



1.0 Background

This document presents a revised and updated Nationally Determined Contribution (NDC) for Zambia to the Paris Agreement on climate change. This pursuant to Decision *1/CP.19*, *1/CP.20* and *1/CP.21* of the United Nations Framework Convention on Climate Change (UNFCCC) for countries to enhance their climate ambitions and update their Nationally Determined Contributions by 2020.

Zambia's first NDC was submitted on 9th December, 2016, and consisted of both mitigation and adaptation components based on the country's national circumstances. This NDC was submitted with a conditional pledge of reducing Greenhouse Gas (GHG) emissions by 25% (20,000 Gg CO₂ eq.) by 2030 against a base year of 2010 under the Business As Usual (BAU) scenario with limited international support or by 47% (38,000 Gg CO₂ eq.) with substantial international support. The mitigation actions were focused on three programmes:

- (1) Sustainable forest management;
- (2) Sustainable agriculture, and;
- (3) Renewable energy and energy efficiency.

Adaptation actions in this NDC were focused on strategic productive systems (agriculture, wildlife and water), strategic infrastructure and health systems and enhanced capacity building, research, technology transfer and finance for adaptation. The country requires substantial resources to meet the means of implementation of these interventions.

By this submission Zambia enhances its NDC by broadening the scope of sectors under mitigation by adding transport, liquid waste and coal (production, transportation and consumption) and by elaborating the adaptation component of the NDC by developing indicators that will enable the country track progress on building resilience in both the human and physical systems and on adaptation actions.

1.1 Further information necessary for clarity, transparency and understanding (ICTU) of Zambia's NDC

Zambia has used the guidance on information to provide clarity, transparency and understanding in Decision *4/CMA.1* for information provided in the Annex to this submission, as applicable to its NDC.

Further information to facilitate clarity, transparency and understanding for the enhanced nationally determined contribution may be provided at a later date, when there is more clarity on the updated nationally determined contribution.

2.0 Annex 1

Nationally Determined Contribution (NDC) of Zambia for the timeframe 2015-2030

Updated as of 23 December 2020

Zambia is committed to reduce its greenhouse gas emissions by 25% (at Business As Usual (BAU) level of international support prevailing in 2015) and towards 47% (with substantial international support) compared to 2010 levels.

Information necessary for clarity, transparency and understanding (ICTU) of Zambia's NDC

Para	Guidance in decision 4/CMA.1	ICTU guidance as applicable to Zambia's NDC
<i>1</i>	<i>Quantifiable information on the reference point (including, as appropriate, a base year):</i>	
(a)	Reference year(s), base year(s), reference period(s) or other starting point(s);	Base year: 2010
(b)	Quantifiable information on the reference indicators, their values in the reference year(s), base year(s), reference period(s) or other starting point(s), and, as applicable, in the	The reference indicator will be quantified based on national total greenhouse gas (GHG) emissions, except AFOLU in the base year 2010. The base year emission level was about 120,605 Gg CO ₂ -equivalents.
(c)	For strategies, plans and actions referred to in Article 4, paragraph 6, of the Paris Agreement, or policies and measures as components of nationally determined contributions where paragraph 1(b) above is not	Not applicable.

(d)	Target relative to the reference indicator, expressed numerically, for example	At least 25% (at the Business As Usual BAU level of international support prevailing in 2015) and towards 47% (with substantial international support) reduction in greenhouse gas emission compared to 2010
(e)	Information on sources of data used in quantifying the reference point(s);	The reference indicator will be quantified based on national total GHG emissions in 2010 reported in Zambia's Biennial Update Report.
(f)	Information on the circumstances under which the Party may update the values of the reference indicators.	The national total GHG emissions in 2010 may be updated and recalculated due to continuous methodological improvements. Information on updates made will be included in the relevant reporting under the UNFCCC, and from 2024 onwards in the Biennial Transparency Reports.
2	Time frames and/or periods for implementation:	
(a)	Time frame and/or period for implementation, including start and end date, consistent with any further relevant decision adopted by the Conference of the Parties serving as the meeting of the Parties to the Paris	From 1 st January 2015 – 31 st December 2030
(b)	Whether it is a single-year or multi-year target, as applicable.	Single-year target in 2030.

