitled "Conservation, restoration and sustainable use of biodiversity and ecosystem services", includes action lines linked to land use and forestry, including designing and implementing actions that contribute to control desertification and foster soil conservation</li> <li>Ecological restoration projects across levels of government will allow the recovery of unused and degraded soils</li> <li>The NDC details a specific deforestation target for the sector and an associated policy (the ENAREDD+ Strategy) but the target remains vague and no further information is provided on the subsectors in which action will take place or the drivers of deforestation in the country</li> </ul>	<p>▲ ▲</p> <p><b>High:</b> NDC provides <b>indications of specific orientations</b> pursued by the Party in different agricultural and food sub-sectors</p>


How action-oriented are the NDCs in the food and land sector?		
Criteria		NDC Assessment
<b>Key policies in the NDC supporting priorities:</b> <b>Agriculture and food:</b> <ul style="list-style-type: none"> <li>Long-term perspectives for Mexico's agricultural sector 2011–2020</li> <li>National Agricultural Planning 2017–2030</li> <li>Fertiliser Outlook 2017–2021</li> <li>Agricultural and Fisheries Information Service</li> <li>Note: all these policies are listed under "Assumptions and methodological approaches" and not directly linked to actions or orientations</li> </ul> <b>LULUCF:</b> <ul style="list-style-type: none"> <li>National Strategy to Reduce Emissions from Deforestation and Forest Degradation (ENAREDD+)</li> <li>National Forest and Soil Inventory (INFyS)</li> <li>Note: only the ENAREDD+ strategy is directly linked to the implementation of actions in the sector</li> </ul>		 <b>High:</b> NDC lists <b>sectoral</b> policies related to either agriculture and food or LULUCF which are directly linked to actions/orientations
<b>Dedicated financial resources associated with policies or action:</b> <ul style="list-style-type: none"> <li>No specific details on funding mitigation policies</li> <li>Under the adaptation section: "Promote financing mechanisms that address the negative impacts of climate change on the primary productive sector"</li> </ul>		 <b>Low:</b> NDC does not provide any detail on public funding to mitigation actions in the agriculture, food and land sectors
<b>Spatial information for mitigation provided in the NDC:</b> <ul style="list-style-type: none"> <li>N/A</li> </ul>		 <b>Low:</b> NDC does not provide any information on spatial planning to support adaptation or mitigation actions in the food and land sectors in the form of maps or indications of spatial data
<b>Technology details provided in the NDC:</b> <ul style="list-style-type: none"> <li>Mentions of technological innovation to tackle climate change are found throughout Mexico's NDC, with emphasis on the promotion of bio-digester technologies for a sustainable treatment of livestock residues</li> <li>Promotion of climate technologies for water collection, efficient use of water resources, wastewater treatment, recycling, and reuse; protection and restoration of water-related ecosystems, including forests, mountains, wetlands, rivers, aquifers, and lakes; value integration of ecosystems and biological diversity into national and local planning, as well as strategies for development and poverty reduction</li> <li>The foreseen actions consider best agricultural and conservation practices, the promotion of agroforestry and agroecological systems, the reduction of agricultural fires and the promotion of bio-digester technologies for a sustainable treatment of livestock residues</li> </ul>		 <b>Medium:</b> NDC provides a general indication of technological development needs or plans related to agriculture, food or LULUCF
What specific policy measures are included in the NDCs regarding critical food and land transitions?		
Critical transition	Details	NDC Assessment
<b>Healthy diets</b>	<ul style="list-style-type: none"> <li>Food safety section and action lines (Axis B): promoting sustainable production and consumption practices, conservation of genetic resources, strengthen environmental policy instruments and implement actions to ensure the protection of native crops relevant to agriculture and food security from the potential impacts of climate change</li> <li>Food is a fundamental human right that is warranted when people have timely and permanent physical, economic, and social access to food in sufficient quantity and quality for adequate consumption; this right contributes both to their well-being and to the satisfaction of their dietary and cultural needs</li> </ul>	 NDC provides inexplicit or unclear information on the critical transition (topic is mentioned, but not as a policy action)
<b>Productive and regenerative agriculture</b>	<ul style="list-style-type: none"> <li>Promotion of agroforestry and agroecological systems, regenerative cattle farming</li> <li>With the purpose of complying with the commitments established in the Paris Agreement, beginning in 2015, Mexico proposed a comprehensive mitigation strategy that would include black carbon as a short-lived climate pollutant; reducing black carbon decreases the negative impact on ecosystems and human health, strategic infrastructure, tangible cultural heritage, and productive sectors, including agro-ecosystems</li> </ul>	 NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition











What specific policy measures are included in the NDCs regarding critical food and land transitions?		
Critical transition	Details	NDC Assessment
<b>Protecting and restoring nature</b>	<ul style="list-style-type: none"> <li>Dedicated section and action measures for conservation, restoration and sustainable use of biodiversity and ecosystem services (Axis C); it integrates crucial issues for the country based on the conservation and restoration of blue carbon ecosystems, seas and oceans, forests, and key species, including strengthening environmental policy instruments and implementing actions to conserve and restore continental ecosystems, increasing their ecological connectivity, and promoting their resilience</li> <li>Strengthen instruments and implement actions for the conservation of biodiversity and the restoration of marine, coastal and freshwater ecosystems</li> <li>It also integrates actions to strengthen the management of Natural Protected Areas and increase their connectivity</li> <li>Mexico maintains and strengthens the strategy towards a zero-net deforestation rate, which will be achieved under the National Strategy to Reduce Emissions from Deforestation and Forest Degradation (REDD+)</li> </ul>	<p>●</p> <p>NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition</p>
What specific policy measures are included in the NDCs regarding critical food and land transitions?		
Critical transition	Details	NDC Assessment
<b>A healthy and productive ocean</b>	<ul style="list-style-type: none"> <li>The NDC integrates crucial issues for the country based on the conservation and restoration of blue carbon ecosystems, seas and oceans, forests, and key species: including implement actions for the conservation and restoration of the seas and oceans to enhance their resilience in the face of climate change</li> <li>Agricultural and Fisheries Information Service</li> </ul>	<p>●</p> <p>NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition</p>
<b>Diversifying protein supply</b>	<ul style="list-style-type: none"> <li>N/A</li> </ul>	<p>●</p> <p>NDC does not mention any detail on the critical transition</p>
<b>Reducing food loss and waste</b>	<ul style="list-style-type: none"> <li>The NDC addresses opportunities related to solid waste management and disposal activities; it considers or foresees an increase in treatment of wastewater from both municipal and industrial sources, as well as other activities related to their final disposal, reuse, recycling, composting, and bio digestion</li> </ul>	<p>●</p> <p>NDC provides inexplicit or unclear information on the critical transition (topic is mentioned, but not as a policy action)</p>
<b>Local loops and linkages</b>	<ul style="list-style-type: none"> <li>National Strategy for Circular Economy; promote a circular economy by recognizing the externalities of the processes employed and at the same time optimizing the use of inputs and energy required</li> </ul>	<p>●</p> <p>NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition</p>
<b>Digital revolution</b>	<ul style="list-style-type: none"> <li>Promotion of climate technologies for water collection, efficient use of water resources, wastewater treatment, recycling, and reuse; protection and restoration of water-related ecosystems, including forests, mountains, wetlands, rivers, aquifers, and lakes; value integration of ecosystems and biological diversity into national and local planning, as well as strategies for development and poverty reduction</li> <li>In Mexico's LULUCF strategy, the country will strengthen the strategy towards zero-net deforestation, improved ecological restoration projects, and strengthen the agricultural sectors synergies with sustainable development; all of these areas will have a system of constant monitoring and follow-up to ensure effectiveness</li> <li>This NDC update presents a greater ambition in the actions that will be undertaken in the territory and foresees the consolidation of Monitoring and Evaluation (M&amp;E) mechanisms which will enhance the System for Information on Advances in Transparency (SIAT) of the NDC</li> <li>Section on Monitoring, Reporting and Verification of Actions for cross-sectoral approaches and actions</li> </ul>	<p>●</p> <p>NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition</p>
<b>Stronger rural livelihoods</b>	<ul style="list-style-type: none"> <li>As with agriculture, this sector has high synergies with adaptation, its impact on the lives of rural communities and biodiversity conservation should be addressed strategically, strengthening its positive impact on sustainable development</li> <li>Axis B. Resilient production systems and food security: <ul style="list-style-type: none"> <li>Promote sustainable production and consumption practices, conservation of genetic resources and the recovery of biocultural landscapes. Incorporate climate change risk into value chains and investment plans of productive sectors</li> <li>Promote financing mechanisms that address the negative impacts of climate change on the primary productive sector</li> </ul> </li> </ul>	<p>●</p> <p>NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition</p>

