



# **SAO TOME AND PRINCIPE INTENDED NATIONALLY DETERMINED CONTRIBUTION**

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Supported by





## Democratic Republic of Sao Tome and Principe

### Intended Nationally Determined Contributions (INDC)

#### National background: Development Benchmarks and National Priorities and Climate Change

##### Context

Sao Tome and Principe (STP) is a small island state consisting of two islands and several islets located in the Gulf of Guinea, with an area of 1001 km<sup>2</sup>. With a total population of about 187,356 inhabitants, of which over 65% are below the poverty line, and less than 50% have access to electricity services. GDP growth is around 4% which is not sufficient to meet STP's major development needs. Furthermore, over 90% of the State Budget (OGE) come from foreign aid and the debt rate is high (70% of GDP). The country is an absolute sink of greenhouse gases, i.e. it contributes to the sequestration of CO<sub>2</sub> but on the other hand it is one of the countries most affected by climate change (CC).

Climate change adaptation and risk reduction from climate change impacts is a priority for the national authorities, although, STP has taken steps to identify additional mitigation measures that can contribute to the reduction of national GHG emissions. The implementation of measures, both for adaptation and mitigation requires financial resources, access to technology and capacity building, through external assistance.

The state of Sao Tome and Principe has a legal and institutional framework to manage and respond to challenges on environmental issues: The Ministry of Infrastructure, Natural Resources and Environment, through the General Directorate of Environment (DGE) established, in 2007, by Presidential Decree No. 2/2007, involved in the implementation of the United Nations Framework Convention on Climate Change, in collaboration with the National Institute of Meteorology (NIM); the Law No.10/99 – Basic Law on Environment of 15 April 1999 establishing the legal framework of the environment in Sao Tome and Principe.

The Decree No.13/2012, published in the Daily Gazette of the Republic No. 81, of July 11, 2012, created the National Committee for Climate Change for the implementation, coordination, monitoring and evaluation of the United Nations Framework Convention on Climate Change.

#### CONTRIBUTION IN TERMS OF ADAPTATION

1. Rationale and process for developing	STP adaptation measures are aimed at improving the
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<p>INDCs on adaptation</p>	<p>country's ability to adapt to the adverse consequences of CC, thus contributing to the country's development.</p> <p>The rationale for the inclusion of the adaptation component in the INDC takes into consideration that the country is already a sink of greenhouse gases. In addition, , the country shows vulnerability and fragility conditions as a developing small island state, for which the negative impacts of CC are evident in all sectors of the national economy, such as: Agriculture and Livestock; Forest and Soil; Water, Energy and Fishing; Coastal Zone and Population; Health and Education.</p> <p>Being a LDC, STP requires external support to implement a CC resilient development. In this regard the INDC process is also considered as a mechanism to raise awareness of the national adaptation program at the international level in order to attract technical, financial and capacity-building support for its implementation.</p>
<p>2. Summary of Climate Change trends, impacts and vulnerabilities.</p>	<p>STP is already suffering the impacts of CC. Several trends have been observed: increasing temperature, decreasing rainfall, longer dry season “gravana”, decreasing river flow level, which causes the risk of decreasing groundwater reservoirs , floods, raising sea level and increasing coastal erosion.</p> <p>These trends have negative economic impacts on energy production, fishing activities, forestry and agro forestry, agriculture and livestock.</p> <p>All these trends and impacts have already been identified and documented (in the Second National Communication) and they represent a major concern for the country.</p>
<p>3. Reporting on long-term and near-term adaptation visions, goals and targets</p>	<p>Depending on the future availability of financial, technological and capacity-building support provided by</p>

the international community, the country plans in short and medium terms to implement the following actions:

I. Strengthening the National Service of Civil Protection and Fire, by 2025, to respond to fire and other environmental disasters, increasing resilience to climate change, thus contributing to social well-being;

II. Reduce the number of people living in vulnerable areas at risk, by providing housing in safer areas;

III. Develop a national program for sustainable management of the forest and agro forestry ecosystems by 2025;

IV. Introduce radar reflectors on board all fishing vessels by 2025, reducing the number of accidents at sea;

V. Train and equip fishermen with means to enable safe fishing and train them in the proper use of fishing gear.

In the medium and long terms, Sao Tome and Principe will be conditionally committed to implement the following activities , depending on the availability of financial, technological and capacity-building support, from the international community:

I. Reduce the illegal and indiscriminate felling of trees by 15%, by 2030;

II. Develop scientific and technical research on adaptation of new productive crop varieties with a broad spectrum of tolerance to adverse climate impacts by 2030;

III. Promote forestry / planting of species resistant to dry and low rainfall by 2030;

IV. Improve pasture with grazing selection by applying rotation management of the of plots by

	<p>2030;</p> <p>V. Increase the resilience to erosion and maritime, river and storm flooding of coastal areas through improved Coastal Protection for vulnerable communities;</p> <p>VI. Reduce the use of nitrogen fertilizers in agriculture by 2030.</p>
<p>4. Reporting on current and planned adaptation undertakings and support</p>	<p>To achieve the objectives of the above mentioned actions in paragraph 3, 17 specific projects were identified and listed in the NAPA, which implementation require external financial support in addition to technological support and capacity building.</p>
<p>5. Gaps and Barriers</p>	<p><u>Financial Barriers:</u></p> <p>I. Difficult access to finance;</p> <p>II. Relatively long time for return on investment;</p> <p>III. Limited budgets from the State to create an enabling environment for resource mobilization to encourage private sector investment.</p> <p><u>Technological barriers and lack of skilled human resources</u></p> <p>I. Non- sufficient and inappropriate technological abilities in the national market;</p> <p>II. Absence of adequate capacity-building of national experts on specific issues;</p> <p>II. Low access to modern and efficient technology.</p> <p><u>Institutional and Political barriers:</u></p> <p>I. Instability of the CC Committee;</p> <p>II. Deficient and incomplete disclosure of information on</p>

