



Climate Change & Southeast Asia

**An Assessment of the Nationally  
Determined Contributions (NDCs)  
In-depth Country Focus:  
Cambodia, Indonesia, and Thailand**

**By Asian Research Institute for  
Environmental Law (ARIEL)**

Supported by Heinrich Böll Stiftung  
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**HEINRICH BÖLL STIFTUNG**  
**SOUTHEAST ASIA**



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### INTRODUCTION

In November 2015, 196 countries negotiated the Paris Climate Agreement, a landmark international treaty on climate change mitigation, adaptation, and financing, which set the long-term goal of limiting global warming to well below 2, preferably to 1.5 degrees Celsius compared to pre-industrial levels. As a result, 191 states and the European Union as signatories expressed their commitment to reach global peaking of greenhouse gas emissions as soon as possible and achieve a 'climate-neutral' world by 2050.

The Paris Agreement works through a five (5)-year cycle of increasing ambitious climate action negotiated and signified by member-states. As part of this cycle, Article 4, Paragraph 2 of the Agreement requires each party to prepare, communicate and maintain successive nationally determined contributions (NDCs) that it intends to achieve. These NDCs embody the commitments and undertakings of all countries to combat and address climate change issues and reduction of greenhouse gas emissions (GHG), including but not limited to baseline scenarios per country, current and planned policy framework initiatives, climate financing initiatives, plans, and measures, and overall updates with regards to the realization of climate targets.

This assessment aims to present an analysis of three Southeast Asian states' NDCs, namely Cambodia, Indonesia and Thailand, thereby providing insight into how a future 'decarbonized' picture might look like in these countries.

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### CAMBODIA

Cambodia is faced with several challenges in terms of environmental and climate governance despite being a low carbon-emitting country. Although it contributed only 0.7% in total CO<sub>2</sub> emissions in 2018<sup>1</sup>, the country ranked 139 out of 180 in 2020 the Environmental Performance Index (EPI), with a score of 33.6/100.<sup>2</sup> The country's protected areas suffer from one of the highest rates of deforestation in the world.<sup>3</sup> Additionally, problems persist in enacting policy, particularly with regard to the passing of the country's environmental code, described as being 'stuck in limbo'<sup>4</sup>.



<sup>1</sup> [https://data.worldbank.org/indicator/EN.ATM.CO2E.PC?locations=KH&most\\_recent\\_value\\_desc=false](https://data.worldbank.org/indicator/EN.ATM.CO2E.PC?locations=KH&most_recent_value_desc=false)

<sup>2</sup> [https://epi.yale.edu/sites/default/files/files/KHM\\_EPI2020\\_CP.pdf](https://epi.yale.edu/sites/default/files/files/KHM_EPI2020_CP.pdf)

<sup>3</sup> <https://www.phnompenhpost.com/national/kingdom-ranks-low-global-green-list>

<sup>4</sup> <https://news.mongabay.com/2020/08/in-cambodia-a-sweeping-new-environment-code-languishes-in-legal-limbo/>






With the goal of addressing these issues, the country has developed the Climate Change Strategic Plan 2014-2023<sup>5</sup>, the National Environment Strategy and Action Plan 2016–2023 (NESAP)<sup>6</sup>, and the NDC Roadmap and Stakeholder Engagement Plan 2019 – 2030<sup>7</sup>, aiming to provide a roadmap for the mitigation and adaptation plans with regards to addressing climate change and environmental issues.

### ***Cambodia’s NDC***

Cambodia submitted their first NDC on 2 June 2017, with the subsequent update on 31 December 2021. The document highlights the Cambodian government’s coordinated strategy to tackle climate change, focused on adaptation with a gradual increase in mitigation actions aligned with economic development goals. This is further explained in the country’s development plans (1) the National Strategic Development Plan (NSDP) and (2) the Cambodia Climate Change Strategic Plan 2014 – 2023 (CCCSP, 2013)

The figure below provides for the summary of NDC implementation timeline and targets of Cambodia

*Summary of NDC implementation timeline and targets*

	By 2020	By 2025	By 2030
<b>Governance</b> 	Governance systems set up	NDC and climate change governance systems increasingly mainstreamed	NDC and other planning systems perfectly mainstreamed and used to report on NDC and SDGs
<b>Mitigation</b> 	Implementation of mitigation actions	Increased ambition, economy-wide mitigation targets and implementation	Real-time economy-wide mitigation targets and implementation
<b>Adaptation</b> 	NAP process ongoing and adaptation actions in NDC implemented	NDC linked to NAP process	NDC linked to NAP process and resilience improved
<b>Finance</b> 	Finance systems set up and concessional financing terms	Climate investment plan operational and increased sophistication of finance system	Middle-income level of financial sophistication achieved
<b>MRV/Transparency</b> 	Limited measurement of progress and development of transparency system	Transparency system partially operational	Transparency system upgraded and fully operational

