



Government  
of  
Papua New Guinea

# Papua New Guinea's Enhanced Nationally Determined Contribution 2020

## The Summary

PNG reported total net Green House Gas (GHG) emissions in 2015 of 15,193 Gg CO<sub>2</sub> eq compared to -14,179 Gg CO<sub>2</sub> eq in 2000, a net increase of close to 30,000 Gg CO<sub>2</sub> eq<sup>1</sup>. These increases were driven by a combination of increases in emissions from the energy sector linked to a growing economy and development of PNG's natural gas reserves as well as increases in emissions and a reduction in accounted for removals<sup>2</sup> from the LULUCF sector.

PNG is committed to working to reverse this growth in emissions as part of the global fight against climate change and recognition of the country's vulnerability to its impacts - PNG is ranked as one of the 10 vulnerable countries in the world to the risks of climate change.<sup>3</sup>

This NDC provides information on PNG's key commitments to both mitigate and address

the impacts of climate change. It builds on and enhances ambition from PNG's first NDC (submitted in 2015) through inclusion of additional sector targets for LULUCF and adaptation as well as increasing information on the nature of these targets in line with the Enhanced Transparency Framework (ETF). The NDC also recognizes the important role that improved collection and management of emissions related data across the economy will have in PNG's capacity to further enhance ambition and respond to climate change.

A summary of PNG's commitments is presented below. All commitments are conditional in recognition of PNG's position as a developing national with limited resources and capacity and cover an implementation period of 2020 to 2030.

## Mitigation

PNG's emissions and recent increases are primarily driven by the AFOLU and Energy sectors, which accounted for 13,522 Gg CO<sub>2</sub> eq, or 89% of reported net emissions in 2015. Total emissions from the energy sector in 2015 were 11,806 Gg CO<sub>2</sub> eq, an increase of 5,532 Gg CO<sub>2</sub> eq (88.2%) from 2000<sup>4</sup>. Energy industries and Manufacturing industries and construction accounted for 5,596 (47%) Gg CO<sub>2</sub> eq of these emissions in 2015<sup>5</sup> and include emissions from on and off grid electricity generation and operation of the LNG plants.

Within the AFOLU sector, Land Use, Land Use Change and Forestry sector (LULUCF) is the biggest contributor to GHG emissions in PNG accounting for net emissions of 1,717 Gg CO<sub>2</sub> eq in 2015 compared to -21,636 Gg CO<sub>2</sub> eq in 2000 which is a total decrease of removals amounting to 23,370 Gg CO<sub>2</sub> eq.<sup>6</sup>

As such this enhanced NDC focuses on targets and actions within these two sectors specifically the LULUCF sector<sup>7</sup> and Energy Industries sub-sectors, while also noting opportunities for action within the transport subsector and a commitment to enhance ambition in the way that PNG collects and manages data within them and across all emitting sectors to allow for further refinement and enhancement of ambition within future updates.

## Mitigation Targets

PNG has enhanced its NDC commitments by presenting targets for both the Energy Industries and LULUCF sectors, which made up 38% of PNG's reported net emissions in 2015<sup>8</sup> consideration of possible actions within the transport sector are also presented. Across both sectors targets are based against a 2015 baseline with the target period covering 2021-2030. All targets presented are conditional.

### Energy Industries:

Within the Energy Industries PNG is committing to a headline target of carbon neutrality within the energy industries sub-sector by 2030.

*This will be achieved by:*

- **Reducing energy demand** - through adoption and implementation of Minimum Energy Performance Standards and Labelling (MEPSL) Regulations as well as enhancing public awareness of energy use and means of reducing energy use.
- **Enhancing levels of renewables in the energy mix** – through increasing from 30% (2015) to 78% the level of installed capacity for on grid electricity generation that is produced by renewables<sup>9</sup>.
- **Establishing a framework for fossil fuel emission offsetting** – PNG remains committed to an energy transition but also recognizes that a full transition will take time given PNG's complex geographies and dispersed population as well as growing economy. As such a framework for offsetting of emissions from fossil fuels will be introduced to support economic incentives for the transition while also helping to finance domestic nature based solutions in particular reduced emissions and enhanced removals from the forest sector.
- **Enhanced data collection** – Specific GHG targets are not currently possible for energy industries within PNG due to limitations of data availability. To strengthen this process PNG will establish a framework for enhanced data collection on energy use and associated emissions to support improved policy and regulation to manage emissions.

