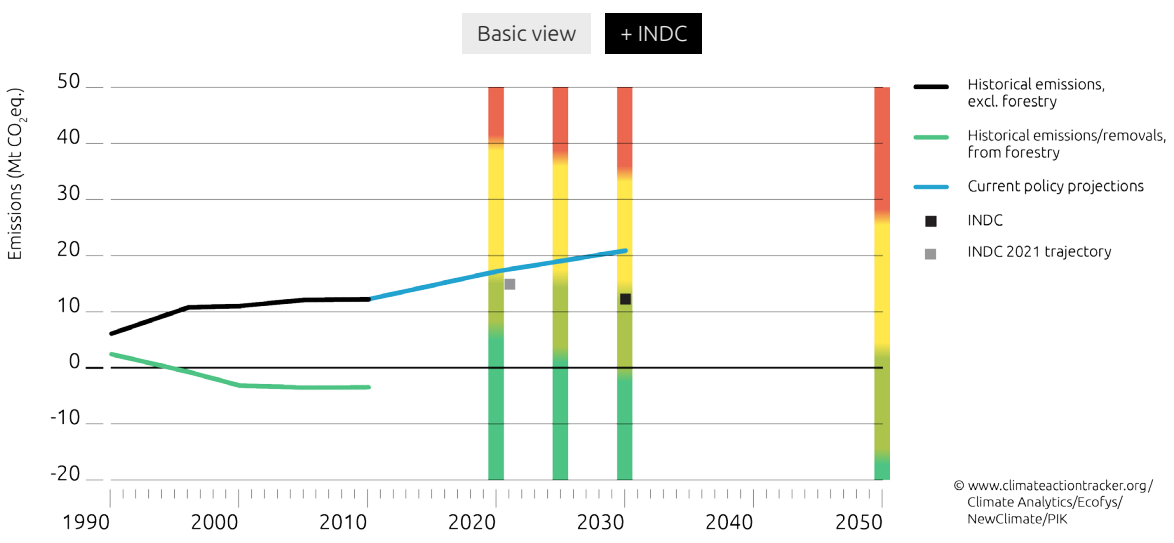
Costa Rica

Page last updated: 4th December 2015

Rating





Note: Hover over the coloured bars for a pop-up with the fair emissions range per effort sharing category. More information here.

Assessment

On September 30, 2015 Costa Rica submitted its Intended Nationally Determined Contribution (INDC) with an unconditional target to keep net greenhouse gas (GHG) emissions below 9.37 MtCO2e emissions by 2030 including Land Use, Land Use Change and Forestry (LULUCF). The INDC translates into emissions (excl. LULUCF) returning to 2010 levels by 2030. Based on this target, we rate Costa Rica "sufficient".

The "sufficient" rating indicates that Costa Rica's climate plans are at the most ambitious end of its fair contribution. This means it is consistent with limiting warming to below 2°C without requiring other countries to make much deeper reductions and comparatively greater effort. The rating could be improved if Costa Rica renewed its commitment to have zero carbon emissions by 2021 as expressed in the National Climate Change Strategy.

Costa Rica's INDC announces its long-term intention to become carbon neutral by 2085. This contradicts the target included in the 2008 National Climate Change Strategy (ENCC)—of becoming carbon neutral by 2021. Instead, the INDC puts forward an indicative level of emissions (incl. LULUCF) of 10.9 $MtCO_2e$ for 2021 (equivalent to about 23% above 2010 emissions levels excl. LULUCF). This is unexpected, especially given the Government's recent announcement that they have already achieved 81% of the carbon neutral target.

According to our analysis, Costa Rica will need to implement additional policies to reach its proposed targets. Most of the mitigation policies it has implemented and planned are in the forestry sector, while the design and implementation of policies for the remaining sectors—energy, buildings, transport, agriculture and waste sectors—are still in an embryonic stage. An exception is electricity generation that already runs on a very high share of renewable sources.

Costa Rica will go through an internal process to facilitate the implementation of the 2030 goal from 2021 onwards (Ministerio de Ambiente, 2015). Further policies i.e. reducing energy demand, further decarbonising the energy supply, fuel switching and carbon sink management will need to be implemented for Costa Rica to meet its target. The government is engaged in multiple sectoral dialogues to better understand what the most attractive mitigation actions are. Examples of the policies considered include an internal carbon market (the Emissions Reductions Program), a goal to have 100% electricity generated from renewable energy, better agricultural practices, waste management in cities, and electric transportation (Ministerio de Ambiente, 2015; REEGLE, 2015).

In the forestry sector, current efforts are mainly the Low Emissions Development Strategies and a REDD+ (Reduce Emissions from Deforestation and Forest Degradation) strategy at the national level. Also, as included in NAMAs (Nationally Appropriate Mitigation Actions), the metrics to assess the potential for removals and emissions are under review and continuous improvement. Emissions excluding LULUCF could increase significantly from historic levels and require attention to further decarbonise the economy. We don't include the forestry sector in our rating—please see the CAT's INDC ratings and LULUCF page for more details.