	<p>Climate Change;</p> <p>III. Absence of availability to a centralized CC database with needed information;</p> <p>IV. Absence of policies and regulatory activity for key sectors (energy, water, forests etc.).</p>
6. Summary of Needs	<p>The realization of the priority adaptation projects identified and not yet properly implemented, require external financial support in order to ensure their feasibility.</p> <p>As well as, STP requests the technologies support and capacity building.</p>
<b>MITIGATION IN TERMS CONTRIBUTION</b>	
1. Timeframe	2020-2030
2. Type of contribution	<p>The type of contribution selected by STP in terms of mitigation is based on results, i.e. the reduction of greenhouse gases to levels below the BAU.</p> <p>The BAU scenario by 2030 was based on the last GHG inventory of 2005.</p>
3. Target Level	<p>Taking into consideration the country's national economic, social and environmental situation, STP will not present any unconditional contributions.</p> <p>The contributions of STP with regard to mitigation are conditioned by financial support, technological support and capacity-building that the country will receive from abroad.</p>
4. GHG Reduction	<p>In 2005, emissions were about 93 ktCO<sub>2</sub>eq, and BAU projection indicates that to fulfil the condition of the supposed growth parameters by 2030, the emissions will reach 240 ktCO<sub>2</sub>eq.</p>

	<p>The measures which STP has considered as potential contributions to this date, are as follows:</p> <ul style="list-style-type: none"> <li>I. Isolated Mini Power plant (1 MW);</li> <li>II. Hydro Power plant connected to the main network (9 MW);</li> <li>III. Photovoltaic solar panels (12 MW);</li> <li>III- Mini-hydro Power plant connected to the main grid (4 MW).</li> </ul> <p>The implementation of these four (4) measures would mean an introduction of about 47% renewable energy in the national electricity system compared to the projected BAU electricity production, of which 34% is hydro and 13% solar (PV).</p> <p>Thus, STP would be able to contribute to the reduction of Greenhouse Gases by about 57 ktCO<sub>2</sub>eq, which approximately corresponds to a 24% national emission reduction by 2030 related to 2005.</p> <p>In 2030, it is expected that national emissions will be about 240 ktCO<sub>2</sub>eq, according to the BAU scenario. Net emissions from LULUCF under the BAU scenario are expected to be around -630 ktCO<sub>2</sub>eq, indicating that STP will continue to be a carbon sink country, in which net absorptions will be - 400 ktCO<sub>2</sub>eq.</p>
<p>5. Means of Implementation</p>	<p>To implement the above listed mitigation activities, it is estimated that a total investment of not less than US\$ 59 million in the form of external aid will be required between 2020 and 2030.</p> <p>According to the mitigation measures identified, the necessary technologies are:</p> <ul style="list-style-type: none"> <li>I. Hydropower Electricity Generation Systems;</li> <li>II. Photovoltaic Electricity Generation Systems.</li> </ul> <p>Thus, STP requests the technologies support and capacity building</p>

6. Sectors	The scope of the contribution covers all sectors of the national economy.
7. Gases	CO <sub>2</sub> , CH <sub>4</sub> , NO <sub>x</sub>
8. Accounting Methodology	<p>With the support of GACMO model, developed by UNEP DTU Partnership, the BAU scenario was constructed based on the national GHG Inventory (IGEE) of 2005 IGEE, according to the IPCC guidelines for NAI countries.</p> <p>The mitigation measures were selected and prioritized based on consultation with stakeholders, which formed the basis for the calculation of the mitigation scenario, calculated using the GACMO model.</p> <p>The calculations were performed without including the absorption of CO<sub>2</sub> of forests.</p>
9. Institutional Arrangements	Apart from the legal framework referred to in the <i>National Circumstances</i> , for the analysis of mitigation, it took into account the Kyoto Protocol, ratified on May 19, 2008, by Presidential Decree No. 9/2008 and the Legal Regime of the Energy Sector created by Decree-law No. 26/2014.
10. How is it equitable and adequate?	STP is a GHG sinkhole country. However, it is willing to make further efforts to reduce its emissions depending on the financial support, technological resources and support for capacity-building it may receive from the international community.
11. Market mechanisms of participation	According to the Marrakesh Call for Climate Action, agreed at the Ministerial Dialogue of the Seventh African Forum of Carbon, in April 2015, Sao Tome and Principe recognizes the experience gained from the implementation of the Clean Development Mechanism and want to be supported by market mechanisms with high environmental integrity, contributing to sustainable development and establishing strong incentives to harness the power of private sector.



	Sao Tome and Principe supports the use of market mechanisms including the results of mitigation pre-2020, such as the use of Emission Reduction Certificates (ERCs) generated by CDM projects and programs.
12. Monitoring and Progress Report	The country elaborated a Monitoring and Progress Report System proposal (MPR) to (INDC) according to the needs, complying with international requirements of the monitoring activities and progress of certain national contributions to adaptation and mitigation.