3	Scope and coverage:	
(a)	General description of the target;	This NDC is submitted with a conditional pledge of reducing Greenhouse Gas (GHG) emissions by 25% (20,000 Gg CO ₂ eq.) by 2030 against a base year of 2010 under the BAU scenario with levels of international support prevailing in 2015 or by 47% (38,000 Gg CO ₂ eq.) with substantial international support.
(b)	Sectors, gases, categories and pools covered by the nationally determined contribution, including, as applicable, consistent with Intergovernmental Panel on Climate Change (IPCC) guidelines;	<p>Information provided is this NDC is consistent with the IPCC guidelines:</p> <p><u>Sectors</u> Energy, industrial processes and product use, Agriculture Forestry and Other Land Use (AFOLU), and waste.</p> <p><u>Gases</u> Carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), perfluorocarbons (PFCs), hydrofluorocarbons (HFCs), sulphur hexafluoride (SF₆)).</p> <p>For the AFOLU sector, emissions and removals the following reporting categories are included: forest land, cropland, grassland, and wetland (wetland remaining wetland only from 2026), including land use changes between the categories, and between these categories and settlements and other land. The five carbon pools above-ground biomass, below-ground biomass, litter, dead wood and soil organic matters are included. In addition, the carbon pool harvested wood products is included.</p>

<p>(c)</p>	<p>How the Party has taken into consideration paragraph 31(c) and (d) of decision 1/CP.21</p> <p>Para. 31(c) “Parties strive to include all categories of anthropogenic emissions or removals in their nationally determined contributions and, once a source, sink or activity is included, continue to include it”</p> <p>31(d) “Parties shall provide an explanation of why any categories of anthropogenic emissions or removals are excluded”</p>	<p>By this submission Zambia enhances its Nationally Determined Contribution by broadening the scope of sectors under mitigation by adding transport, liquid waste and coal (production, transportation and consumption). This translates into additional categories which demonstrates the consideration of paragraph 31(c) and (d) of decision 1/CP.21</p> <p>Responding to the request in para. 31(c) of decision 1/CP.21, through this submission, Zambia demonstrates it has striven to enhance its NDC by broadening the scope of sectors which contribute to the country’s mitigation efforts. Zambia is now considering all sectors and categories as potential contributors to its mitigation efforts. Zambia is prioritising mitigation actions that it considers likely to be effective and reliable, targeted where possible at GHG inventory key categories, and, cost-effective. For brevity, this NDC presents a summary of the mitigation actions by sector, and not by category.</p> <p><u>Energy – Stationary combustion</u> Major mitigation themes are: 1) better access to electrical energy; 2) better resilience, transmission efficiency, and, interconnectivity of the electricity supply network, 3) greater energy efficiency of both generation and consumption; 4) increased generation of and increased use of renewable energy. The investments Zambia are making in low-carbon and carbon-neutral energy technologies are expected to reduce the energy intensity of our economic development, the carbon intensity of energy production, GHG emissions, and the long-term costs of mitigation.</p> <p><u>Energy – Transport</u> Major mitigation themes are: 1) improved fuel efficiency; 2) modal shift; 3) improved transport infrastructure.</p> <p><u>Industrial Processes and Product Use (IPPU)</u> Major mitigation themes are: 1) increased energy efficiency of processes; 2) improvements in technology.</p>
------------	---	--

		<p><u>Agriculture</u> Major mitigation themes are: 1) conservation and sustainable agriculture; 2) efficient agriculture.</p> <p><u>Waste</u> Major mitigation themes are: 1) improved solid waste handling and disposal practices; 2) reduction in waste generation; 3) generation of biomethane from waste; 4) improved waste-water treatment practices.</p> <p><u>Forestry and Land Use</u> Major mitigation themes are: 1) reduction in deforestation; 2) increase in afforestation and reforestation; 3) improved forest management; 4) careful agro-forestry practice.</p> <p>Responding to the request in para. 31(d) of decision 1/CP.21, Zambia has not explicitly decided to exclude any sectors. Zambia has instead focussed its efforts on sectors with the greatest mitigation potential, with the greatest likelihood of rapid implementation, aligned where possible with the GHG inventory Key Category Analysis.</p>
(d)	<p>Mitigation co-benefits resulting from Parties' adaptation actions and/or economic diversification plans, including description of specific projects, measures and initiatives of Parties' adaptation actions and/or economic diversification plans.</p>	<p><u>Mitigation co-benefits resulting from Parties' adaptation actions</u> Zambia has identified several mitigation benefits from adaptation actions including under Climate Smart Agriculture where adaptation measures through techniques have also resulted in emissions reductions</p>