Pledge

INDC

Costa Rica submitted its INDC with a target of 9.37 $MtCO_2e$ emissions by 2030 and shows an indicative emissions level of 10.9 $MtCO_2e$ emissions by 2021 (including LULUCF). The CAT estimates the target to be 14.9 $MtCO_2e$ excluding LULUCF for the 2021 projections and 12.3 $MtCO_2e$ excluding LULUCF for 2030 target (see assumptions for details on how we derive emissions levels excl. LULUCF). For 2030, this is equivalent to 101% above 1990 levels and equal to 2010 levels excluding LULUCF. Costa Rica also has a long-term target aiming at keeping emission below 5.96 $MtCO_2e$ by 2050 including LULUCF (Ministerio de Ambiente, 2015).

The INDC lists mitigation options under four broad categories (Ministerio de Ambiente, 2015):
1. Reducing energy demand and GHG emissions
2. Decarbonisation of energy supply
3. Fuel switch for final use
4. Management of carbon sinks

Nationally Appropriate Mitigation Actions (NAMA)

Costa Rica communicated that it will implement a "long-term economy-wide transformational effort to enable carbon-neutrality", that is, to have zero net emissions including LULUCF (UNFCCC, 2011). It adds that this target will help Costa Rica to significantly deviate from 'business as usual' emission scenarios from now until 2021 and beyond. In its previous assessments, the CAT interpreted this target to mean carbon neutrality by 2021, based on the National Climate Change Strategy (ENCC) from 2008. Since the INDC—the most recent document—clarifies that target year for carbon neutrality is 2085, we disregard the previously announced target.

Convention	
NAMA	'
"Long term economy-wide transformational effort to enable carbon-neutrality"	
Conditions	International financing
INDC	
2030 target	9.37 $MtCO_2$ by 2030 incl. LULUCF [equivalent to 10% above 1990 levels and 8% below 2010 levels by 2030 incl. LULUCF]
Long term goal(s)	
	5.96 $MtCO_2e$ by 2050
	-0.27 net tCO_2e per capita by 2100 including LULUCF

In their INDC (Ministerio de Ambiente, 2015) Costa Rica gives an extremely different interpretation to the NAMA, namely being carbon neutral by 2085, starting in 2021. Indeed, according to the INDC, the definition of carbon neutrality by 2021 is completely redefined and changed to "(achieve) total net emissions comparable to total emissions in 2005". The reasons for the change in the interpretation of the pledge, which in practical terms means a delay in climate action of 64 years, are unclear. Compared to the pledge, however, the INDC is more precise. The INDC provides exact net emission projections for 2021 (10.9 $MtCO_2e$), 2030 (9.3 $MtCO_2e$) and 2050 (5.9 $MtCO_2e$) as well as a per capita net emissions projection of -0.27 tCO_2e by 2100.

Fair share

We rate Costa Rica's 2030 target as "sufficient". The target is in line with effort sharing approaches that focus on responsibility and capability as well as approaches that take capability, responsibility and need together. The "sufficient" rating indicates that Costa Rica's climate plans are at the most ambitious end of its fair contribution. This means it is consistent with limiting warming to below 2°C without requiring other countries to make much deeper reductions and comparably greater effort.

Current policy projections

With currently implemented policies, Costa Rica's emissions levels might increase up to 17 $MtCO_2e$ by 2020 and 21 $MtCO_2e$ by 2030, excluding land use, land use change and forestry (LULUCF). Total emissions—including LULUCF—have remained fairly stable between 1990 and 2010 at levels between 7.8 and 10 $MtCO_2e$. However, Costa Rica has seen an increase in GHG emissions excluding LULUCF since 1990. Until 2010, the last available historic data year, emissions excluding LULUCF doubled from 6 $MtCO_2e$ in 1990 to 12 $MtCO_2e$. The CAT estimates the level of emissions under current policy projections to be overestimated. If Costa Rica's emissions were to remain as stable in the next 15 years, as they did from 1990 to 2010, it would achieve the INDC's 2030 target.

Costa Rica has put in place some policies to reduce GHG emissions. Most of the planned abatement will come from the LULUCF sector; the government intends to make an extensive use of funds from the REDD+ and carbon trade (MINAET, 2009b; MINAET, 2014). Until now, many of the accounting details for programmes like REDD+ in a post-2020 scenario remain uncertain (OECD, 2014).

Beyond LULUCF, the main policies driving mitigation take place in the energy sector, especially transport, and agriculture, with further substantial emissions from the waste sector. Since the implementation of the National Climate Change Strategy (ENCC) in 2008, Costa Rica has been working to design mitigation actions in transportation, energy efficiency and conservation, renewable energy and agriculture (NAMA Database, 2014). Examples of the policies considered include an internal carbon market (the Emissions Reductions Program), a goal to have 100% electricity generated from renewable energy, better agricultural practices, waste management in cities and electric transportation (Ministerio de Ambiente, 2015; REEGLE, 2015).

