

Republic of Argentina

First Revision of its Nationally Determined Contribution

1. Background

In accordance with the Decisions 1/CP.19 and 1/CP.20, and taking into account the principles, dispositions and structure of the UNFCCC (United Nations Framework Convention for Climate Change), the Republic of Argentina has presented on October 1st, 2015 its Intended Nationally Determined Contribution (INDC). As from the achievements reached during the twenty first session of the Conference of the Parties (COP 21), in particular the Paris Agreement, the country decided to make a first effort of revision of its INDC, effort that shall continue for the next years. Argentina has signed and ratified the Paris Agreement, submitting the ratification document on September 21st, 2016; therefore this present reviewed contribution shall replace the first version of its NDC (National Determined Contribution) according to paragraph 22nd of the Decision 1/CP.21.

The efforts of Argentina together with all those of the Parties to the UNFCCC are oriented to achieving the objective of the Convention as set out in its article 2, as well as the purpose of the Paris Agreement. Argentina understands that, while it moves forward in the resolution of technical aspects related to the communication of the contributions pursuant to the mandate given by the Decision 1/CP.21, paragraph 28, and in view of the rapid come into force of the Paris Agreement, this is an opportunity to review its contributions to the global efforts on the fight against climate change. Such review is based on what is set out on article 4, paragraph 11 of the Paris Agreement focused on increasing the level of ambition and providing more clarity, transparency and understanding to the contribution, according to decision 1/CP.21, paragraph 27. The efforts of the Parties that were communicated through the NDCs involve both elements of mitigation and adaptation and means of implementation according to article 3 of the Paris Agreement. In this sense, Argentina submits its reviewed NDC, composed of mitigation and adaptation elements, which as well involve implementation means that are needed to increase the proposed ambition.

The reviewed NDC is presented in two different parts. Section 2 presents a new goal of carbon dioxide equivalent emissions resulting from mitigation measures planned to the 2030, as well as the plan for the next years in adaptation and of implementation means. These constitute Argentina's new goal towards 2030. In section 3, in order to contextualize the assumed goal, additional information is provided on its attributes, regarding projected reductions through conditional measures that could be implemented on the near future, and also on the path expected to achieve the goal. This information is submitted solely for information purposes and does by no means integrate the goal; this is information to facilitate its understanding by providing transparency and clarity.

2. Revision of the Nationally Determined Contribution of Argentina - 2016

Argentina shall not exceed a net emission of 483 million tons of carbon dioxide equivalent (tCO₂eq) by the year 2030. The goal shall be achieved through several implementation means throughout the economy, focusing on energy sectors, agriculture, forests, transport, industry and waste.

Argentina presents an adaptation communication according to articles 7.10 and

7.11 of the Paris Agreement, which includes **national circumstances, vulnerability and climate change impact, efforts done and in process, as well as concrete needs** that come up from the national process within the framework of the Climate Change National Cabinet. Likewise, within the framework of article 7.9 of Paris Agreement, Argentina is preparing the design and implementation of a National Adaptation Plan (PNA) before 2019.

3. NDC additional information

3.1 Mitigation goal characteristics

The following information is included in order to optimize the understanding of consistency, comparability, technical viability and policy of the mitigation goal.

Scope and Coverage: The whole national territory¹ including the following sectors: energy², industrial processes, agriculture, cattle, land use change, silviculture and waste. Moreover, it includes all the Greenhouse Gases regarded under the Convention: Carbon dioxide (CO₂), Methane (CH₄); Nitrous oxide (N₂O); Hydrofluorocarbons (HFCs); Perfluorocarbons (PFCs); and sulfur hexafluoride (SF₆).

Methodological approach: An inventory-based approach for the estimation and accounting of anthropogenic emissions of greenhouse gases and the removal of carbon dioxide pursuant to the methodological guidelines of the Intergovernmental Panel on Climate Change (IPCC) of 2006.

Metric: The Global Warming Potential (GWP-100) is used as metric using the values of the IPCC SAR, notwithstanding the possibility of using other metrics in the future.

Uncertainty: The monitoring of reductions in the agriculture, livestock, land use change and silviculture sectors is more uncertain than the other sectors and therefore the projected emissions, reductions, and absorptions by such sectors shall be monitored and eventually reviewed with more frequently. In addition it is planned to enforce the forest monitoring system. Another source of uncertainty is given by the projections of economic growth to the year 2030 and its associated emissions, through which planned emissions reduction are estimated.