(e)	Sectoral targets	A quantitative analysis of sectoral targets is currently under review.
4	Planning processes:	
(a)	Information on the planning processes that the Party undertook to prepare its nationally determined contribution and, if available, on the Party's implementation plans, including, as appropriate:	<p>The mitigation and adaptation programs elaborated in this NDC are integrated in the Seventh National Development Plan (7NDP) and its successive plans. Planning for adaptation and mitigation programs under the Zambia's NDC.</p> <p>The National Adaptation Planning process being undertaken by Government provides a good basis for long term adaptation programming and mainstreaming of climate change adaptation into the existing national planning processes.</p> <p>The National Designated Authority (NDA) for the Green Climate Fund has already been designated and is expected to play a key role of "clearing house or entity" for climate change projects to be funded from GCF in Zambia. The process is on-going to select a National Implementing Entity (NIE) and establishing a National Climate Change Fund (NCCF).</p> <p>The effectiveness of the NDC implementation will be ensured through the ongoing development and strengthening of existing Monitoring Reporting and Verification (MRV) systems to track progress of implementation of both the mitigation and adaptation programs.</p>

(i) Domestic institutional arrangements, public participation and engagement with local communities and indigenous peoples, in a gender-responsive manner;

Institutional arrangements: The Institutional arrangements for climate change implementation is established in the National Policy on Climate Change of 2016 through an interministerial consultation structure.

The Policy establishes the Council of Ministers chaired by the Vice President of the Republic of Zambia and is the supreme decision making body in overseeing Climate Change interventions in the country. It provides policy guidance in climate change programming, mainstreaming, resource mobilization, monitoring and evaluation.

The Steering Committee of Permanent Secretaries as the advisory body to the Council of Ministers on policy and programme coordination and implementation. The Steering Committee is chaired by the ministry responsible for development planning to ensure climate change is mainstreamed in the development planning process.

The Technical Committee on Climate Change comprising representatives from relevant Ministries and a broad range of other stakeholders, including private sector, civil society, financial institutions, among others. The Technical Committee is the main technical advisory body to the Steering Committee of Permanent Secretaries. The Technical Committee is chaired by the Ministry responsible for Climate Change implementation under which there is a dedicated department on climate change which is responsible for coordinating climate change implementation in Zambia.

<p>(ii)</p>	<p>Contextual matters, including, inter alia, as appropriate:</p> <p>a. National circumstances, such as geography, climate, economy, sustainable development and poverty eradication;</p> <p>b. Best practices and experience related to the preparation of the nationally determined contribution;</p> <p>c. Other contextual aspirations and priorities acknowledged when joining the Paris Agreement</p>	<p>a. Information on national circumstances can be found in Zambia’s Biennial Update Report to the UNFCCC, Chapter 2.</p> <p>b. Zambia has established institutional arrangements at the high-level decision-making bodies of the Republic of Zambia. It has established the Council of Ministers on Climate Change, chaired by the Vice President of the Republic of Zambia which is the supreme decision-making body in overseeing Climate Change interventions in the country. This is supported by Steering Committee of Permanent Secretaries and Technical Committee on Climate Change, and this ensures broad political ownership and effective coordination of the climate change interventions in the country.</p> <p>c. <i>Zambia aspires to become a prosperous middle income country by 2010 as enshrined in its Vision 2030.</i></p>
-------------	---	---