Source: Cambodia’s Updated Nationally Determined Contribution

The country’s NDC features a cross-cutting approach to mitigation measures through the involvement of the following sectors:

- Gender, through the Ministry of Women’s Affairs (MOWA) - Gender and Climate Change Committee and Neary Rattanak IV, the National Policy on Gender Equality and Women’s Empowerment;
- Youth involvement, through the Ministry of Education, Youth, and Sports (MoEYS);

<sup>5</sup>[https://www.cambodiaip.gov.kh/DocResources/ab9455cf-9eea-4adc-ae93-95d149c6d78c\\_007729c5-60a9-47f0-83ac-7f70420b9a34-en.pdf](https://www.cambodiaip.gov.kh/DocResources/ab9455cf-9eea-4adc-ae93-95d149c6d78c_007729c5-60a9-47f0-83ac-7f70420b9a34-en.pdf)

<sup>6</sup><https://www.adb.org/sites/default/files/publication/470846/cambodia-environment-strategy-action-plan.pdf>

<sup>7</sup>[https://ncsd.moe.gov.kh/sites/default/files/2019-08/Cambodia%20NDC%20Roadmap%20and%20Stakeholder%20Engagement%20Plan\\_awaiting%20signature\\_2019\\_en.pdf](https://ncsd.moe.gov.kh/sites/default/files/2019-08/Cambodia%20NDC%20Roadmap%20and%20Stakeholder%20Engagement%20Plan_awaiting%20signature_2019_en.pdf)

- Private sector engagement, through Public Private Partnerships (PPPs); and
- Indigenous People

The document further provides for the means of implementation of the aforementioned commitments. In terms of finance specifically, it is estimated that funding required for mitigation actions is over US\$5.8 billion and total funding required for adaptation actions is just over US\$2 billion. The document also mentions barriers and capacity needs, technology needs and availability, and transparency measures

Category	First NDC	Updated NDC
GHG targets	(1) 27% GHG reduction by 2030 compared to BAU or equivalent to 3.1 MtCO <sub>2</sub> e, (2) LULUCF contribution of 4.7 tCO <sub>2</sub> e/ha/year	GHG targets (1) 27% GHG reduction by 2030 compared to BAU or equivalent to 3.1 MtCO <sub>2</sub> e, (2) LULUCF contribution of 4.7 MtCO <sub>2</sub> e/ha/year 41.7% GHG reduction (of which 59.1% is from FOLU) by 2030 compared to BAU or equivalent to 64.6 MtCO <sub>2</sub> e
GHG coverage	(1) CO <sub>2</sub> , (2) CH <sub>4</sub> , (3) N <sub>2</sub> O	(1) CO <sub>2</sub> , (2) CH <sub>4</sub> , (3) N <sub>2</sub> O
Time frame	2020 to 2030	2020 to 2030
Conditionality element	Conditional NDC only	Conditional NDC only
Targets by mitigation sector	<b>Energy Industries:</b> 16% GHG reduction by 2030 compared to BAU or equivalent to 1.8 MtCO <sub>2</sub> e <b>Manufacturing Industries:</b> 7% GHG reduction by 2030 compared to BAU or equivalent to 0.727 MtCO <sub>2</sub> e <b>Transport:</b> 3% GHG reduction by 2030 compared to BAU or equivalent to 0.39 MtCO <sub>2</sub> e <b>Other:</b> 1% GHG reduction by 2030 compared to BAU or equivalent to 0.155 MtCO <sub>2</sub> e <b>LULUCF:</b> 60% forest cover of total land area or equivalent to 4.7 tCO <sub>2</sub> e/ha/year	<b>Energy:</b> 21.3% GHG reduction by 2030 compared to BAU or equivalent to 38.1 MtCO <sub>2</sub> e <b>Industry (IPPU<sup>4</sup>):</b> 9.1% GHG reduction by 2030 compared to BAU or equivalent to 5.9 MtCO <sub>2</sub> e <b>Food and Land Use (FOLU):</b> 59.1% GHG reduction by 2030 compared to BAU or equivalent to 38.1 MtCO <sub>2</sub> e <b>Agriculture:</b> 9.6% GHG reduction by 2030 compared to BAU or equivalent to 6.2 MtCO <sub>2</sub> e <b>Waste:</b> 0.9% GHG reduction by 2030 compared to BAU or equivalent to 0.6 MtCO <sub>2</sub> e
Sector coverage	(1) Energy industries, (2) manufacturing industries, (3) transport, (4) other, (5) LULUCF	(1) Energy, (2) industry (IPPU), (3) transport, (4) building, (5) FOLU, (6) agriculture, (7) waste