Improvements to the contribution submitted in 2015: As result of the INDC revision submitted in 2015, Argentina improved its contribution by planning unconditional mitigation measures that manage to lower their target to 2030 from 570 to 483 million tCO₂eq. The difference of 87 million tCO₂eq- between the original contribution and the reviewed one derives from two principal aspects. Firstly, the change to IPCC 2006 methodology allows the improvement of the inventory quality by avoiding therefore the overestimation of the agricultural emissions, giving a difference of 79 million tCO₂eq. Secondly, the revision of more than 50 unconditional measures and the incorporation of new ambitious measures to the national contribution imply 8 million tCO₂eq of additional reduction.

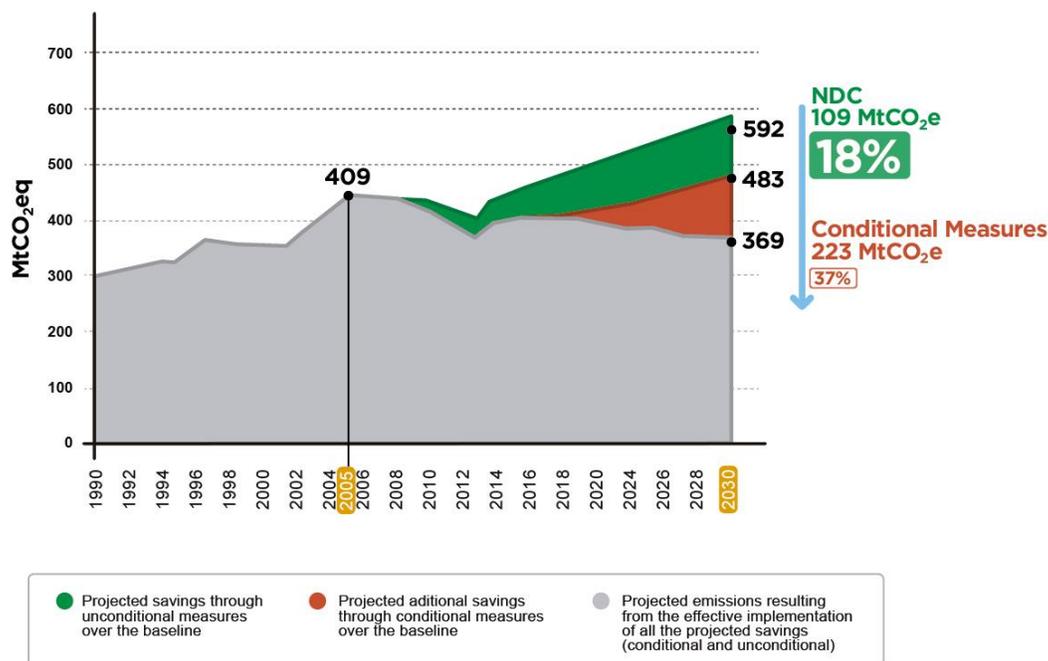
Conditional Measures: Argentina has also calculated the impact of conditional measures, which if jointly implemented could bring emissions to 369 million tCO₂eq for 2030. These measures don't integrate the contribution, but define a future work which shall advance together with international community in order to solve the aspects that lay the foundation of its conditionality in order to include them in a new NDC to be presented in the future. The conditionality of the

¹ The Argentine Republic expresses that information regarding Malvinas Islands, South Georgia and South Sandwich Islands and surrounding maritime areas, is not included as that said part of its national territory is subject to illegal occupation from The United Kingdom of Great Britain and North Ireland and is subject of dispute of sovereignty recognized by successive resolutions of the United Nations and declarations by other international forums and organizations, thus Argentina is in fact prevented from to access that part of the territory.

² Emissions related to aviation and international maritime transport activities are not included

measures have several origins and can be briefed in aspects referred to: a) international funding; b) the support to the transference, innovation and development of technologies (for example; to accurately measure and monitor the reductions and captures obtained); c) the support to the creation of capacities to spread good practices and effectively implement the proposed measures. If all conditional measures were implemented jointly to the unconditional ones, Argentina would reduce a total of 223 million tCO₂eq with respect to the 2030 baseline scenario.