What specific policy measures are included in the NDCs regarding critical food and land transitions?		
Critical transition	Details	NDC Assessment
<b>Stronger rural livelihoods (cont'd)</b>	<ul style="list-style-type: none"> <li>This NDC update is based on gender-responsive approaches that will contribute to a more just and egalitarian society by prioritizing the needs of vulnerable communities and promoting the inclusion and recognition of the knowledge of indigenous communities, under the principle of intergenerational equity</li> </ul>	<p>●</p> <p>NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition</p>
<b>Gender and demography</b>	<ul style="list-style-type: none"> <li>The Mexican Government ratifies its commitment to implement the NDC respecting human rights, integrating a gender equality approach, prioritising the needs of vulnerable groups, and promoting the inclusion and recognition of science and traditional knowledge of native indigenous communities under the principle of intergenerational equity.</li> <li>Reports on the progress of the NDC's implementation will incorporate the objectives and goals of the Lima Work Programme on Gender and the UNCCD Gender Action Plan.</li> <li>In Mexico, several social groups are particularly vulnerable to the impacts of climate change; among them are indigenous and Afro-Mexican communities, the vast majority of whom live in impoverished, high-risk areas. On the other hand, the inequality that persists in Mexico, further stresses geographical vulnerability as well as age and gender disparities. Restricting women's access to means of production such as land, financing, training, education and information, diminishes their adaptive capacity in the face of climate change.</li> </ul>	<p>●</p> <p>NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition</p>
What specific institutional arrangements for climate have countries put in place?		
<p><b>Dedicated body in place:</b></p> <ul style="list-style-type: none"> <li>National Climate Change System (SINACC), the permanent mechanism for consultation, communication, collaboration, and coordination on national climate policy, is the interaction point between the National Institute of Ecology and Climate Change, responsible for conducting research and providing technical and scientific support for climate policy decision-making and the Coordination of Evaluation, as the pluralistic body responsible for assessing national climate change policy</li> <li>The Intersecretarial Commission on Climate Change (CICC), composed of fifteen ministries, is a space for coordinating the actions of national agencies and entities in relation to climate change;</li> <li>The Council on Climate Change (C3), composed of experts from the academic and social sectors who provides recommendations on mitigation and adaptation</li> </ul> <p><b>Consultation processes:</b></p> <ul style="list-style-type: none"> <li>During this NDC's update, government agencies and state governments were involved, along with the private sector and social organisations. Public and private discussions were conducted with representatives of each of the sectors included in the NDC, comprising human rights, gender perspective and youth associations. In addition, online consultation procedures were implemented, in order to engage society as a whole in the process of developing climate policy and updating the NDC</li> </ul>		
SUMMARY		
<p><b>Summary of the NDC analysis:</b></p> <ul style="list-style-type: none"> <li>The NDC provides dedicated sections to agriculture and LULUCF under its mitigation and adaptation components. However, these mitigation sections are concise and short on detail. While specific orientations are provided on agriculture, which will enable assessments of both national action alignment with the NDC and progress from one NDC to the next, only generic orientations are provided for the LULUCF sector. More specific orientations in LULUCF are provided in the adaptation section.</li> <li>A specific net-zero deforestation target is set for the LULUCF sector, but no further detail on actions to achieve it are provided</li> <li>The only policy that is directly linked to actions is the ENAREDD+ Strategy on reducing emissions from deforestation. Other policies, especially on agriculture, are mentioned in the NDC under the "assumptions" section but not explicitly linked to the actions to be undertaken.</li> <li>No detail is provided on funding and the use of spatial information, and only vague details are available on the need for new agricultural technologies.</li> <li>The NDC addresses the critical transitions well, with many transitions including specific commitments, targets and strategies.</li> <li>The "digital revolution" transition is well addressed in the NDC. It addresses the promotion of climate technologies for efficient water use, the protection and restoration of water-related ecosystems, and it states that all LULUCF strategies will have a system of constant monitoring and follow-up to ensure effectiveness. The NDC also references mechanisms for monitoring and evaluation as well as systems for transparency for the NDC.</li> </ul>		
REFERENCES		
<ol style="list-style-type: none"> <li>Source: ClimateWatch, accessed 30 August 2021. <a href="https://www.climatewatchdata.org/compare-all-targets?">https://www.climatewatchdata.org/compare-all-targets?</a></li> <li>Source: UNFCCC, Greenhouse Gas Inventory Data, accessed 30 August 2021. <a href="https://di.unfccc.int/detailed_data_by_party">https://di.unfccc.int/detailed_data_by_party</a></li> <li>Source: UNFCCC, Greenhouse Gas Inventory Data, accessed 30 August 2021. <a href="https://di.unfccc.int/detailed_data_by_party">https://di.unfccc.int/detailed_data_by_party</a></li> <li>Submitted 30 December 2020. Source: UNFCCC. <a href="https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Mexico%20First/NDC-Eng-Dec30.pdf">https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Mexico%20First/NDC-Eng-Dec30.pdf</a></li> <li>Submitted 16 November 2016. Source: UNFCCC. <a href="https://unfccc.int/files/focus/long-term_strategies/application/pdf/mexico_mcs_final_cop22nov16_red.pdf">https://unfccc.int/files/focus/long-term_strategies/application/pdf/mexico_mcs_final_cop22nov16_red.pdf</a></li> <li>Source: Climate Action Tracker, accessed 15 September 2021. <a href="https://climateactiontracker.org/countries/mexico/">https://climateactiontracker.org/countries/mexico/</a></li> </ol>		



# Russian Federation

Emissions	Climate Commitment Status
<p><b>4.1%</b> of global emissions<sup>1</sup></p>  <p>Agriculture = 114.2 MtCO<sub>2</sub>eq in 2019<sup>2</sup> or 5% of total emissions excluding LULUCF ↓ -54% since 1990</p> <p><b>-534.8</b> MtCO<sub>2</sub>eq LULUCF emissions in 2019<sup>3</sup> Net sink of emissions</p>	<p>2020 update submitted<sup>4</sup> ✓</p> <p>LTS not yet submitted ✗</p> <p>CAT rating<sup>6</sup> <b>CRITICALLY INSUFFICIENT</b></p> <p>Net zero commitment: No official commitment</p>
How action-oriented are the NDCs in the food and land sector?	
Criteria	NDC Assessment
<p><b>Specific policy priorities or actions for agriculture and food:</b></p> <ul style="list-style-type: none"> <li>While positive and negative climate impacts on agriculture are listed, the NDC does not outline actions in the agriculture sector in either mitigation or adaptation</li> </ul>	<p>○</p> <p><b>Low:</b> NDC does not cover agriculture and food or provides no detail on general or specific orientations, or only in contextual manner.</p>
<p><b>Specific policy priorities or actions for LULUCF:</b></p> <ul style="list-style-type: none"> <li>The Russian Federation NDC only references LULUCF in the reference indicator and scope and coverage sections. No specific targets or measures are mentioned</li> <li>Russia's emissions reduction target of 70% by 2030 relative to the 1990 level takes into account the maximum possible absorptive capacity of forests; this is intended to demonstrate the importance of protecting and improving the quality of sinks</li> <li>A national climate change adaptation system is being formed, which includes preventative adaptation such as forest protection belts</li> <li>The NDC also intends to account for the maximum possible absorption capacity of forests and other ecosystems</li> </ul>	<p>▲</p> <p><b>Medium:</b> NDC mentions <b>generic orientations of actions, commitment or strategy</b> in the LULUCF sector but provides little detail of specific sub-sector orientations pursued by the Party</p>
<p><b>Key policies in the NDC supporting priorities:</b></p> <p><b>Agriculture and food:</b></p> <ul style="list-style-type: none"> <li>The National Action Plan includes measures to adapt economic sectors to agro-industrial complex, fishing, and nature, but it is not a sectoral policy</li> </ul> <p><b>LULUCF:</b></p> <ul style="list-style-type: none"> <li>2019 National Action Plan accounts for various sectors including nature management. Preventative adaptation aimed at reducing the risk of climate change through forest protection belts and more. However, it is not a sectoral policy</li> </ul>	<p>○</p> <p><b>Low:</b> NDC does not list any <b>sectoral</b> policy related to agriculture, food or LULUCF</p>
<p><b>Dedicated financial resources associated with policies or action:</b></p> <ul style="list-style-type: none"> <li>N/A</li> </ul>	<p>○</p> <p><b>Low:</b> NDC does not provide any detail on public funding to mitigation actions in the agriculture, food and land sectors</p>
<p><b>Spatial information for mitigation provided in the NDC:</b></p> <ul style="list-style-type: none"> <li>N/A</li> </ul>	<p>○</p> <p><b>Low:</b> NDC does not provide any information on spatial planning to support adaptation or mitigation actions in the food and land sectors in the form of maps or indications of spatial data</p>
<p><b>Technology details provided in the NDC:</b></p> <ul style="list-style-type: none"> <li>N/A</li> </ul>	<p>○</p> <p><b>Low:</b> NDC does not provide any information on spatial planning to support adaptation or mitigation actions in the food and land sectors in the form of maps or indications of spatial data</p>