Comparison of Cambodia's First NDC and Updated NDC  
Source: ASEAN Center for Energy

### ***Partnerships and Initiatives***

Cambodia has also partnered with several international organizations in pursuing plans, programs, and projects with regards to environmental protection and conservation, and climate change adaptation and mitigation, including the following:

- **World Bank<sup>8</sup>**

The World Bank, through its Country Partnership Framework for the Kingdom of Cambodia<sup>9</sup>, has highlighted how environmental and natural resource stewardship will play a vital role in the future growth of the country. In line with this, the WB has also released reviews of the INDCs and NDCs of countries, including Cambodia, to “provide a summary analysis of existing and instead country mitigation and adaptation policies and plans, commitments and targets, implementation strategies and sector priorities, associated costs and conditionalities, and stated gaps and needs, among other issues.”<sup>10</sup>

- **United Nation Environment Programme (UNEP)<sup>11</sup>**

There are currently fifteen (15) existing UNEP-supported projects/programs in Cambodia, in varying states of implementation and in partnership with both the national government and civil society stakeholders. Of these, six (6) are under the Programme Information and Management System (PIMS) and nine (9) are under the Global Environment Facility (GEF). PIMS projects include the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants and Strengthening Human Rights and Gender Equality through Climate Change Action and Disaster Risk Reduction (EmPower), while GEF projects include the Seed Capital Assistance Facility (Renewable Energy Enterprise Development) and Continuing Regional Support for the POPs Global Monitoring Plan under the Stockholm Convention

- **Green Climate Fund<sup>12</sup>**

Under the GCF, there are four (4) projects in Cambodia, with a total GCF financing of 104.0M. There are also eight (8) country-level readiness activities approved, amounting to 2.1M support approved and 1.2M disbursed. Financing programs from GCF include the ASEAN Catalytic Green Finance Facility (ACGF): Green Recovery Program, the Global Subnational Climate Fund (SnCF Global) – Equity and Technical Assistance (TA) Facility as well as the Climate-Friendly Agribusiness Value Chains Sector Project.

- **United Nations Development Programme (UNDP)<sup>1314</sup>**

The UNDP, through the 2019-2023 Cambodia Country Programme Document, aims to (1) support environmental protection, working with the Government to ensure sustainable natural resource management and build climate resilience, (2) support policy formulation and capacity development for more environmentally sustainable development, (3) support line ministries in adopting and implementing gender-responsive climate action, (4) support

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<sup>8</sup> [http://spappssecext.worldbank.org/sites/indc/PDF\\_Library/KH.pdf](http://spappssecext.worldbank.org/sites/indc/PDF_Library/KH.pdf)

<sup>9</sup> <https://openknowledge.worldbank.org/bitstream/handle/10986/31789/Cambodia-Country-Partnership-Framework-for-the-Period-of-FY2019-2023.pdf?sequence=5>

<sup>10</sup> [http://spappssecext.worldbank.org/sites/indc/PDF\\_Library/KH.pdf](http://spappssecext.worldbank.org/sites/indc/PDF_Library/KH.pdf)

<sup>11</sup> <https://open.unep.org/country/kh>

<sup>12</sup> <https://www.greenclimate.fund/countries/cambodia>

<sup>13</sup> [https://www.cf.undp.org/content/dam/LECB/events/2019/20190002-asia-pacific-ndc-dialogue/PowerPointPresentations/undp-ndcsp-asia-pacific-dialogue-Session%205\\_Resilience%20and%20Adaptation\\_Cambodia.pdf](https://www.cf.undp.org/content/dam/LECB/events/2019/20190002-asia-pacific-ndc-dialogue/PowerPointPresentations/undp-ndcsp-asia-pacific-dialogue-Session%205_Resilience%20and%20Adaptation_Cambodia.pdf)

<sup>14</sup> <https://www.kh.undp.org/content/cambodia/en/home.html>

the Ministry of Environment and the Ministry of Agriculture, Forestry and Fisheries (MAFF) for the sustainable management of natural resources and biodiversity conservation while strengthening capacities of local authorities and community-based organizations to improve rural livelihoods, food security and effective climate responses, and (5) leverage private sector investment for scalable climate initiatives and a circular economy.<sup>15</sup>

● **Global Buildings Performance Network (GPBN)<sup>16</sup>**

In partnership with the Global Buildings Performance Network, the Cambodian government developed the NDC Roadmap for Buildings and Construction, and further developed the process and tools for under the NDC Roadmaps for Buildings and Construction programme

### *NDC Assessment*

The Cambodian NDC ranks high on the Climate and Health Alliance NDC Scorecard, primarily due to the level of detail that the document provided specifically in terms of financial costs and returns of mitigation and adaptation measures. It further delineates between commitments which can be done unconditionally through national resources and conditionally on the financing from donor countries.