Image 1. Emissions trajectories on the BAU, unconditional and conditional measures scenarios. Argentina 2016



Source: Based on the Second Biennial Update Report of the Greenhouse Gases Inventory (GHGs) of Argentina (2016) and projections of emissions to 2030.

3.2 Fair and ambitious contribution

In order to do an objective evaluation of the justice and ambition of Argentina's reviewed contribution, the following data sources were taken into account: (i) The update of the GHGs inventory recently finished by the Argentine Republic for the year 2014 and (ii) the Emissions Gap Report of the United Nations Environmental Program (UNEP) for 2016. Based on such studies the following indexes were taken into account in order to measure, in relative terms, the values of the following reviewed NDC:

(a) **The participation of Argentina in global emissions compared to its participation in the efforts offered for global reduction at present:** The participation³ of the Argentine Republic in the global emissions of GHGs in 2014 was of 0.7% of the total global emissions⁴. Argentina's reviewed mitigation contribution represents a participation of 2.8% of the country over the total amount of

³ Second Biennial Report Update of the GHGs Inventory of the Argentine Republic, corresponding to the year 2014, pursuant to the methodologic guides of the IPCC 2006.

⁴ Global emissions: 52700 MtCO₂eq. (2014). Source: The Emissions Gap Report (UNEP, 2016).

unconditional reductions informed by the Parties of UNFCCC (sum of submitted contributions)⁵. In such sense, Argentina's reviewed contribution, compared to the unconditional contributions of the rest of the countries, is four times its current participation in the global emissions, thus showing its ambitious level.

(b) Argentina's participation in the global emissions compared to its participation in the needed efforts to achieve the goal of 2°C in the future: If all the unconditional measures accounted in the present NDC were implemented, the contribution of the Argentina to the needed global effort for the year 2030 in order to achieve the goal of maintaining the temperature increase below 2°C regarding preindustrial levels⁶ would be very close to the proportion of its current emissions (0,6%⁷ of the reductions compared to 0,7% of the emissions). This indicator shows the justice of the presented goal, and the reasonability of the decision of continuing with the revision process of the mitigation measures that compose the NDC, in order to adequately contribute to the global effort needed to achieve the climate goals of the Agreement, identifying new actions which shall be duly informed as part of the national contribution presented before the UNFCCC.

(c) Argentina's participation in global emissions, compared to its participation in the needed efforts to achieve the goal of 2°C in the future if it were to implement all conditional planned measures: If all conditional measures included in the NDC were implemented, the contribution of Argentina to the needed global effort for 2030 of achieving the goal of keeping the temperature below 2°C regarding preindustrial levels⁸ will almost duplicate its proportion of current emissions (1,3% of the reductions compared to the 0,7% of the emissions). That would demonstrate its capacity of contributing with the necessary global ambition through the implementation of the identified conditional measures⁹.

3.3 Adaptation component

Argentina is including in its contribution aspects linked to adaptation, pursuant to section 7.10 and 7.11 of Paris Agreement. It's worth mentioning that, pursuant to section 7.9 of the Paris Agreement, Argentina shall develop and implement a PNA for the year 2019. The PNA, which will have subnational and sectorial chapters, shall serve to prioritize adaptation actions at national level, and to generate a conceptual and institutional framework that shall allow the design and implementation of the local adaptation plans by other actors.

⁵ The 2,8% is calculated based on the relation between the reduction informed by Argentina in this reviewed mitigation contribution (109 MtCO₂eq.) and the added value of reductions proposed by the Parties in its INDCs (3900 MtCO₂eq.) obtained from the report "The emissions gap report" (UNEP, 2016)

⁶ 17600 MtCO eq. Source: The Emissions Gap Report (UNEP2016).

⁷ The average of 0.6% rises from the relation between the reviewed unconditional mitigation contribution proposed by Argentina (109 MtCO₂eq.) which includes all the unconditional measures, and the needed reductions (17600 MtCO₂eq.) estimated by UNEP in order to achieve the temperature goal of Paris Agreement. Source: The Emissions Gap Report (UNEP2016).

⁸ 17600 MtCO eq. Source: The Emissions Gap Report (UNEP, 2016).

⁹ The average of 1.3% rises from the relation between the reviewed conditional mitigation contribution proposed by Argentina (223 MtCO₂eq.) which includes every conditional and unconditional measures, and the necessary reductions (17600 MtCO₂eq.) estimated by UNEP in order to achieve the temperature goal of the Paris Agreement.