What specific policy measures are included in the NDCs regarding critical food and land transitions?		
Critical transition	Details	NDC Assessment
Healthy diets	<ul style="list-style-type: none"> <li>N/A</li> </ul>	 NDC does not mention any detail on the critical transition
Productive and regenerative agriculture	<ul style="list-style-type: none"> <li>N/A</li> </ul>	 NDC does not mention any detail on the critical transition
Protecting and restoring nature	<ul style="list-style-type: none"> <li>Priority measures to adapt economic sectors and spheres of government to climate change (transport, fuel and energy complex, construction, housing and communal services, agro-industrial complex, fishing, nature management, health care, etc.)</li> <li>A national adaptation plan is being formed to include preventive (proactive) adaptation aimed at reducing the risk of climate change (for example, the construction of dams against floods, forest protection belts, expansion of drought-resistant crops, etc.)</li> </ul>	 NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition
A healthy and productive ocean	<ul style="list-style-type: none"> <li>The Russian Federation will continue, within the framework of relevant international agreements, to strengthen capacity in developing countries through the training of qualified specialists in climatology, meteorology, hydrology and oceanography.</li> <li>Priority measures to adapt economic sectors and spheres of government to climate change (transport, fuel and energy complex, construction, housing and communal services, agro-industrial complex, fishing, nature management, health care, etc.)</li> </ul>	 NDC provides inexplicit or unclear information on the critical transition (topic is mentioned, but not as a policy action)
Diversifying protein supply	<ul style="list-style-type: none"> <li>N/A</li> </ul>	 NDC does not mention any detail on the critical transition
Reducing food loss and waste	<ul style="list-style-type: none"> <li>N/A</li> </ul>	 NDC does not mention any detail on the critical transition
Local loops and linkages	<ul style="list-style-type: none"> <li>N/A</li> </ul>	 NDC does not mention any detail on the critical transition
Digital revolution	<ul style="list-style-type: none"> <li>No information in the context of food and land</li> <li>Broader information on Russia's planned national climate change adaptation system to monitor the effectiveness of adaptation measures and adjusting them.</li> <li>In accordance to the Concept for the formation of a monitoring, reporting and verification system for greenhouse gas emissions in the Russian Federation, approved by order of the Government of the Russian Federation No. 716-r dated April 22, 2015, the current assessment system will in the future be supplemented with a monitoring, reporting and checking the volumes of greenhouse gas emissions at the level of organisations, as well as the constituent entities of the Russian Federation, which are recommended to organise an inventory of greenhouse gas emissions and removals on their territory</li> </ul>	 NDC does not mention any detail on the critical transition
Stronger rural livelihoods	<ul style="list-style-type: none"> <li>N/A</li> </ul>	 NDC does not mention any detail on the critical transition
Gender and demography	<ul style="list-style-type: none"> <li>N/A</li> </ul>	 NDC does not mention any detail on the critical transition

## What specific institutional arrangements for climate have countries put in place?

### Dedicated body in place:

- N/A

### Consultation processes:

- N/A

## SUMMARY

### Summary of the NDC analysis:









- The NDC provides little information on actions in the agricultural sector and generic orientations in the LULUCF sector (mostly tied to adaptation). The document does not include any details on funding, policies, spatial information or employment of technology directly tied to the AFOLU sector
- The NDC does not address the critical transitions well and provides little information on the AFOLU sector. The NDC generally lacks detail, specific strategies or commitments related to the AFOLU sector and there are no clear lines for funding
- The NDC includes a national adaptation plan that includes preventive (proactive) adaptation aimed at reducing the risk of climate change, for example with the construction of dams against floods and forest protection belts. It however lacks detail.





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1. Source: ClimateWatch, accessed 30 August 2021. <https://www.climatewatchdata.org/compare-all-targets?>
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4. Submitted 25 November 2020. Source: UNFCCC. [https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Russian%20Federation%20First/NDC\\_RF\\_eng.pdf](https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Russian%20Federation%20First/NDC_RF_eng.pdf)
5. A first draft was published in March 2020 but not submitted to the UNFCCC (Russian only). Source: Ministry of Economic Development, Russian Federation. [https://economy.gov.ru/material/news/minekonomrazvitiya\\_rossii\\_podgotovilo\\_proekt\\_strategii\\_dolgosrochnogo\\_razvitiya\\_rossii\\_s\\_nizkim\\_urovnem\\_vybrosov\\_parnikovyh\\_gazov\\_do\\_2050\\_goda\\_.html](https://economy.gov.ru/material/news/minekonomrazvitiya_rossii_podgotovilo_proekt_strategii_dolgosrochnogo_razvitiya_rossii_s_nizkim_urovnem_vybrosov_parnikovyh_gazov_do_2050_goda_.html)
6. Climate Action Tracker, accessed 15 September 2021. <https://climateactiontracker.org/countries/russian-federation/>

# South Africa

Emissions	Climate Commitment Status								
<b>1.06%</b> of global emissions <sup>1</sup>	<p><b>2020 update submitted<sup>2</sup></b> ✓</p> <p><b>LTS submitted in 2020<sup>3</sup></b> ✓</p> <p><b>CAT rating<sup>4</sup></b> <b>INSUFFICIENT</b></p> <p><b>Net zero commitment:</b> No official commitment</p> <p>The long-term strategy submitted to the UNFCCC states that "We thus commit to ultimately moving towards a goal of net zero carbon emissions by 2050" but this goal and the measures to achieve it "will be formally communicated in future iterations of this strategy" (<a href="#">South Africa's Low Emission Development Strategy 2050</a>)</p> <p><b>Net zero details:</b></p> <table> <tr> <td><b>Date:</b></td><td>2050</td></tr> <tr> <td><b>Legal status:</b></td><td>In policy document</td></tr> <tr> <td><b>Gases covered:</b></td><td>Uncertain</td></tr> <tr> <td><b>Credits allowed:</b></td><td>Uncertain</td></tr> </table>	<b>Date:</b>	2050	<b>Legal status:</b>	In policy document	<b>Gases covered:</b>	Uncertain	<b>Credits allowed:</b>	Uncertain
<b>Date:</b>	2050								
<b>Legal status:</b>	In policy document								
<b>Gases covered:</b>	Uncertain								
<b>Credits allowed:</b>	Uncertain								
How action-oriented are the NDCs in the food and land sector?									
Criteria	NDC Assessment								
<p><b>Specific policy priorities or actions for agriculture and food:</b></p> <ul style="list-style-type: none"> <li>The AFOLU sector is covered in the NDC, but no information is provided on mitigation actions or targets in the agriculture and food sector</li> <li>Agriculture is included in the key focus sectors in the adaptation component, aiming to "prioritise understanding of impacts, risk and vulnerability for the key sectors, and the development of climate response plans"</li> <li>Adaptation actions in the agricultural sector include the development of early warning systems for small scale farmers, supporting climate-smart agriculture, the development of a multi-hazard early warning system, capacity building for the farming sector on climate change and full implementation of a climate-smart agriculture framework</li> <li>In the context of COVID19 the NDC highlights the importance of ensuring that "food production is not threatened and to enable economic development to proceed in a sustainable manner"</li> </ul>	<p>▲</p> <p><b>Medium:</b> NDC mentions <b>generic orientations of actions, commitment or strategy</b> in the agriculture and food sector but provides little detail of specific sub-sector orientations pursued by the Party</p>								
<p><b>Specific policy priorities or actions for LULUCF:</b></p> <ul style="list-style-type: none"> <li>The land sector is included in the NDC, excluding emissions from natural disturbances (IPCC 2006 guidelines categories 3B and 3D); no information is provided on mitigation measures or targets in the LULUCF sector.</li> <li>The excluded emissions are mainly related to wildfires and are excluded due to significant interannual variations and uncertainties</li> <li>The NDC states that "considerable uncertainties remain in estimating GHGs, especially in the land sector" and that recalculations following improvements in estimating land sector emissions may result in significant changes in previously reported GHG estimates</li> <li>The forestry sector is mentioned together with agriculture as one of the key focus sectors for adaptation, but no specific adaptation actions are provided</li> </ul>	<p>○</p> <p><b>Low:</b> NDC does not cover LULUCF or <b>provides no detail on general or specific orientations</b>, or only in contextual manner</p>								
<p><b>Key policies in the NDC supporting priorities:</b></p> <p><b>Agriculture and food:</b></p> <ul style="list-style-type: none"> <li>N/A</li> </ul> <p><b>LULUCF:</b></p> <ul style="list-style-type: none"> <li>N/A</li> </ul>	<p>○</p> <p><b>Low:</b> NDC does not list any <b>sectoral</b> policy related to agriculture, food or LULUCF</p>								
<p><b>Dedicated financial resources associated with policies or action:</b></p> <ul style="list-style-type: none"> <li>The NDC states that it will require a much greater investment programme over the next decade, of between R860 billion and R920 billion (in 2019 Rands; USD60-64 billion); the figures are associated mostly to the electricity generation sector and projects</li> <li>The NDC was developed with the assumption that support will be provided for the implementation of the targets and goals specified, for mitigation, adaptation and loss and damage; "South Africa expects developed countries to continue to provide and mobilise climate finance and to support country-driven strategies".</li> <li>Public investment information is only provided for the adaptation component of the NDC, including: <ul style="list-style-type: none"> <li>USD 3-4 billion required for the implementation of the National Climate Change Adaptation Strategy from 2021 to 2030 (including specific actions in the agricultural sector)</li> <li>USD 8 million for developing tools, strategies and rollout for the period 2021 to 2030 for climate adaptation including in agriculture and forestry</li> </ul> </li> </ul>	<p>○</p> <p><b>Low:</b> NDC does not provide any detail on public funding to mitigation actions in the agriculture, food and land sectors</p>								