The scorecard further highlights how the Cambodian NDC factors in a multitude of health impacts, including vector-borne and water-borne diseases, heat-related disease and undernutrition. It emphasizes that the level of detail on adaptation in the health sector is exceptional, with actions set out in both the body of the NDC and an annex. The country, through its NDC, also commits to transparency of environmental data and recognizes the effects of environmental factors to health (particularly in the transport and agriculture sectors) and economics (on reduced labour productivity due to heat stress). The NDC also includes sections specific to health and gender equality<sup>1718</sup>.

The World Wide Fund for Nature (WWF), in their assessment of submitted NDCs in terms of protected areas, gives the Cambodian NDC 3.5 over 5 credits, as the document (1) explicitly mentions protected or other conserved areas, (2) covers adding new protected areas or expanding current protected areas, (3) includes plans to use nature to help people adapt to climate change (EbA), although not specifically mentioning using protected areas, and (4) specifically references plans to use climate risk information and climate adaptive measures to manage protected areas and other conserved areas<sup>1920</sup>.

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<sup>15</sup> <https://www.unfpa.org/cpd-cambodia-2019-2023-dpfpacpdhkm6>

<sup>16</sup> <https://www.gbpn.org/projects/unep-cambodia/>

<sup>17</sup> <https://climateandhealthalliance.org/initiatives/healthy-ndcs/ndc-scorecards/>

<sup>18</sup> <https://climateandhealthalliance.org/wp-content/uploads/2021/09/Scorecard-Cambodia-EN.pdf>

<sup>19</sup> [https://www.fint.awsassets.panda.org/downloads/enhancing\\_ndcs\\_through\\_nature\\_based\\_solutions.pdf](https://www.fint.awsassets.panda.org/downloads/enhancing_ndcs_through_nature_based_solutions.pdf)

<sup>20</sup> [https://d2ouvy59p0dg6k.cloudfront.net/downloads/enhancing\\_ndcs\\_through\\_protected\\_areas\\_final.pdf](https://d2ouvy59p0dg6k.cloudfront.net/downloads/enhancing_ndcs_through_protected_areas_final.pdf)



Indonesia ranked 116 out of 180 in the 2020 Environmental Performance Index, with an EPI score of 37.8 over 100. The country is home to some of the world's most biologically diverse rainforests, and due to this it has drawn many issues related to deforestation. Clearing is primarily done to make way for palm oil plantations, to which Indonesia contributes almost 80% of the global supply. Large-scale air pollution and haze attributed to Indonesia, more commonly known as the "Southeast Asian haze", is another issue related to the palm oil plantation industry. The country has also been criticized for not being ambitious enough as it only rehashed its previous INDC commitments to the new NDC.<sup>21</sup>

### *Indonesia's NDC*

Indonesia first submitted their NDC in November 2016, with the subsequent submission on 21 July 2021 and a corrected version on 12 August 2021. The country pledged to reduce emissions from 2020-2030 by 29% (unconditional) up to 41% (conditional) against the 2030 business-as-usual scenario, an increased unconditional commitment compared to the 2010 pledge of 26%. This is indicated in the National Medium-Term Development Plan (RPJMN) 2020-2024, Indonesia's four (4) foundational principles, and nine (9) programmes for NDC implementation strategy

In terms of mitigation, the country set the following commitments, as follows:

- Forestry: 2030 in peatland restoration of 2 million ha and rehabilitation of degraded land of 12 million ha.
- Energy: mixed energy use policy, development of clean energy sources as a national policy directive
  - Government Regulation No. 79/2014 on National Energy Policy
- A national mandatory biodiesel policy of B20
  - Enhance to B30 in 2020 — ten-years earlier than 1st NDC target.
- Waste
  - Presidential Decree Number 97/2017 on National Policy and Strategy on Solid Waste Management
  - Presidential Regulation Number 35/2018 on Acceleration of Construction of Thermal Generation Facilities for Converting Waste into Electricity Energy with Environmental Sound Technology.