<p>c.</p>	<p>Other contextual aspirations and priorities acknowledged when joining the Paris Agreement - continued.</p>	<p>Food security: Zambia's role in global food security in the context of climate change is to adapt to a changing climate, manage and use these resources sustainably, to secure food supplies while emissions of greenhouse gases are reduced.</p> <p>Gender equality: In 2018, the Government Republic of Zambia with support from cooperating partners developed and launched a Climate Change Gender Action Plan (CCGAP) which ensures that Zambia's climate change processes mainstream gender considerations to guarantee that women and men can have access to, participate in, and benefit equally from climate change initiatives.</p> <p>Youth actions:</p> <p>Education and training are important elements in enhancing the country's capacity to effectively undertake climate change actions. In order to ensure sustained implementation of education and training activities in the country, the National Policy on Education was formulated to provide a framework for education at primary and secondary school levels. In addition, a National Climate Change Learning Strategy has been developed to strengthen individual and institutional systemic capacities of the energy, forestry, health, agriculture and education sectors to enable them to deliver climate change.</p> <p>Sustainable Development Goals (SDGs):</p> <p>Zambia's current National Development Plan (7NDP) has embraced an integrated multisectoral approach. The country has domesticated the SDGs, the AU Agenda 2063, among others, into its 7NDP. The 7NDP has mainstreamed 86% of SDGs goals and targets. Consequently, implementation and reporting on SDGs are coordinated through the institutional structures at national and sub-national levels using the Cluster approach. This approach has fostered doing more with less and has strengthened synergies and partnerships resulting into multi-sectoral responses to development challenges whose achievements include:</p>
-----------	--	--

(b)	<p>Specific information applicable to Parties, including regional economic integration organizations and their member States, that have reached an agreement to act jointly under Article 4, paragraph 2, of the Paris Agreement, including the Parties that agreed to act jointly and the terms of the agreement, in accordance with Article 4, paragraphs 16–18, of the Paris Agreement;</p>	<p>Not applicable</p>
(c)	<p>How the Party’s preparation of its nationally determined contribution has been informed by the outcomes of the global stocktake, in accordance with Article 4, paragraph 9, of the Paris Agreement;</p>	<p>Zambia's climate targets and polices are developed in the context of best available science and hence the IPCC Special Report on 1.5 degrees, has been central to the assessment of the nationally determined contribution.</p>

<p>(d)</p> <p>(i)</p> <p>(ii)</p>	<p>Each Party with a nationally determined contribution under Article 4 of the Paris Agreement that consists of adaptation action and/or economic diversification plans resulting in mitigation co-benefits consistent with Article 4, paragraph 7, of the Paris Agreement to submit information on:</p> <p>How the economic and social consequences of response measures have been considered in developing the nationally determined contribution;</p> <p>Specific projects, measures and activities to be implemented to contribute to mitigation co-benefits, including information on adaptation plans that also yield mitigation co-benefits, which may cover, but are not limited to, key sectors, such as energy, resources, water resources, coastal resources, human settlements and urban planning, agriculture and forestry; and economic diversification actions, which may cover, but are not limited to, sectors</p>	<p>The intended contribution on adaptation stated here is for the purposes of information so that an overview of the range of planned climate-related actions of the country is made known; it does not constitute an international obligation to the country. The extent of implementation of the intended contribution is contingent upon the financial resources, capacity and technologies available to the country through both domestic and international support to stimulate investments and innovation.</p> <p>(i) As a minimal contributor to global GHG emissions, Zambia places significant importance and priority on adaptation to the effects of climate change in order to enhance the resilience of its population, ecosystems, infrastructure, productive and health systems. The key socio-economic sectors identified as most vulnerable to climate change impacts include: agriculture, water, forestry, energy, wildlife, infrastructure and health. All the adaptation actions have strong synergies with mitigation actions.</p> <p>(ii) In terms of implementation, Zambia will take a landscape approach at watershed level to enhance synergies between adaptation and mitigation actions. Zambia has six major watersheds: Tanganyika; Luapula; Chambeshi; Luangwa; Kafue; and Zambezi.</p> <p>The adaptation measures comprise three (3) goals/programs and 13 priority actions. The programs include:</p> <p>Program 1: Adaptation of strategic productive systems (agriculture, wildlife, water)</p> <p>Which include: 1. Guaranteed food security through diversification and promotion of Climate Smart Agricultural (CSA) practices for crop, livestock and fisheries production including conservation of germplasm for land races and their wild relatives.</p>
-----------------------------------	--	--