1. Papua New Guinea First Biennial Update Report. (2018)

2. PNG currently only accounts for removals from regenerating forests and planted forest. Clearance of degraded forest areas have thus had a significant impact on levels of removals. PNG does not account for removals from primary forest remaining forest.

3. United Nations University. 2016. World Risk Report 2016. <http://weltrisikobericht.de/wp-content/uploads/2016/08/WorldRiskReport2016.pdf>

4. Papua New Guinea First Biennial Update Report. (2018)

5. Papua New Guinea First Biennial Update Report. (2018)

6. Papua New Guinea First Biennial Update Report. (2019).

7. Emissions from agriculture are not seen to make up a significant level of emissions with data on the agriculture sector also currently limited preventing accurate reporting of its impacts.

8. It should be noted that the LULUCF sector in PNG makes up significantly higher levels of emissions (13,574.04 Gg CO<sub>2</sub> eq in 2015) but these are offset by removals within PNG's current approach to reporting leaving a relatively small net emission of 1,716.46 Gg CO<sub>2</sub> eq.

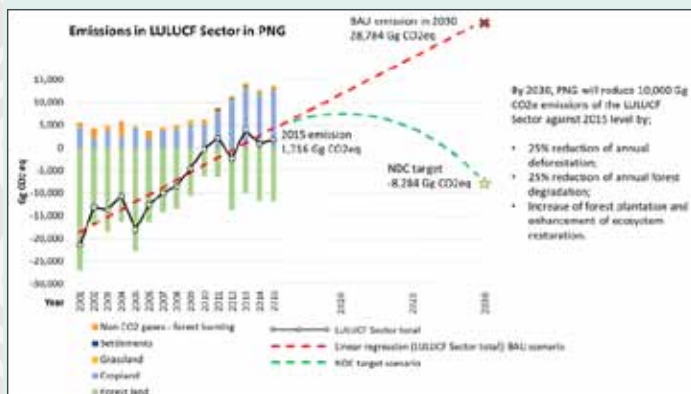
9. It is noted that this is an amendment of PNG's presented commitments in their First NDC of 100% renewables – this revision is based on improved data on existing and planned energy projects and recognition of the growth and importance of PNG's LNG sector.

## Transport

In addition PNG will continue to review appropriate options and approaches to reducing emissions from the transport sub-sector.

## Land Use Land Use Change and Forestry (LULUCF)

By 2030, PNG is committing to a reduction in annual emission from deforestation and forest degradation, due to agriculture expansion and commercial logging of 10,000 Gg CO<sub>2</sub> eq compared to 2015 level. This target is significant in itself but should also be seen in the context of PNG's projected business as usual scenario for the forest sector which would result in significant increases in levels of emissions (see Figure 1) As such PNG is working to deliver a significant change is the emission trend within the sector.



**Figure 1** PNG's annual GHG emissions and removals between 2001 and 2015, the future emissions prediction under the business as usual scenario and an illustrative pathway to the NDC target for the LULUCF sub-sector.

This target will be achieved by a 25% reduction in both the area of annual deforestation and annual degradation against 2015 levels (equating to a reduction in annual deforestation of 8,300 ha or annual degradation of 43,300ha) as well as an increase in the area of forest planted.

In addition PNG will continue to take action to strengthen the quality and nature of reporting on the LULUCF sector to allow for better accounting of the sustainable management of forests as well as reviewing how best to account for removals from PNG's extensive forest resource. This will be supported by improvements in information and reporting on agriculture to allow for its inclusion within future NDCs.