In terms of adaptation, the following initiatives have been taken, as follows:

- National Action Plan on Climate Change Adaptation
- Development of nationwide climate vulnerability index data information system, built on the existing system known as SIDIK (Vulnerability Index Data Information System), which allows public access to the information in the online system, will be strengthened.
- Ministerial Regulation No. P.33/2016 on Guideline for Development of Adaptation Actions
- Focus on three areas of resilience: economic resilience, social and livelihood resilience, and ecosystem and landscape resilience.
- Commitments under Convention on Biological Diversity (CBD), Convention to Combat Land Degradation and Desertification (UNCCD), RAMSAR convention, and Sendai Framework on Disaster Risk Reduction (SFDRR), as well as Sustainable Development Goals (SDGs) were considered to have significant potential for synergy with NDC - adaptation.

The country pledged the following GHG emission reduction as part of their commitments:

<sup>21</sup><https://www.thejakartapost.com/news/2020/04/16/indonesias-rehashed-climate-action-commitments-not-ambitious-enough.html>

<i>Unconditional</i>	<i>Conditional</i>
26% of its greenhouse gases against the business-as-usual scenario by the year 2020	41% reduction of emissions by 2030, subject to availability of international support for finance, technology transfer and development and capacity building
29% of its greenhouse gasses emissions against the business-as-usual scenario by the year of 2030	

The country will also utilize a National Registry System in the implementation of a transparency framework, with the following initiatives:

- Integrated National Transparency framework
  - National Registry System (Id. Sistem Registry Nasional/SRN)
  - National GHGs Inventory System (SIGN-SMART);
  - MRV system for mitigation including REDD+,
  - Safeguards Information System for REDD+ (SIS-REDD+); and
  - Information Systems on vulnerability (SIDIK) and joint adaptation and mitigation at the Village level (PROKLIM).
- Pursuance of a 'One GHGs Data Policy'.

Overall, Indonesia has spent a total of about USD 17.48 billion for climate change adaptation, mitigation and supporting activities: from 2015 to 2019, allocating a total of USD 55.01 billion, and from 2015-2016, received support of USD 1,237.41million in the form of loan and grant through bilateral and multilateral channels

Green financing effort will be continued and promoted, particularly through green sukuk, green bond, and public-private partnership through SDGs-One Indonesia Platform. It is worth noting that in 2018, the Ministry of Finance recorded the issuance of 'green sukuk' in a total of USD 2.0 billion for a five-year period. Finally, in order to strengthen climate financing, Indonesia has established a national agency for environmental fund management (Id. Badan Pengelola Dana Lingkungan Hidup/BPDLH). A specific climate financing instrument 'Carbon Pricing' is also under preparation.

In terms of technology development and transfer, the following policies are in place:

- Law on National System for Science and Technology (UU No. 11/2019)
- Technology Needs Assessment (TNA)
  - 2010 focusing on mitigation
  - 2nd TNA in 2012 covering both mitigation and adaptation

The capacity building programme on climate change will be aligned with Indonesia vision on education, focusing on:

- human resources development to build strong character;
- regulatory reform to increase effectiveness and efficiency of capacity building programmes and activities;
- increase investment in human resource development, including revitalization of vocational education;
- creation of employment and business opportunities; and
- use of technology to increase efficiency in capacity building.

Also, two interrelated instruments of capacity building were highlighted to be used to support NDC implementation:

- First instrument (General Instrument) will focus on integrating climate change into the national system on education, training, and other forms of capacity building
- Second instrument (Technical Instrument) will focus on capacity building programmes for various actors in mitigation and adaptation.



### ***Partnerships and Initiatives***

In addressing these issues, Indonesia helped develop the Agreement on Transboundary Haze Pollution in the Association of Southeast Asian Nations (ASEAN) to reduce the haze pollution in the region. The country has also partnered with international institutions in several endeavors, as follows:

- **World Bank<sup>22</sup>**

The World Bank, through its Country Partnership Framework for the Republic of Indonesia, recognizes the issue of climate change as a cross-cutting theme in addressing development challenges. The country has a “high responsibility” in addressing climate change and its effects on global public goods through reforms in governance both broad-based and specific to the management of natural assets, decarbonization through energy policies and regulations, and pricing and regulatory reforms in transport, particularly in urban mass transit and in maritime transport.<sup>23</sup>

- **United Nation Environment Programme<sup>24</sup>**

There are currently nineteen (19) UNEP-supported projects in Indonesia, in varying stages of implementation and in partnership with both the national government and civil society stakeholders. Of these, eight (8) are under the Programme Information and Management System and eleven (11) are under the Global Environment Facility (GEF). PIMS projects include Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants and the Joint UNEP-UNIDO Programme to host and manage the Climate Technology Centre and Network (CTCN), while GEF projects include Building the Foundation for Forest Landscape Restoration at Scale and Strengthening Forest and Ecosystem Connectivity in RIMBA Landscape of Central Sumatra through Investing in Natural Capital, Biodiversity Conservation, and Land-based Emission Reductions (RIMBA).