<p>such as manufacturing and industry, energy and mining, transport and communication, construction, tourism, real estate, agriculture and fisheries.</p>	<ol style="list-style-type: none"> 2. Develop a National Wildlife Adaptation Strategy and ensure its implementation through supportive policies, local community, civil society and private sector participation. 3. Protection and conservation of water catchment areas and enhanced investment in water capture, storage and transfer (linked to agriculture, energy, ecological, industrial and domestic use purposes) in selected watersheds. <p><i>Program 2: Adaptation of strategic infrastructure and health systems</i> Which include:</p> <ol style="list-style-type: none"> 1. Institutionalize integrated land use planning compatible with sustainable management of natural resources and infrastructure development 2. Mainstream climate change in the National Health Policy, Environmental Health (EH) Policy, and Water and Sanitation Policy. 3. Enhance decentralized climate information services for early warning and long-term projections on the effects of climate change to support sustainable management of the production systems, infrastructure development and public health. <p><i>Program 3: Enhanced capacity building, research, technology transfer and finance for adaptation</i> Which include:</p> <ol style="list-style-type: none"> 1. Capacity building in Climate Smart Agriculture (CSA), Sustainable Forest Management (SFM), Sustainable Fisheries and Aquaculture (SFA), Renewable Energy Technologies (RET), and Early Warning Systems (EWS), Change management and climate change planning. 2. Water technologies for savings, recycling, irrigation and sustainable management for household, agriculture and industrial purposes. 3. Development of an insurance market against climate change induced risks related to agriculture and infrastructure. 4. Mainstream climate change adaptation into country development plans and strategies.
--	--

(e)	Adaptation	<p>An In-depth Vulnerability Report was conducted in 2019 to provide a needs assessment and analyse the effect of dry spells, floods and pest infestation on different sectors in order to understand their impacts on sector performance and decipher the required actions for response, rehabilitation and recovery. It outlines recommendations for the following sectors: Agriculture and food security; Health; Nutrition; Water, Sanitation and Hygiene; Education; and Development Project and Safety net programmes being implemented in communities.</p> <p>A countrywide vulnerability assessment to inform adaptation planning is underway and will be reflected in the adaptation component of the final revised NDC to be submitted in early 2021</p>
5	Assumptions and methodological approaches, including those for estimating and accounting for anthropogenic greenhouse gas emissions and, as appropriate, removals:	
(a)	Assumptions and methodological approaches used for accounting for anthropogenic greenhouse gas emissions and removals corresponding to the Party's nationally determined contribution, consistent with decision 1/CP.21, paragraph 31, and accounting guidance adopted by the CMA;	<p>Zambia used IPCC 2006 guidelines for both Third National Communication and BUR. All the categories were included in the baseline emissions in the INDC in accordance with Decision 1/CP.21 para. 31 (c). The country will at the latest by 31 December 2024 report a GHG inventory in accordance with 18/CMA.1 and report on progress towards its nationally determined contribution. For accounting relevant information, Zambia will use the accounting guidance in 4/CMA.1. For IPCC methodologies and metrics, see 5 (d).</p> <p>Final accounting towards the target, that will take place in 2032, may depend resource availability. Zambia does not rule out the possibility of using market based mechanisms in meeting emission reduction target.</p>
(b)	Assumptions and methodological approaches used for accounting for the implementation of policies and measures or strategies in the nationally determined contribution;	Not applicable.

(c)	If applicable, information on how the Party will take into account existing methods and guidance under the Convention to account for anthropogenic emissions and removals, in accordance with Article 4, paragraph 14, of the Paris Agreement,	Zambia's current GHG inventory is in accordance with decision 24/CP.19 and hence the IPCC 2006 Guidelines and the 2003 Good Practice Guidance .
(d)	IPCC methodologies and metrics used for estimating anthropogenic greenhouse gas emissions and removals;	IPCC 2006 guidelines was used for estimating GHG emissions and removals. Global warming potentials (GWP) for a 100 year time horizon from the IPCCs Second Assessment Report was used to calculate CO2 equivalents for Third National Communications and Biennial Update Report(BUR).
(e)	Sector-, category- or activity-specific assumptions, methodologies and approaches consistent with IPCC guidance, as appropriate, including, as applicable:	
(i)	Approach to addressing emissions and subsequent removals from natural disturbances on managed lands;	Emissions and subsequent removals from natural disturbances on afforested land and managed forest land may be excluded from the accounting if the emissions from the natural disturbance exceed the average emissions caused by natural disturbances in the period 2001-2020, excluding outliers (background level)
(ii)	Approach used to account for emissions and removals from harvested wood products;	Not Applicable
(iii)	Approach used to address the effects of age-class structure in forests;	Emissions and removals in managed forests in the period 2021 – 2030 will be accounted for as the deviation from a projected forward-looking forest reference level, with regards to dynamic age-related forests characteristics. Zambia may provide further information to facilitate clarity, transparency and understanding.