A national carbon market called the "Emission Reduction Program" (ERPA) is currently under development. Moreover, the VII National Energy Plan 2015–2030, approved on September 14, 2015, supported the continuation of renewable energy development, energy efficiency and low-carbon emission transport. The aspirational goal is to achieve and sustain 100% of electricity generation coming from renewable energy by 2021 (LSE, 2015). In 2013, 88% of electricity was already generated from renewable sources, mainly hydropower (Enerdata, 2015) and Costa Rica already generates 100% electricity during some parts of the year. Further advancements are partially achieved with the National Strategy for De-carbonization of the Economy that promotes hydro, geothermal, wind, solar and biomass as renewable energy sources (REEGLE, 2015).

According to the INDC, most of the emission reductions will come from the increased use of electric transportation, both private and public (i.e. inter-urban train) (Ministerio de Ambiente, 2015). Regarding the agriculture sector, the INDC points out measures to increase access to finance for the procurement of low-carbon technologies, particularly for small and medium size enterprises. Costa Rica also has a National Low-Carbon Livestock Strategy, which aims at replicating pilot projects such as the one in the Livestock NAMA (Ministerio de Ambiente, 2015). Regarding the waste sector, the INDC plans to reduce GHG emissions by enhancing solid waste management in the Metropolitan area(Ministerio de Ambiente, 2015).

Assumptions

Historic emissions

Historical emissions for the years 1990, 1996, 2000 and 2005 were taken from the latest UNFCCC inventory (UNFCCC, 2014). Data from the Third National Communication (MINAET, 2014) was used for 2010. We interpolated for the years in between. Estimates on the emissions sink by LULUCF are lower than before. This is primarily because most of the forests in Costa Rica are mature, which means a lower capacity to remove carbon from the atmosphere.

Pledge and INDC

In the previous CAT analysis, we assumed Costa Rica pledged to carbon neutrality by 2021 as stated in the National Climate Change Strategy (2008), including emissions removals from LULUCF. We project LULUCF emissions removals to reach -4 $MtCO_2e$ by 2021 and -2.88 $MtCO_2e$ by 2030. However, Costa Rica's INDC postponed the carbon neutrality target to 2085 and pledged to keep emissions below 9.37 $MtCO_2e$ by 2030, including LULUCF. (For a detailed description of the projection, we explain how we built the projection in the 'Current policy projection' section below).

Current policy projections

Our current policy projections until 2021, are based on the report "Action Plan for the National Climate Change Strategy" (MINAET, 2011). We calculate emissions excl. and incl. LULUCF for 2011–2021 by interpolating 2010 data from Costa Rica's "Third National Communication" (MINAET, 2014) and the emission data for 2021 in the "Action Plan for the National Climate Change Strategy." The emission growth during the period 2022 to 2030, are in line with the CEPAL's "reference scenario" (CEPAL, 2011). Future LULUCF removals are projected to reach -4 $MtCO_2e$ in 2021 (Action Plan for the National Climate Change Strategy). Beyond 2021 we applied the growth rates from the PES projections in the NEEDS Project (MINAET, INCAE, FUNDECOR, 2010), leading to -2.88 $MtCO_2e$ of removals by 2030.

Sources

CEPAL (2011). Escenarios de emisiones y opciones de mitigation. In: La economía del cambio climático en Centroamérica: Reporte técnico 2011.

Enerdata (2015). Global Energy and CO2 Data.

LSE (2015). Grantham Research Institute on Climate Change and the Environment. The Global Climate Legislation. Costa Rica Country Profile.

MINAET, INCAE, FUNDECOR (2010). NEEDS Project – Options for Mitigation of Greenhouse Gas Emissions in Costa Rica: Towards Carbon Neutrality in 2021, Ministerio de Ambiente, Energía y Telecomunicaciones de Costa Rica; INCAE Business School; Fundación para el Desarrollo de la Cordillera Volcánica Central.

MINAET (2009a). Segunda Comunicación Nacional a la Convención Marco de las Naciones Unidas sobre Cambio Climático, Costa Rica. Ministerio de Ambiente, Energía y Telecomunicaciones de Costa Rica; Instituto Meteorológico Nacional de Costa Rica

MINAET (2009b). National climate change strategy. Estrategia Nacional de Cambio Climático (ENCC) Costa Rica. Ministerio del Ambiente Energía y Telecomunicaciones de Costa Rica

MINAET (2011). Plan de Accion de la Estreategia Nacional de Cambio Climatico (ENCC).

MINAET (2014) Tercera Comunicación Nacional a la Convención Marco de las Naciones Unidas sobre Cambio Climatico, Costa Rica. Ministerio de Ambiente, Energia y Telecomunicaciones de Costa Rica, Intututo Meteorológico Nacional de Costa Rica.

NAMA Database (2014). NAMAs in the Costa Rican coffee sector.

OECD (2014). Planting the Foundations of a Post-2020 Land Sector Reporting and Accounting Framework. Climate Change Expert Group.

REEGLE (2015) Country Profile Costa Rica

Republic of Costa Rica (2010). Costa Rica's pledge to the Copenhagen Accord. Compiled in: Compilation of information on nationally appropriate mitigation actions to be implemented by Parties not included in Annex I to the Convention, UNFCCC (2011)

UNFCCC (2014). GHG emission profiles for non-Annex I countries.

Copyright 2018 Climate Action Tracker Partners | Disclaimer