- **Green Climate Fund<sup>25</sup>**

Under the GCF, there are seven (7) projects in Indonesia, with a total GCF financing of 287.3M. There are also three (3) country-level readiness activities approved, amounting to 4.9M support approved and 1.2M disbursed. Financing programs from GCF include the Global Fund for Coral Reefs Investment Window, the ASEAN Catalytic Green Finance Facility (ACGF): Green Recovery Program, the Global Subnational Climate Fund (SnCF Global) – Equity and Technical Assistance (TA) Facility, Climate Investor One and the Indonesia Geothermal Resource Risk Mitigation Project.

- **UNDP<sup>26</sup>**

The UNDP, through the Country Programme Document for Indonesia (2021-2025), aims to (1) support the reconstruction and recovery of disaster-affected areas, (2) restore and protect land and marine ecosystems through strengthened management of protected areas

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<sup>22</sup> [http://spappssecext.worldbank.org/sites/indc/PDF\\_Library/ID.pdf](http://spappssecext.worldbank.org/sites/indc/PDF_Library/ID.pdf)

<sup>23</sup> <https://documents1.worldbank.org/curated/en/306831620760881407/pdf/Indonesia-Country-Partnership-Framework-for-the-Period-FY21-FY25.pdf>

<sup>24</sup> <https://open.unep.org/country/id>

<sup>25</sup> <https://www.greenclimate.fund/countries/indonesia>

<sup>26</sup> <https://www.ndcs.undp.org/content/ndc-support-programme/en/home/our-work/geographic/asia-and-pacific/Indonesia.html>

for the conservation of threatened species and sustainable land use practices and livelihoods through nature-based tourism, promoting local wisdom and addressing illegal wildlife trade, (3) assist communities to improve social, economic and ecological resilience and adaptive seascape management in coastal areas, (4) support a transboundary response to over-exploited marine resources and the rising pressures on the globally significant biodiversity in the region of Arafura and Timor seas, (5) support green commodities, sustainable crops and supply chains for palm oil, coffee, cocoa, cashew and rice to encourage climate mitigation by preventing loss of forests, (6) support platforms for the formulation and implementation of policies and national actions plans for sustainable farming, and (7) assist rural farming communities facing climate change-related risks through a long-term strategy for climate change adaptation, capacity building and access to finance for smallholding farmers to adopt climate smart agricultural practices.<sup>27</sup>

### ***NDC Assessment***

The Climate and Health Alliance scorecard for the Indonesian NDC notes how the document covers the social and health impacts of climate change, referencing the health benefits that can be gained from emissions reduction and placing health as a sector of focus on adaptation. In terms of financing, the NDC factors in that removing fossil fuel subsidies has created fiscal space for other priorities including health. The said scorecard also highlights the reference to the right to health and a healthy environment, and gender and intergenerational equity. However, the scorecard also notes that Indonesia's climate ambition is assessed as being in line with 4C of warming<sup>2829</sup>.

The WWF, in their assessment of submitted NDCs in terms of protected areas, gives the Indonesian NDC 1 over 5 credits, mentioning that the document (1) includes plans to use nature to help people adapt to climate change (EbA), but doesn't specifically mention using protected areas, and (2) mentions mitigation benefits from nature or natural areas, but not in the context of protected areas<sup>3031</sup>.

The Climate Action Tracker (CAT) gives the updated Indonesian NDC a "Highly Insufficient" rating, primarily given the fact that there was no significant increase in climate ambition in the updated document. The CAT states that "while some improvements to the regulatory environment for renewables have been seen, significant barriers remain and would need to be addressed to realize Indonesia's vast potential for renewable energy"<sup>32</sup>.

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<sup>27</sup> <https://digitallibrary.un.org/record/3874132?ln=en>

<sup>28</sup> <https://climateandhealthalliance.org/initiatives/healthy-ndcs/ndc-scorecards/>

<sup>29</sup> <https://climateandhealthalliance.org/wp-content/uploads/2021/09/Scorecard-Indonesia.pdf>

<sup>30</sup> [https://wwfint.awsassets.panda.org/downloads/enhancing\\_ndcs\\_through\\_nature\\_based\\_solutions.pdf](https://wwfint.awsassets.panda.org/downloads/enhancing_ndcs_through_nature_based_solutions.pdf)

<sup>31</sup> [https://d2ouvy59p0dg6k.cloudfront.net/downloads/enhancing\\_ndcs\\_through\\_protected\\_areas\\_final.pdf](https://d2ouvy59p0dg6k.cloudfront.net/downloads/enhancing_ndcs_through_protected_areas_final.pdf)

<sup>32</sup> <https://climateactiontracker.org/countries/indonesia/>

 **THAILAND**

In 2020, Thailand ranked 78 out of 180 in the Environmental Performance Index, having a score of 45.4 over 100.<sup>33</sup> The country faces several environmental issues, ranging from waste management and deforestation, among others. The country has also been criticized for human rights violations committed against environmental activists and the seeming indifference of the government in addressing these environmental issues<sup>34</sup>.