3.3.1 Climate Change national circumstances, vulnerability and impacts

With a total estimated of 43,590,000 population to the year 2016, spread over 23 provinces and the Autonomous City of Buenos Aires, Argentina has a 92%¹⁰ population that lives in urban zones, figure that is over the regional and global average. At the same time, the country has a huge biodiversity, with different geomorphological, climatic and edaphic characteristics, situation that brings 18 ecoregions, from which 8 have been classified as high priority for conservation.

Recent studies showed that during the period 1960-2010 the average temperature in most of Argentina increased around 0.5°C, reaching almost 1°C in some areas of the Patagonia, and registering an increase of the days with heat waves and a reduction in the days with frost¹¹. Regarding rainfall, the largest increases occurred in the East of the country, causing floods of a large socio-economic impact. In semiarid areas, it was registered a reduction on the rainfalls in the mountain areas and a reduction in the flow of the rivers in the Cuyo region.¹²

Regarding the potential impacts of climate change for the rest of the XXI century, it is important to note that a rise on the average temperature between 0.5 and 1°C in almost all the country around the middle of the century is forecasted. That would imply an acceleration of the warming observed on the last 50 years. Regarding the average rainfall, large variations aren't expected for the upcoming decades. Nevertheless, consistent with what has been recently observed, an increase on the frequency of intense rainfall events is forecasted.¹³

Throughout the whole century, an acceleration of the desertification processes is expected, with less efficiency on the use of water on the ecological systems, lower productive capacity, soil and nutrient losses and displacement or reduction on the distribution of some species.¹⁴

Almost all the glaciers on the Patagonic Andes located between 37-55 °S have been retreating during the last decade because of temperature increase and less rainfall in some cases. It is also important to note that larger changes on the composition and dynamic of the region ecosystems are expected, mainly because of more intense and/or prolonged drought periods.¹⁵

Regarding the maritime coast of the country where numerous activities take place and implying a highly dynamic system, climate change could affect it because of an increase on the water temperature, changes on the circulation of sea currents and a rise on the average level of the sea.¹⁶

The vulnerability regarding climate change becomes highly relevant regarding the agricultural activity because of its prominent place on the economic development of the country and its fundamental role on the production and supply of food on a global scale. The intensification of extreme events (intense rainfall, floods, droughts and heat waves) widens the year-to-year variability of production and compromises the stability of the system, producing a high negative impact, both economic and social.¹⁷

When looking at the energy system, the electricity and natural gas demand may be affected significantly because of climate change as there may be changes on the extreme thermic conditions. The high electric demand may cause severe problems to the distribution network on highly-populated urban centers. The hydroelectric generation could also face significant impacts

¹⁰ World Bank. World Development Indicators. Urban population in Argentina. Available at <http://datos.bancomundial.org/indicador/SP.URB.TOTL.IN.ZS>.

¹¹ Third National Communication, p.99. (<http://unfccc.int/resource/docs/natc/argnc3s.pdf>).

¹² Ibid, p.101

¹³ Ibid, p.105

¹⁴ Ibid, p.113

¹⁵ Ibid, p.120

¹⁶ Ibid, p.125

¹⁷ Ibid, p.127

because of the river streams, as well as the infrastructure of the transport network because of severe winds.¹⁸

The risk of the transmission of dengue fever and other diseases caused by the same vector is elevated all year long in the north and northeast of Argentina, while in the center of the country the risk is focused on summer. Because of global warming, intensification on the transmission of diseases on the current endemo-epidemic areas is expected.¹⁹

For the tourism sector, it is expected that the general demand won't be affected by climate change on the near future. Nevertheless, it is likely that some destinations will be affected, with tourists travelling to other areas according to their seasonality.²⁰

3.3.2 Current efforts and adaptation needs

The process of creating a PNA has started within the National Climate Change Cabinet. The plan will be based on the priorities identified by all sectors, jurisdictions (represented by the Federal Council of the Environment –COFEMA- and the participation of municipal representatives) and relevant actors of the civil society, academia and the private sector.