## Adaptation

The enhanced NDC will focus on four (4) development sectors central to PNG's ability to adapt to climate change namely agriculture, health, infrastructure, and transport. This sectoral focus is in line with the PNG National Adaptation Plan, which is currently under development. The adaptation targets are measured against beneficiaries for the agriculture and health sectors, and the value and number of assets for the transport and infrastructure sector and are summarized below:

- 100% of PNG's population to benefit from introduced health measures to respond to malaria and other climate-sensitive diseases;
- 6 million people (70% of population) benefit from improved early warning information to respond to climate extremes;
- 10% of the total population (0.8 million beneficiaries (25% are women) have increased resilience of food and water security, health, and well-being in PNG; and
- US\$ 1.7 billion value of transport, building and utility infrastructure and assets is built and or rehabilitated according to climate-resilient codes and standards.

## NDC Development Process

The NDC is consistent with the methodologies used in the preparation and development of the BUR1 using the 2006 IPCC Guidelines for National Greenhouse Gas Inventories.

PNG adopted the baseline method in the determination of contributions and in compiling its NDC. Whilst there are existing laws, policies, measures, and initiatives that will guide actions going forward, effective implementation will require structural adjustments to the domestic regulatory framework, institutional measures, financing, and additional action (including projects). Hence, the NDC will be assessed against the identified baselines, as opposed to considering the contributions and targets as "business as usual".

The NDC has been developed through an

extensive process of consultation including sector-sub-technical working groups, three four day long 'lockdowns' that brought together key technical officers from across key sectors and four national level consultation meetings that provided a forum for multi-stakeholder inputs into the NDC. Targets presented are in line with key national policies, strategies and plans and it has been endorsed by the National Executive Council of PNG.

Within this process there has been a strong commitment to ensuring a gender responsive and human rights-based approach, which will be carried over into all related planning, programming and implementation. This includes participation of women, youth and vulnerable groups in consultations, planning and decision making in the sectors, as well as to ensure women and youth have opportunities to develop sustainable low-carbon livelihoods.

## Consideration of the NDC Being Fair and Ambitious

PNG's emissions account to a minimal percentage of global emissions. The country is also a lower middle-income country that faces significant development challenges. Despite this the GoPNG have made significant commitments to address the impacts of climate change, with the proposed targets considered very ambitious (addressing sectors responsible for over 38% of PNG's net emissions and a far higher percentage should gross emissions from the LULUCF sector be considered) when assessed against PNG's levels of development, its status as a Small Island Developing State (SIDS) and its emissions profile – including projected increases in emissions. It should also be noted that these targets mark a stepwise approach to the development of PNG's emissions commitments with ongoing improvements in GHG monitoring and reporting being undertaken to allow PNG

to more effectively develop and set targets for sectors in which data is currently too limited for effective target setting.

The inclusion of adaptation within PNG's targets presents a clear statement of recognition that PNG, while only contributing a relatively insignificant level of emissions, will face some of the most significant impacts of climate change. As such support to addressing these impacts is paramount as part of the global response to climate change.

## NDC Implementation and Support Needs

PNG is committed to delivering the targets presented in this NDC and further enhancing ambition in future NDCs. Presented targets are in line with key national and sector policies and strategies, as well as the emerging National Adaptation Plan and as such are fully integrated into PNG's response to climate change. PNG will also establish a National Climate Change Coordination Committee (NCCCC) that will bring together key sector agencies and central government bodies to lead PNG's response to climate change. This committee will be supported by the Climate Change Development Authority (CCDA), which will continue its mandate to collect information on emissions and the impacts of climate change as well as support sectors and subnational governments in the development of mitigation and adaptation plans and actions and their mainstreaming into core workflows. An NDC Implementation Plan has also been developed to provide a more detailed outline of how targets will be achieved and it will be against this work plan that annual progress will be monitored. The NDC Implementation Plan also lays out key projects and programmes that will require support to ensure that targets are met.