***Thailand's NDC***

Thailand submitted its updated NDC on 20 October 2020, outlining the country's commitments to reduce its greenhouse gas emissions by 20% from the projected business-as-usual level by 2030. The level of contribution could increase up to 25%, subject to adequate and enhanced access to technology development and transfer, financial resources, and capacity building support. Thailand is formulating its Long-Term Low Greenhouse Gas Emission Development Strategy (LT-LEDS) which will guide Thailand towards a climate-resilient and low greenhouse gas emissions development and serve as a basis for enhancing its subsequent NDCs.

Thailand's NDC target has been integrated into the National Strategy. It will be implemented through the NDC Roadmap on Mitigation 2021-2030, the NDC Sectoral Action Plans and the NDC Supportive Action Plan which were carried out with a wide range of stakeholders' consultation and public participation processes at the national and local levels. The NDC Roadmap identifies key measures and allocates emission reduction targets and responsibilities to relevant agencies in energy, transport, industry, and waste management sectors. The NDC Sectoral Action Plans further identify emission reduction targets in each measure. The NDC Supportive Action Plan highlights gaps and needs to enhance the enabling environment to support NDC implementation.

In terms of adaptation, the NDC highlights the National Adaptation Priorities, specifically on the following sectors: water resources management sector, agriculture and food security sector, tourism sector, public health sector, natural resources management sector, and human settlements and security sector. The document also highlights the areas where further support might be necessary, specifically on policy implementation, technology development and transfer, mechanisms and instruments, climate information, and M&E systems.



<sup>33</sup> [https://epi.yale.edu/sites/default/files/files/THA\\_EPI2020\\_CP.pdf](https://epi.yale.edu/sites/default/files/files/THA_EPI2020_CP.pdf)

<sup>34</sup> <https://www.bangkokpost.com/opinion/opinion/1804509/we-will-keep-eating-poison-for-a-while-yet>

Category	First NDC	Updated NDC
GHG targets	20% (unconditional) up to 25% (conditional) GHG reduction by 2030 compared to BAU	20% (unconditional) up to 25% (conditional) GHG reduction by 2030 compared to BAU
GHG coverage	(1) CO <sub>2</sub> , (2) CH <sub>4</sub> , (3) N <sub>2</sub> O, (4) HFCs, (5) PFCs, (6) SF <sub>6</sub>	(1) CO <sub>2</sub> , (2) CH <sub>4</sub> , (3) N <sub>2</sub> O, (4) HFCs, (5) PFCs, (6) SF <sub>6</sub>
Time frame	2021-2030	2021-2030
Conditionality element	Unconditional and Conditional NDC	Unconditional and Conditional NDC
Targets by mitigation sector	<b>Energy:</b> (1) 20% RE share in power generation by 2036, (2) 30% RE share in end use energy by 2036, (3) 30% reduction of energy intensity (compared to 2010) by 2036	Climate change is addressed at the highest policy level under the National Strategy (2018-2037). Ambitious energy targets are put forward in the Power Development Plan (PDP), Alternative Energy Development Plan (AEDP), and Energy Efficiency Plan (EEP)
Sector coverage	Economy-wide (inclusion of LULUCF will be decided later)	Economy-wide (excluding LULUCF)

Comparison of Thailand’s First NDC and Updated NDC  
Source: ASEAN Center for Energy

### *Partnerships and Initiatives*

In addressing these, the country has partnered with several international institutions through the following endeavors:

- **World Bank<sup>35</sup>**

The World Bank, through its Thailand – World Bank Group Country Partnership Framework (2019–2022), puts forward the following issues: (1) Thailand’s natural forests and coastal and marine resources are being depleted, putting future economic growth at risk; (2) Although Thailand has abundant water resources, productive growth is limited by inadequate water allocations/rights and flood and drought risk management; (3) Water and air quality has generally improved but remains low, especially in urban areas; and (4) Climate change and vulnerabilities are risks to Thailand’s future growth and shared prosperity, and climate-related risks are expected to affect the poor and bottom 40 percent disproportionately strongly.