(f)		Other assumptions and methodological approaches used for understanding the nationally determined contribution and, if applicable, estimating corresponding emissions and removals, including:
(i)	How the reference indicators, baseline(s) and/or reference level(s), including, where applicable, sector-, category- or activity-specific reference levels, are constructed, including, for example, key parameters, assumptions, definitions, methodologies, data sources and models used;	Tier 2 method was employed for Land subcategory under AFOLU while Tier 1 was used for the remaining subcategories under AFOLU. Zambia may provide further information to facilitate clarity, transparency and understanding.
(ii)	For Parties with nationally determined contributions that contain non greenhouse-gas components, information on assumptions and methodological approaches used in relation to those components, as applicable;	Not applicable.
(iii)	For climate forcers included in nationally determined contributions not covered by IPCC guidelines, information on how the climate forcers are estimated;	For precursor emissions estimates, the European Environment Agency EMEP/EEA air pollutant emission inventory guidebook 2019 were used.
(iv)	Further technical information, as necessary;	Not applicable.

(g)	The intention to use voluntary cooperation under Article 6 of the Paris Agreement, if applicable.	<p>Zambia intends to use voluntary cooperation under Article 6 of the Paris Agreement to fulfil part of its target.</p> <p>Zambia will report on progress towards its nationally determined contribution through the transparency framework under the Paris Agreement, and account for its cooperation with the European Union in a manner consistent with the guidance adopted by CMA and further guidance agreed by the CMA.</p>
6	How the Party considers that its nationally determined contribution is fair and ambitious in the light of its national circumstances:	
(a)	How the Party considers that its nationally determined contribution is fair and ambitious in the light of its national circumstances;	<p>Zambia considers the updated NDC as fair and ambitious enough to contribute to low carbon and climate resilient economy by 2030 in accordance with its national circumstance and desire to become a high middle income and prosperous Nation by 2030. Zambia is low contributor to the global greenhouse gas emission. In developing the NDC, Zambia considered the general principles and provisions of the Convention especially those related to Common But Differentiated Responsibilities and Respective Capabilities (CBDR) and equitable access to atmospheric space.</p> <p>The country's NDC is guided by the country's desire to reduce poverty, attainment low carbon climate resilient economy, sustainable development and become a high middle income and prosperous nation by 2030 in line the country's Vision 2030.</p>

		The successful implementation of Zambia's NDC is conditional and dependent on the level of support to be provided through the Convention and other multilateral and bilateral arrangements.
(b)	Fairness considerations, including reflecting on equity;	Zambia regards its NDC to represent its fair share of the efforts to achieve the global long-term goal of the Paris Agreement.
(c)	How the Party has addressed Article 4, paragraph 3, of the Paris Agreement;	Zambia's updated and strengthened nationally determined contribution represents a progression beyond its previously communicated nationally determined contribution, as it broadens the scope of sectors under mitigation by adding transport, liquid waste and coal (production, transportation and consumption) and elaborates the adaptation component of the NDC by developing indicators that will enable the country track progress on building resilience in both the human and physical ecosystems and on adaptation actions.
(d)	How the Party has addressed Article 4, paragraph 4, of the Paris Agreement	Not applicable.
(e)	How the Party has addressed Article 4, paragraph 6, of the Paris Agreement.	Not applicable.
7	How the nationally determined contribution contributes towards achieving the objective of the Convention as set out in its Article 2:	
(a)	How the nationally determined contribution contributes towards achieving the objective of the Convention as set out in its Article	Zambia regards the long-term target of the Paris Agreement to be in line with Article 2 of the Convention. The answer to this question is therefore explained under 6a.
b)	How the nationally determined contribution contributes towards Article 2, paragraph 1(a), and Article 4, paragraph 1, of the Paris Agreement	See 6a and 7a.