How action-oriented are the NDCs in the food and land sector?		
Criteria		NDC Assessment
<b>Spatial information for mitigation provided in the NDC:</b> <ul style="list-style-type: none"> <li>Goal 2 of the adaptation communication mentions the need to develop an understanding of the impacts of 1.5°C and 2°C of global warming and the underlying global emission pathways through "geo-spatial mapping of the physical climate hazards"</li> </ul>		 <b>Medium:</b> NDC provides information on spatial planning related to climate mitigation and adaptation and/or includes a non-actionable map, i.e. one that is not useful in isolation or when combined with other data layers to inform policy. E.g. Map of administrative regions
<b>Technology details provided in the NDC:</b> <ul style="list-style-type: none"> <li>One of the actions under goal 3 of the adaptation communication is to "promote research and development in application, localisation, transfer and adoption of technology within key climate-sensitive sector for the period 2021- 2030" including agriculture and forestry</li> <li>Section 5 on the needs for external supports restates the need for technology transfer from developed countries but does not specify what types of technologies and for which sectors.</li> </ul>		 <b>Medium:</b> NDC provides a general indication of technological development needs or plans related to agriculture, food or LULUCF
What specific policy measures are included in the NDCs regarding critical food and land transitions?		
Critical transition	Details	NDC Assessment
Healthy diets	<ul style="list-style-type: none"> <li>N/A</li> </ul>	 NDC does not mention any detail on the critical transition
Productive and regenerative agriculture	<ul style="list-style-type: none"> <li>Development of early warning climate systems for small scale farmers and supporting climate-smart agriculture</li> <li>The development of a multi-hazard early warning system, capacity change and full implementation of a climate- smart agriculture framework should be prioritised</li> <li>Capacity building for the farming sector on climate change and full implementation of a climate-smart agriculture</li> <li>Agriculture, forestry and fisheries sectors are critical in attracting foreign exchange, job creation and production of raw material for the economy</li> <li>Across South Africa, the increase in temperatures and changing rainfall patterns will bring about distinct risks for different crops and commodities in different growing areas; impacts will have major implications for crops, tree species, livestock, game and fisheries as well as the prevalence of pests and diseases</li> </ul>	 NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition
Protecting and restoring nature	<ul style="list-style-type: none"> <li>The national Department of Environment, Forestry and Fisheries is the focal point for climate change and is responsible for climate change adaptation planning</li> <li>Priority sectors are biodiversity, ecosystems, water, health energy, settlements (coastal, urban, rural); disaster risk reduction, transport, infrastructure, mining, fisheries, forestry and agriculture</li> <li>Enhance the Monitoring of Climate Change impacts on Biodiversity and Ecological Infrastructure</li> <li>The current projections show a considerable increase in temperature and more erratic rainfall leading to biodiversity loss within the biodiversity sector, which contributes about 418 000 jobs (NBA, 2018); the risk to biodiversity is expected to increase in future, as explained by various projected climatic variables in the form of increased fire frequency and severity, erratic rainfall and increased evaporative demand on account of elevated temperatures</li> <li>The adaptation communication provides detailed information on South Africa's planned contribution to the global adaptation goal during the NDC period, anticipated climate impacts, a description of our recently approved National Climate Change Adaptation Strategy, and details of planned adaptation actions over the next decades and their associated costs for key areas of the economy that are likely to be most impacted by climate change (health, agriculture and forestry, human settlements, biodiversity, and water)</li> </ul>	 NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition
A healthy and productive ocean	<ul style="list-style-type: none"> <li>Water sector settlements: enhance water security; effectively deploy flood protection measures, and hydro-metrological monitoring systems</li> </ul>	 NDC does not mention any detail on the critical transition
Diversifying protein supply	<ul style="list-style-type: none"> <li>N/A</li> </ul>	 NDC does not mention any detail on the critical transition
Reducing food loss and waste	<ul style="list-style-type: none"> <li>In the context of COVID-19, we highlight the importance of global solidarity, in fighting the virus and climate change. In recommitting ourselves to the multi-lateral rules based system, we highlight the importance of ensuring that "food production is not threatened and to enable economic development to proceed in a sustainable manner"</li> </ul>	 NDC does not mention any detail on the critical transition

What specific policy measures are included in the NDCs regarding critical food and land transitions?		
Critical transition	Details	NDC Assessment
Local loops and linkages	<ul style="list-style-type: none"> <li>N/A</li> </ul>	 <p>NDC does not mention any detail on the critical transition</p>
Digital revolution	<ul style="list-style-type: none"> <li>Water sector settlements: enhance water security; and effectively deploy flood protection measures, hydro-metrological monitoring systems</li> <li>Agriculture: development of early warning systems for small scale farmers; and supporting climate-smart agriculture</li> <li>Health: monitoring, surveillance and early warning systems for climate-induced diseases</li> <li>Biodiversity: Enhance the Monitoring of Climate Change impacts on Biodiversity and Ecological Infrastructure</li> <li>Enhance early warning, vulnerability and adaptation monitoring system for period of 2021 to 2030</li> <li>South Africa will seek to develop small, medium and micro-enterprises, including energy service companies, to implement innovative technologies and create sustainable employment; in addition to implementation of emissions reductions in the 2020s pursuant to the updated NDC target ranges contained in Table 2 above, support will also be required for longer term decarbonisation, which will require investments in the 2020s in infrastructure, technology development and capacity-building</li> </ul>	 <p>NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition</p>
Stronger rural livelihoods	<ul style="list-style-type: none"> <li>Coastal Settlement: urban and rural</li> <li>The just transition in South Africa will require international cooperation and support. In the first NDC, South Africa identified various technologies that could help us to further reduce emissions</li> <li>South Africa is also fortunately blessed with abundant renewable energy resources, and developments in the economics of renewable energy technologies over the last decade are very favourable to low-carbon development in the country, but a well-resourced just transition strategy will be needed to shift to low-carbon technologies, to maximise benefits and minimise adverse impacts on communities, workers and the economy</li> <li>South Africa convened a Job Summit in 2018, which agreed to establish a Presidential Climate Commission to oversee South Africa's just transition; a just transition means leaving no-one behind. It requires procedural equity to lead to equitable</li> <li>Outcomes: a just transition is at the core of implementing climate action in South Africa, as detailed in both the mitigation and adaptation goals presented below.</li> <li>"As South Africa indicated at the UN Secretary General's Climate Action Summit in 2019, as part of ensuring a just transition we will need to put measures in place that plan for workforce reskilling and job absorption, social protection and livelihood creation, incentivising new green sectors of our economy, diversifying coal dependent regional economies, and developing labour and social plans as and when ageing coal-fired power plants and associated coal production infrastructure are decommissioned. Based on this process, we will be finalising our Just Transition Plan, including defining pathways compatible with pursuing efforts to limit temperature increase to 1.5 °C"</li> <li>Agriculture: development of early warning climate systems for small scale farmers, capacity building for the farming sector on climate change; and full implementation of a climate-smart agriculture</li> <li>Vulnerability and risk assessment for the health sector positions subgroups such as the elderly and children as the most vulnerable to temperature extremes; recognises rural livelihoods and outdoor labour, including women, as the most exposed to extreme temperature hazards leading to adverse effects such as heat stroke</li> </ul>	 <p>NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition</p>
Gender and demography	<ul style="list-style-type: none"> <li>Public consultation and participation: DFFE conducted stakeholder consultations by way of a hybrid model (due to challenges brought about by the COVID pandemic) using in-person consultations and virtual participation in all nine provinces, accessible to local government and undertaken in a gender-responsive manner</li> <li>Long and deep transformations, for example in producing green steel, require international cooperation and support; "in such transformations, we will seek to raise further awareness of the financial and technical support available for promoting the strengthening of gender integration into climate policies, including good practices to facilitate access to climate finance for grassroots women's organisations and indigenous peoples and local communities"</li> </ul>	 <p>NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition</p>