- **Asian Development Bank<sup>36</sup>**

The Asian Development Bank, through its Country Partnership Strategy-Thailand (2021-2025), recognizes climate change as a development constraint for the country, stating how Thailand has faced difficulty in planning and implementing climate change adaptation plans due to limited availability of climate-related data and understanding of impacts, and that mainstreaming the response to climate change in overall development efforts will ensure sustainability of the development plan and community resilience.

- **United Nation Environment Programme<sup>37</sup>**

<sup>35</sup> [http://spappssecext.worldbank.org/sites/indc/PDF\\_Library/TH.pdf](http://spappssecext.worldbank.org/sites/indc/PDF_Library/TH.pdf)

<sup>36</sup> <https://www.adb.org/sites/default/files/institutional-document/703071/tha-cps-2021-2025.pdf>

<sup>37</sup> <https://open.unep.org/country/th>

There are currently twelve (12) UNEP-supported projects in Thailand, in varying stages of implementation and in partnership with both the national government and civil society stakeholders. Of these, six (6) are under the Programme Information and Management System (PIMS), five (5) are under the Global Environment Facility (GEF). PIMS projects include the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants and No and Low Emissions Mobility, while GEF projects include Seed Capital Assistance Facility (Renewable Energy Enterprise Development).

● **Green Climate Fund<sup>38</sup>**

Under the GCF, there is one (1) project in Thailand, with a total GCF financing of 17.5M. There are also seven (7) country-level readiness activities approved, amounting to 5.3M support approved and 1.7M disbursed. GCF financing programs include enhancing climate resilience in Thailand through effective water management and sustainable agriculture.

● **UNDP<sup>39</sup>**

The UNDP, in partnership with the Thai Ministry of Natural Resources and Environment, launched the NDC Support Programme, with key work areas in (1) Private Sector Engagement, through “engaging the private sector systematically on NDC mitigation investment opportunities (in energy efficiency) through a Private Climate Expenditure and Institutional Review (PCEIR) that will enhance the leveraging effects of public-private investment mechanisms” and (2) Climate-friendly Investment Opportunities, through “building capacities to design climate-friendly investment opportunities, address investor risks and blend and catalyze climate finance through an Investment and Financial Flows (I&FF) Assessment in the transport sector”

### ***NDC Assessment***

The WWF, through their “NDCS We Want” project, gave the Thai NDC a “Some Way to Go” rating, citing how the updated document provided no additions in enhancing the ambition of mitigation targets. However, the report also highlights how the country NDC presents an Adaptation Component with clear objectives and makes generic mentions of Sustainable Development Goals (SDGs) and Nature-based Solutions<sup>40,41</sup>.

Additionally, the WWF in their assessment of submitted NDCs in terms of protected areas, gave the Thai NDC 2 over 5 credits, noting that the document (1) explicitly mentions protected or other conserved areas, (2) includes plans to increase forest cover, plant trees, or expand natural areas but does not go as far as designating new protected areas, and (3) mentions mitigation benefits from nature or natural areas, but not in the context of protected areas.

The Climate Action Tracker rates the Thai NDC as “Critically Insufficient”, given the fact that the updated NDC did not raise its ambition targets and does not reflect fair share contributions. The underdelivering of the country, specifically in terms of reaching its target through current and

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<sup>38</sup> <https://www.greenclimate.fund/countries/thailand>

<sup>39</sup> <https://www.ndcs.undp.org/content/ndc-support-programme/en/home/our-work/geographic/asia-and-pacific/Thailand.html>

<sup>40</sup> [https://wwwf.panda.org/discover/our\\_focus/climate\\_and\\_energy\\_practice/ndcs\\_we\\_want/reviewed\\_ndcs\\_/thailand/](https://wwwf.panda.org/discover/our_focus/climate_and_energy_practice/ndcs_we_want/reviewed_ndcs_/thailand/)

<sup>41</sup> [https://wwwfint.awsassets.panda.org/downloads/ndcs\\_we\\_want\\_checklist\\_thailand.pdf](https://wwwfint.awsassets.panda.org/downloads/ndcs_we_want_checklist_thailand.pdf)

planned policies, is also highlighted, citing how current in-place policies fall short in achieving set targets for a 1.5C rise in temperature<sup>42</sup>.

The report also takes note of the “disappointing trend” of Thailand’s initially high Business-As-Usual baseline even prior to the COVID-19 pandemic for its NDC targets. This is exacerbated by the country’s the power sector planning. The dependency on coal to natural gas is set over the next two decades lowers overall emission pathways but nevertheless exacerbates fossil-fuel (gas) lock-in and delays meaningful decarbonization efforts.

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<sup>42</sup> <https://climateactiontracker.org/countries/thailand/>