## What specific institutional arrangements for climate have countries put in place?

### Dedicated body in place:

- The NDC states that the Climate Change Bill describes "three key climate change adaptation institutional structures in the Climate Change Bill – namely the Presidential Climate Commission (PCC); the Inter-Ministerial Committee on Climate Change (IMC) and the Provincial Forum on Climate Change – are designed to improve both coherence coordination, as well as the implementation of adaptation responses across government, and in engaging with business, civil society and research institutions"
- The NDC commits to establishing the Presidential Climate Commission and Inter- Ministerial Committee on Climate Change by 2025

### Consultation processes:

- The process for updating SA's first NDC had five parts: technical analysis, consultation within government, consultation with broader stakeholders, provincial public stakeholder workshops, and finalisation in government and Cabinet
- Public consultation and participation: The Department of Forestry, Fisheries and Environment conducted stakeholder consultations by way of a hybrid model (due to challenges brought about by the COVID pandemic) using in-person consultations and virtual participation in all nine provinces, accessible to local government and undertaken in a gender-responsive manner; the stakeholder consultations were launched at the National Climate Change Committee, and the NDC was presented to the Presidential Climate Commission and to stakeholders across business, labour and civil society, including women and youth constituencies

## SUMMARY


### Summary of the NDC analysis:








- The NDC does not detail any mitigation measures tied to the food and land sector. Agriculture and forestry are identified as key focus sectors in the adaptation communication. Some orientations of actions are provided for the adaptation of the agriculture and food sector, but no actions are described for the LULUCF sector.
- No sectoral policies related to the AFOLU sector are mentioned in the NDC.
- The need for external financial support is highlighted, but no indications are provided on national budgetary lines.
- The NDC mentions the need for "geo-spatial mapping of the physical climate hazards" of climate change for key sectors including agriculture and LULUCF but does not include any further details.
- The NDC mentions the need to promote research and development in climate adaptive technologies in several sectors including agriculture and forestry, but no further details are provided.
- The NDC addresses five critical transitions well, however it does not reference many policies or strategies relating to each transition.
- Under the critical transition on "stronger rural livelihoods", the NDC includes many references to a just transition, including specific actions and a Just Transition Plan to define pathways to achieve climate action without "leaving anyone behind." It does however mention that a "well-resourced" strategy will be need, so this is a conditional target on international support.

## REFERENCES

1. Source: ClimateWatch, accessed 30 August 2021. <https://www.climatewatchdata.org/compare-all-targets?>
2. Submitted 27 September 2021. Source: UNFCCC. <https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/South%20Africa%20First/South%20Africa%20updated%20first%20NDC%20September%202021.pdf>
3. Submitted 23 September 2020. Source: UNFCCC. <https://unfccc.int/sites/default/files/resource/South%20Africa%27s%20Low%20Emission%20Development%20Strategy.pdf>
4. Source: Climate Action Tracker, accessed 05 October 2021. <https://climateactiontracker.org/countries/south-africa/>

# United Kingdom

Emissions	Climate Commitment Status
<p><b>0.9%</b> of global emissions<sup>1</sup></p>  <p>Agriculture = 42.1 MtCO<sub>2</sub>eq in 2019<sup>2</sup> or 9% of total emissions excluding LULUCF ↓ -19% since 1990</p> <p><b>6.0</b> MtCO<sub>2</sub>eq LULUCF emissions in 2019<sup>3</sup></p> <p>Net source of emissions</p>	<p><b>2020 update submitted<sup>4</sup></b> ✓</p> <p><b>LTS submitted in 2021<sup>5</sup></b> ✓</p> <p><b>CAT rating<sup>6</sup></b> <b>ALMOST SUFFICIENT</b></p> <p><b>Net zero commitment:</b> 100% reduction of GHG emissions by 2050 compared to 1990 levels (Source: <a href="#">The Climate Change Act 2008 (2050 Target Amendment Order) 2021</a>)</p> <p><b>Net zero details:</b></p> <p><b>Date:</b> 2050</p> <p><b>Legal status:</b> In law</p> <p><b>Gases covered:</b> All GHGs</p> <p><b>Credits allowed:</b> Likely. The net UK carbon account covers "the amount of carbon units credited to the net UK carbon account" but "the circumstances in which carbon units may be credited to the net UK carbon account" must be regulated by the Secretary of State (section 27, no further information)</p>
How action-oriented are the NDCs in the food and land sector?	
Criteria	NDC Assessment
<p><b>Specific policy priorities or actions for agriculture and food:</b></p> <ul style="list-style-type: none"> <li>The NDC does not include a specific agriculture section, but food security and policy are highlighted as a priority area; it further outlines specific policies implemented or planned at the national level and in each devolved administration related to food security and policy and terrestrial biodiversity that could have an impact on agriculture</li> <li>The UK's Agriculture Act requires the government to develop a domestic and international food security report every three years, with the first report to be published in 2021</li> <li>The UK is taking ambitious action to phase down the UK's use of hydrofluorocarbons (HFCs), including in refrigeration equipment for food storage and distribution and promoting the uptake of sustainable refrigeration and cold chain technologies domestically and internationally; a review of the F-gas Regulation will be conducted and a report to be published in 2022 will set out any further measures the UK can take to reduce HFC emissions</li> <li>The NDC also addresses the fisheries subsector and marine climate risks through existing and new marine and fisheries policies</li> <li>The UK is committed to delivering a national shift to healthy diets supported by a sustainable food system which contributes towards a reduction in GHG emissions</li> <li>Adaptation programmes are mentioned in the context of the fisheries industry</li> </ul>	<p>▲▲</p> <p><b>High:</b> NDC provides <b>indications of specific orientations</b> pursued by the Party in different agricultural and food sub-sectors</p>
<p><b>Specific policy priorities or actions for LULUCF:</b></p> <ul style="list-style-type: none"> <li>The NDC only references LULUCF when defining the sectors and pools covered, with all LULUCF pools included (above ground biomass, below ground biomass, litter, deadwood soil organic carbon and stocks of harvested wood products)</li> <li>Several policies and schemes related to forests and peatlands are mentioned under "Other contextual aspirations and priorities" but are not explicitly linked to actions to be undertaken for the implementation of the NDC</li> <li>Relevant actions include developing the new Sustainable Land Management scheme and the National Forest for Wales, work to improve the condition of Protected Sites Network, and the National Peatland Action Programme</li> </ul>	<p>▲</p> <p><b>Medium:</b> NDC provides detail focus areas of technological development needs or plans related to agriculture, food or LULUCF</p>
<p><b>Key policies in the NDC supporting priorities:</b></p> <p><b>Agriculture and food:</b></p> <ul style="list-style-type: none"> <li>UK's Agriculture Act</li> <li>F-gas Regulation</li> <li>Environment Strategy for Northern Ireland</li> <li>Nature Recovery Action Plan (NRAP)</li> <li>UK's Marine and Coastal Access Act</li> <li>UK Fisheries Act 2020</li> <li>England's Resources and Waste Strategy</li> <li>2020 Programme for Government (includes a local food strategy)</li> </ul>	<p>▲▲▲</p> <p><b>Very high:</b> NDC lists <b>sectoral policies</b> related to both agriculture and food and LULUCF which are <b>directly linked to actions/orientations</b></p>

How action-oriented are the NDCs in the food and land sector?		
Criteria		NDC Assessment
<b>Key policies in the NDC supporting priorities (cont'd):</b> <b>LULUCF:</b> <ul style="list-style-type: none"> <li>• Sustainable Land Management scheme</li> <li>• National Forest for Wales</li> <li>• National Peatland Action Programme</li> <li>• Edinburgh Declaration and the Leaders' Pledge for Nature, Nature Recovery Action Plan</li> <li>• England Peat Strategy</li> </ul>		 <b>Very high:</b> NDC lists <b>sectoral policies</b> related to both agriculture and food and LULUCF which are <b>directly linked to actions/orientations</b>
<b>Dedicated financial resources associated with policies or action:</b> <ul style="list-style-type: none"> <li>• Plan to mobilise £12 billion in government investments to create and support highly skilled green jobs, including for nature and innovative technologies</li> </ul>		 <b>Medium:</b> NDC provides <b>a general indication</b> on existing or planned public funding to finance mitigation policies and actions in <b>either agriculture and food or LULUCF</b>
<b>Spatial information for mitigation provided in the NDC:</b> <ul style="list-style-type: none"> <li>• The UK Government's National Adaptation Programme outlines how the UK will address marine climate risks by introducing a Sustainable Fisheries policy, giving consideration to climate change in marine planning, building ecological resilience at sea and protecting natural carbon stores through the UK's network of Marine Protected Areas</li> </ul>		 <b>Medium:</b> NDC provides information on spatial planning related to climate mitigation and adaptation and/or includes a non-actionable map, i.e. one that is not useful in isolation or when combined with other data layers to inform policy. E.g. Map of administrative regions
<b>Technology details provided in the NDC:</b> <ul style="list-style-type: none"> <li>• Plan to mobilise £12 billion in government investments to create and support highly skilled green jobs, including for nature and innovative technologies</li> <li>• In November 2020, the UK Prime Minister set out his ambitious Ten Point Plan for a green industrial revolution. Spanning clean energy, buildings, transport, nature and innovative technologies</li> <li>• The UK is taking ambitious action to phase down the UK's use of hydrofluorocarbons (HFCs), including in refrigeration equipment for food storage and distribution and promoting the uptake of sustainable refrigeration and cold chain technologies domestically and internationally</li> </ul>		 <b>High:</b> NDC provides detail focus areas of technological development needs or plans <b>related to agriculture, food or LULUCF</b>
What specific policy measures are included in the NDCs regarding critical food and land transitions?		
Critical transition	Details	NDC Assessment
<b>Healthy diets</b>	<ul style="list-style-type: none"> <li>• The UK is committed to delivering a national shift to healthy diets supported by a sustainable food system which contributes towards a reduction in GHG emissions</li> <li>• Sustainable lifestyles and sustainable patterns of consumption and production</li> </ul>	 NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition
<b>Productive and regenerative agriculture</b>	<ul style="list-style-type: none"> <li>• Agriculture listed in IPCC sectors covered</li> <li>• UK Agriculture Act obligates the UK Government to produce a domestic and international food security report every three years</li> </ul>	 NDC provides inexplicit or unclear information on the critical transition (topic is mentioned, but not as a policy action)
<b>Protecting and restoring nature</b>	<ul style="list-style-type: none"> <li>• Dedicated section on terrestrial biodiversity which includes the UK devolved domestic biodiversity policies</li> <li>• UK is committed to delivering a green recovery including measures to protect biodiversity and accelerate a just transition to net zero; in England, the government will publish a new strategy for nature following agreement of new global biodiversity targets under the Convention on Biological Diversity, expected in 2021</li> </ul>	 NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition

What specific policy measures are included in the NDCs regarding critical food and land transitions?		
Critical transition	Details	NDC Assessment
<b>Protecting and restoring nature (cont'd)</b>	<ul style="list-style-type: none"> <li>The UK will fulfil its responsibilities under the Convention on Biological Diversity, the Ramsar Convention and the Leaders' Pledge for Nature; and implement the Convention on Biological Diversity's vision that by 2050 biodiversity is valued, conserved, restored and wisely used, maintains ecosystem services, sustains a healthy planet and delivers benefits essential for all people; this will provide significant climate mitigation and adaptation benefits</li> </ul>	 <p>NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition</p>
<b>A healthy and productive ocean</b>	<ul style="list-style-type: none"> <li>Dedicated section on ocean and marine environment</li> <li>The sustainable use, protection and restoration of the UK's marine environment is underpinned by the UK Marine and Coastal Access Act (2009), the Environment Bill and Fisheries Act, UK Marine Policy Statement, UK Marine Strategy, commitment to an ecologically coherent well-managed network of Marine Protected Areas, and Joint Fisheries Statement</li> <li>UK Marine and Coastal Access Act and Fisheries Act: building ecological resilience at sea and protecting natural carbon stores</li> </ul>	 <p>NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition</p>
<b>Diversifying protein supply</b>	<ul style="list-style-type: none"> <li>N/A</li> </ul>	 <p>NDC does not mention any detail on the critical transition</p>
<b>Reducing food loss and waste</b>	<ul style="list-style-type: none"> <li>Phase down the UK's use of hydrofluorocarbons (HFCs), including in refrigeration equipment for food storage and distribution and promoting the uptake of sustainable refrigeration and cold chain technologies domestically and internationally.</li> <li>The UK is committed to delivering a national shift to healthy diets supported by a sustainable food system which contributes towards a reduction in GHG emissions; the Resources and Waste Strategy sets out England's plans to move away from a linear economy, towards a more circular and sustainable economy in which natural resources are used efficiently and waste is minimised</li> <li>Ireland published the second iteration of the national Waste Prevention Programme Stopping Waste in its Tracks which aims to decouple waste from growth</li> </ul>	 <p>NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition</p>
<b>Local loops and linkages</b>	<ul style="list-style-type: none"> <li>The Resources and Waste Strategy sets out England's plans to move away from a linear economy, towards a more circular and sustainable economy in which natural resources are used efficiently and waste is minimised; the Welsh Government is investing in people to develop the skills needed for a low-carbon, circular economy, including reskilling workers in existing industries.</li> <li>Scotland's Making Things Last strategy sets out priorities to achieving its commitment to moving towards a more circular economy – where products and materials are kept in high value use for as long as possible. In the 2020 Programme for Government, Scotland has committed to developing a local food strategy</li> <li>Northern Ireland published the second iteration of the national Waste Prevention Programme Stopping Waste in its Tracks which aims to decouple waste from growth</li> <li>The UK is committed to delivering a national shift to healthy diets supported by a sustainable food system which contributes towards a reduction in GHG emissions</li> </ul>	 <p>NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition</p>
<b>Digital revolution</b>	<ul style="list-style-type: none"> <li>In November 2020, the UK Prime Minister set out his ambitious Ten Point Plan for a green industrial revolution; spanning clean energy, buildings, transport, nature and innovative technologies.</li> <li>The UK is taking ambitious action to phase down the UK's use of hydrofluorocarbons (HFCs), including in refrigeration equipment for food storage and distribution and promoting the uptake of sustainable refrigeration and cold chain technologies domestically and internationally</li> <li>The UK will comply with future UNFCCC reporting guidelines on tracking, and reporting on, progress against the UK's NDC</li> </ul>	 <p>NDC provides inexplicit or unclear information on the critical transition (topic is mentioned, but not as a policy action)</p>
<b>Stronger rural livelihoods</b>	<ul style="list-style-type: none"> <li>In Northern Ireland, the Department of Agriculture, Environment and Rural Affairs (DAERA) completed a public discussion exercise on a future Environment Strategy for Northern Ireland in February 2020; this will be Northern Ireland's first overarching Environment Strategy and the findings of the public discussion will inform its development; the Department intends to issue the draft strategy for public consultation in spring 2021</li> <li>Spanning clean energy, buildings, transport, nature and innovative technologies, the plan will mobilise £12 billion of government investment to create and support up to 250,000 highly skilled green jobs in the UK, and unlock three times as much private sector investment by 2030</li> </ul>	 <p>NDC provides inexplicit or unclear information on the critical transition (topic is mentioned, but not as a policy action)</p>
<b>Gender and demography</b>	<ul style="list-style-type: none"> <li>Equality issues are included in domestic decarbonisation policies.</li> <li>The UK is dedicated to promoting equality and inclusion, including women's empowerment and gender equality.</li> <li>Public authorities must fulfil responsibilities set out under the UK's Equality Act (2010)</li> </ul>	 <p>NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition</p>

## What specific institutional arrangements for climate have countries put in place?

### Dedicated body in place:

- Climate Change Committee (CCC), an independent statutory body that advises the UK Government and Devolved Administrations on climate change mitigation and adaptation, including emissions reduction targets established by the Climate Change Act

### Consultation processes:

- The approach to the UK's NDC was discussed in meetings with NGOs, civil society and business groups, and covered in correspondence with representatives of these groups and interested Parliamentarians
- Ahead of COP26 and beyond, the UK will continue to carry out a wide range of engagement with a cross-section of society including experts, industry, non-governmental organisations, trade bodies and the wider public
- The CCC relies on a range of evidence, including expert and stakeholder sources; the CCC has run public calls for evidence, roundtables and workshops with nongovernmental organisations (NGOs), industry stakeholders and trade associations, and held more than 200 meetings with individual stakeholders across all sectors
- The CCC provided advice on the UK's 2030 NDC

## SUMMARY


### Summary of the NDC analysis:

- The NDC provides some detail on specific orientations in the AFOLU sector, including various orientations by individual devolved Governments in Scotland, Wales and Northern Ireland, and some detail on their implementation.
- Specific orientations are described in the agriculture and food section, including a focus on sustainable food systems. More generic orientations are provided for the LULUCF sector.
- The NDC provides an extensive list of relevant policies, both for agriculture and for LULUCF, and these are directly tied to actions to be undertaken in the sectors.
- Some detail is provided on public investment in green jobs "including in nature" but the link to the AFOLU sector is not specified.
- Generic indications on the use of spatial planning are provided in the context of marine planning.
- Some specific information is provided with regards to technology, especially with regards to the phase down of HFC gases and technologies for sustainable refrigeration, though few details are provided on technologies for agriculture and LULUCF.
- Much of the information collected here is listed under the NDC section entitled "other aspirations and priorities", with the section on policies and measures lacking detail. Moreover, the UK Agriculture Act is mentioned here, but not explicitly tied to mitigation measures in the agricultural sector in the NDC.
- The NDC addresses many of the critical transitions, and even in those addressed in an inexplicit manner like "stronger rural livelihoods" it includes a public discussion for the environment strategy of Northern Ireland and strong focus on green jobs, though it lacks detail on rural communities and agriculture in general.
- The "protecting and restoring nature" critical transition is addressed well with the UK's commitment to a green economy through measures to protect biodiversity and achieve net zero emissions. Following the new global biodiversity targets under the CBD, England will public a new nature strategy. The NDC also addresses the transition on "a healthy and productive ocean" well through various policies including UK Marine and Coastal Access Act (2009), the Environment Bill and Fisheries Act, UK Marine Policy Statement, UK Marine Strategy, commitment to an ecologically coherent well-managed network of Marine Protected Areas, and Joint Fisheries Statement











## REFERENCES

1. Source: ClimateWatch, accessed 30 August 2021. <https://www.climatewatchdata.org/compare-all-targets?>
2. Source: UNFCCC, Greenhouse Gas Inventory Data, accessed 30 August 2021. [https://di.unfccc.int/detailed\\_data\\_by\\_party](https://di.unfccc.int/detailed_data_by_party)
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4. Submitted 12 December 2020. Source: UNFCCC. <https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/United%20Kingdom%20of%20Great%20Britain%20and%20Northern%20Ireland%20First/UK%20National%20Determined%20Contribution.pdf>
5. Latest version submitted 19 October 2021; Source: UNFCCC. <https://unfccc.int/sites/default/files/resource/UK%20Net%20Zero%20Strategy%20-%20Build%20Back%20Greener.pdf>
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# United States of America

Emissions	Climate Commitment Status
<p><b>11.8%</b> of global emissions<sup>1</sup></p>  <p>Agriculture = 628.6 MtCO<sub>2</sub>eq in 2019<sup>2</sup> or 10% of total emissions excluding LULUCF  ↑ +13% since 1990</p> <p><b>-789.2</b> MtCO<sub>2</sub>eq LULUCF emissions in 2019<sup>3</sup></p> <p>Net sink of emissions</p>	<p><b>NDC update submitted<sup>4</sup></b> ✓</p> <p><b>LTS submitted in 2016<sup>5</sup></b> ✓</p> <p><b>CAT rating<sup>6</sup></b> <b>INSUFFICIENT</b></p> <p><b>Net zero commitment:</b> Economy-wide target to reach carbon neutrality by 2050 (Source: <a href="#">Updated First NDC</a> and <a href="#">Executive Order</a> on Tackling the Climate Crisis at Home and Abroad) to be achieved domestically</p> <p><b>Net zero details:</b></p> <p><b>Date:</b> 2050</p> <p><b>Legal status:</b> In policy document, not yet in law</p> <p><b>Gases covered:</b> all GHGs (as described in the NDC, unspecified in the Executive Order)</p> <p><b>Credits allowed:</b> Uncertain. International credits are allowed in the NDC: "the United States intends to make corresponding adjustments for any internationally transferred mitigation outcomes that the United States Government authorises for use towards NDCs, and for mitigation outcomes that the United States authorises for other international mitigation purposes"</p>
How action-oriented are the NDCs in the food and land sector?	
Criteria	NDC Assessment
<p><b>Specific policy priorities or actions for agriculture and food:</b></p> <ul style="list-style-type: none"> <li>Agriculture is mentioned explicitly throughout the NDC. In developing the NDC, the United States considered sector-by-sector emissions reduction pathways, including for agriculture and lands.</li> <li>Specific actions mentioned include scaling of climate smart agricultural practices, reforestation, rotational grazing, and nutrient management practices.</li> <li>The NDC mentions programmes and incentives to improve agricultural productivity through practices and technologies that also reduce agricultural methane and N<sub>2</sub>O emissions, such as improved manure management and improved cropland nutrient management.</li> <li>Regarding adaptation, the NDC describes nature-based coastal resilience projects and government investments in forest protection and management.</li> </ul>	<p>▲ ▲</p> <p><b>High:</b> NDC provides <b>indications of specific orientations</b> pursued by the Party in different agricultural and food sub-sectors</p>
<p><b>Specific policy priorities or actions for LULUCF:</b></p> <ul style="list-style-type: none"> <li>Land and forests are mentioned throughout the NDC, including a specific section on agriculture and land when describing the 2030 pathways</li> <li>In the elaboration of the NDC, the National Climate Task Force conducted a whole-of-government process including land sector pathways</li> <li>The NDC indicates that all IPCC sectors are covered including all carbon pools, without explicitly mentioning LULUCF</li> <li>The NDC provides detailed background information related to the land sector, noting that approximately 60 percent of land in the United States is privately owned, 28 percent owned and managed by the federal government, 8 percent by state and local governments, and 3 percent is held in trust for Native Americans by the Bureau of Indian Affairs</li> <li>It also specifies existing land sink capacities, with approximately a net sequestration from LULUCF of 800 million metric tonnes of CO<sub>2</sub>e in 2019, which offset approximately 12 percent of total United States greenhouse gas emissions; sequestration was primarily the result of carbon uptake by standing United States forests, forest management, increased tree cover in urban areas, storage in harvested wood products, and the management of agricultural soils</li> <li>The NDC outlines specific orientations, including the reduction emissions from forests and agriculture and enhance carbon sinks through a range of programmes and measures for ecosystems ranging from forests and agricultural soils to rivers and coasts</li> <li>Specific actions include reforestation and investment in forest protection and forest management</li> <li>On adaptation, the NDC outlines intensive efforts to reduce the scope and intensity of catastrophic wildfires, and to restore fire-damaged forest lands</li> </ul>	<p>▲</p> <p><b>Medium:</b> NDC provides detail focus areas of technological development needs or plans related to agriculture, food or LULUCF</p>
<p><b>Key policies in the NDC supporting priorities:</b></p> <p><b>Agriculture and food:</b></p> <ul style="list-style-type: none"> <li>American Innovation and Manufacturing (AIM) Act mentioned for reducing HFC emissions – could be linked to food chain but not explicitly mentioned</li> </ul> <p><b>LULUCF:</b></p>	<p>○</p> <p><b>Low:</b> NDC does not list any <b>sectoral</b> policy related to agriculture, food or LULUCF</p>



How action-oriented are the NDCs in the food and land sector?		
Criteria		NDC Assessment
<b>Dedicated financial resources associated with policies or action:</b> <ul style="list-style-type: none"> <li>The NDC indicates that climate goals can be achieved by investing in climate smart agriculture and forestry, among other sectors, though no further information on public spending to this end is provided</li> <li>Federal and state governments will invest in forest protection and forest management, and engage in intensive efforts to reduce the scope and intensity of catastrophic wildfires and to restore fire-damaged forest lands</li> </ul>		 <b>Medium:</b> NDC provides a <b>general indication</b> on existing or planned public funding to finance mitigation policies and actions in <b>either agriculture and food or LULUCF</b>
<b>Spatial information for mitigation provided in the NDC:</b> <ul style="list-style-type: none"> <li>N/A</li> </ul>		 <b>Low:</b> NDC does not provide any information on spatial planning to support adaptation or mitigation actions in the food and land sectors in the form of maps or indications of spatial data
<b>Technology details provided in the NDC:</b> <ul style="list-style-type: none"> <li>The NDC indicates that climate goals can be achieved by investing in climate smart agriculture and forestry, among other sectors</li> <li>The United States will offer programmes and incentives to improve agricultural productivity through practices and technologies that also reduce agricultural methane and N2O emissions, such as improved manure management and improved cropland nutrient management</li> </ul>		 <b>High:</b> NDC provides detail focus areas of technological development needs or plans <b>related to agriculture, food or LULUCF</b>
What specific policy measures are included in the NDCs regarding critical food and land transitions?		
Critical transition	Details	NDC Assessment
Healthy diets	<ul style="list-style-type: none"> <li>N/A</li> </ul>	 NDC does not mention any detail on the critical transition
Productive and regenerative agriculture	<ul style="list-style-type: none"> <li>America's vast lands provide opportunities to both reduce emissions and sequester more carbon dioxide</li> <li>The United States will support scaling of climate smart agricultural practices (including, for example, cover crops), reforestation, rotational grazing, and nutrient management practices</li> </ul>	 NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition
Protecting and restoring nature	<ul style="list-style-type: none"> <li>Federal and state governments will invest in forest protection and forest management, reforestation, and engage in intensive efforts to reduce the scope and intensity of catastrophic wildfires, and to restore fire-damaged forest lands</li> <li>Local biodiversity of the country, the United States will support nature-based coastal resilience projects including pre-disaster planning as well as efforts to increase sequestration in waterways and oceans by pursuing "blue carbon"</li> </ul>	 NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition
A healthy and productive ocean	<ul style="list-style-type: none"> <li>The United States also notes the importance of natural climate solutions, terrestrial and marine, in climate ambition and resilience</li> <li>It further recognises the role of the broader suite of ocean-based climate solutions, including scaling-up offshore renewable energy and reducing emissions from shipping and ports, in increasing climate ambition and creating jobs</li> </ul>	 NDC provides inexplicit or unclear information on the critical transition (topic is mentioned, but not as a policy action)
Diversifying protein supply	<ul style="list-style-type: none"> <li>N/A</li> </ul>	 NDC does not mention any detail on the critical transition
Reducing food loss and waste	<ul style="list-style-type: none"> <li>N/A</li> </ul>	 NDC does not mention any detail on the critical transition
Local loops and linkages	<ul style="list-style-type: none"> <li>N/A</li> </ul>	 NDC does not mention any detail on the critical transition

What specific policy measures are included in the NDCs regarding critical food and land transitions?		
Critical transition	Details	NDC Assessment
Digital revolution	<ul style="list-style-type: none"> <li>America will offer programmes and incentives to improve agricultural productivity through practices and technologies that also reduce agricultural methane and N2O emissions, such as improved manure management and improved cropland nutrient management</li> </ul>	<p>●</p> <p>NDC provides inexplicit or unclear information on the critical transition (topic is mentioned, but not as a policy action)</p>
Stronger rural livelihoods	<ul style="list-style-type: none"> <li>These analyses show that the United States can deliver on its NDC, including by investing in efficiency, beneficial electrification, clean energy, plugging methane leaks, addressing direct greenhouse gas emissions from industrial processes, climate smart agriculture and forestry, innovation, and other priorities; these actions will also create good jobs, improve public health, and help to advance equity and achieve environmental justice priorities</li> <li>The United States is committed to standing with the workers and communities too often left behind – people and places that have suffered as a result of economic and energy shifts – and creating well-paid employment in the low carbon economy</li> <li>The United States reaffirms its commitment to the creation of decent work and quality jobs as an integral part of its efforts to combat climate change</li> <li>Acknowledging that the worst impacts of climate change have hit historically disadvantaged communities hardest, the United States is committed to environmental justice and to prioritizing investment that benefits these communities</li> </ul>	<p>●</p> <p>NDC lists essential actions, including specific commitments, strategies, or funding, related to the critical transition</p>
Gender and demography	<ul style="list-style-type: none"> <li>N/A</li> </ul>	<p>●</p> <p>NDC does not mention any detail on the critical transition</p>
What specific institutional arrangements for climate have countries put in place?		
<p><b>Dedicated body in place:</b></p> <ul style="list-style-type: none"> <li>National Climate Task Force</li> </ul> <p><b>Consultation processes:</b></p> <ul style="list-style-type: none"> <li>The National Climate Advisor and the White House Office of Domestic Climate Policy ran an interagency process across the federal government and consulted a range of other stakeholders, including groups representing tens of millions of advocates, activists, youth, trade, scientists, governmental leaders including governors, mayors, and tribal leaders, businesses, schools and institutions of higher education, and specialised researchers</li> </ul>		
SUMMARY		
<p><b>Summary of the NDC analysis:</b></p> <ul style="list-style-type: none"> <li>The NDC provides some detail on specific actions to be undertaken in the food and land sector, including specific orientations for the reduction of emissions in the agricultural sector. More general orientations are provided for the LULUCF sector, where few specific subsectors planned actions are mentioned.</li> <li>The NDC does not list any policies that are directly linked to actions in the food and land sector. It does list the American Innovation and Manufacturing (AIM) Act, aiming to phase down the use of HFCs, which could be linked to refrigeration and food, but this link is not made explicit.</li> <li>While the NDC indicates that climate goals can be achieved by investing in climate smart agriculture and forestry, it provides no information on funding for these priorities. The need for or use of spatial information is not addressed.</li> <li>The NDC mentions some specific technologies to be used in the agricultural sector to reduce CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O emissions, albeit with no detail on development or financing needs for implementing these technologies.</li> <li>The USA addresses the critical transitions in the sector fairly well, with strong commitments particularly in “protecting and restoring nature” and “stronger rural livelihoods”. It references government investments in forest protection and management, and reforestation. In the transition on “stronger rural livelihoods” in particular, the NDC addresses a just transition as an essential action, but it does not specifically address rural communities.</li> <li>The NDC addresses programmes and incentives to improve agricultural productivity through practices and technologies to reduce agricultural methane and N<sub>2</sub>O. This is a good example, but it still lacks the monitoring and verification aspect.</li> </ul>		
REFERENCES		
<ol style="list-style-type: none"> <li>Source: ClimateWatch, accessed 30 August 2021. <a href="https://www.climatewatchdata.org/compare-all-targets?">https://www.climatewatchdata.org/compare-all-targets?</a></li> <li>Source: UNFCCC, Greenhouse Gas Inventory Data, accessed 30 August 2021. <a href="https://di.unfccc.int/detailed_data_by_party">https://di.unfccc.int/detailed_data_by_party</a></li> <li>Source: UNFCCC, Greenhouse Gas Inventory Data, accessed 30 August 2021. <a href="https://di.unfccc.int/detailed_data_by_party">https://di.unfccc.int/detailed_data_by_party</a></li> <li>Submitted 22 April 2021. Source: UNFCCC. <a href="https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/United%20States%20of%20America%20First/United%20States%20NDC%20April%2021%202021%20Final.pdf">https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/United%20States%20of%20America%20First/United%20States%20NDC%20April%2021%202021%20Final.pdf</a></li> <li>Submitted 16 November 2016. Source: UNFCCC. <a href="https://unfccc.int/files/focus/long-term_strategies/application/pdf/mid_century_strategy_report-final_red.pdf">https://unfccc.int/files/focus/long-term_strategies/application/pdf/mid_century_strategy_report-final_red.pdf</a></li> <li>Climate Action Tracker, accessed 15 September 2021. <a href="https://climateactiontracker.org/countries/usa/">https://climateactiontracker.org/countries/usa/</a></li> </ol>		



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