During 2016, adaptation meetings with representatives from the national government were carried out (with the participation of the Ministries of Agro-Industry, Energy, Health, Science, Technology and Productive Innovation, Defense, Security, Finance and Public Finance, Interior and Transportation). A process to review the current policies and programs of public and private investment on adaptation has started, with meetings on the Extended Cabinet with the participation of all relevant actors.

On this first phase of the review process that will continue in the future, a set of initial needs regarding adaptation were identified:

-Investigation and development area

- Widening of the monitoring networks, strengthening of the early alert systems and the health climate services, food security, water, energy and reduction of the disaster risks
- Boosting the investigation and development (I+D) and technologies projects as well as the good productive practices.
- Mapping the vulnerabilities and climate risks as a diagnosis tool of the state of play and support of the management of adaptation to climate change.
- Economic quantification of the climate change impacts and the implementation of adaptation measures.

-Institutional strengthening area

- Capacity building on human resources and improvement on the inter-institutional coordination for planning and management on adaptation to the climate change.
- Creation of multidisciplinary teams to support the diverse ongoing or planned initiatives, with the objective of supporting the processes of land management.

-Priority activities to reduce vulnerability

- Using finance instruments or market risk transfer and production of the agricultural sector
- Development of structural and non-structural works to prevent floods, droughts and heat waves.
- Strengthening of initiatives that support the recovery and rehabilitation of lands, including the adaptation based in ecosystems.

-Awareness and education

¹⁸ Ibid, p.131

¹⁹ Third National Communication, p.137. (<http://unfccc.int/resource/docs/natc/argnc3s.pdf>).

²⁰ Ibid, p.140.

- Creation of citizen awareness and move forward on the communication strategy such as broadcast channels, quality of messages and adaptation to the new technologies
- Development of formal and non-formal education programs on impacts, vulnerability and adaptation to the climate change.

After the creation of the Direction of Adaptation in December 2015, Argentina has started to work on some of these needs such as the development of a virtual platform to visualize climate risks, a step between the diagnosis and the decision making process. With the objective of strengthening the information and knowledge systems, sectorial studies are being carried out on impact, vulnerability and adaptation that will contribute to the planning and implementation of measures and policies of adaptation on a local, provincial and national level. In that regard, it's important to highlight that the country is currently implementing two adaptation projects on the agricultural sector (for a total US\$9.936.817) with funds provided by the Adaptation Fund. Those projects allow funding concrete measures on adaptation for highly-vulnerable communities. In that regard, the projects are linked: in the Northeast of Argentina, with the adaptation and resilience of family agriculture to climate change impacts and its variability, and in the Southwest of Buenos Aires province, with climate resilience and sustainable land management.

The upcoming table summarizes the initiatives and actors identified in 2016 by the National Climate Change Cabinet. It can be considered the ground work for the development of the National Adaptation Plan.

Figure 2: Measures and proposing institutions²¹

Adaptation	
Proposals discussed on the adaptation table of the national cabinet	Contributions by actors
Generation of climate information. Research and development	<ul style="list-style-type: none"> • National public agencies: MinCyT, Agro-industry, MAyDS • Provinces: Tierra del Fuego, San Juan • NGOs/associations: AVINA+ACDI+ProAdapt
Vulnerability analysis, identification of climate risks and planning	<ul style="list-style-type: none"> • National public agencies: YPF, Transport • Provinces: CABA, Córdoba, Buenos Aires, Entre Ríos, Tucumán, Santiago del Estero, Tierra del Fuego • Universities: UNGS – UMET • NGOs/associations: Dialogo Ciudadano, CIPPEC, CISP, CEADS
Strengthening and widening of the early alert systems and monitoring networks	<ul style="list-style-type: none"> • National public agencies: SMN, MAyDS,, Agro-industry, MinCyT • Provinces: CABA, Jujuy, Corrientes, La

²¹ Acronyms. MinCyT: Science, Technology and Productive Innovation Ministry. MAyDS: Environment and Sustainable Development Ministry. ACDI: Cultural Association for the Integral Development. UNGS: General Sarmiento National University. UMET: Metropolitan University for the Education and Work. CIPPEC: Center for Implementation of Public Policies for Equity and Growth. CISP: Comitato Internazionale per lo Sviluppo dei Popoli. CEADS: Argentine Business Council for the Sustainable Development. SMN: National Weather Service. USAU: Salvador University.

	<p>Rioja, Tierra del Fuego, Córdoba, Santa Fe, Entre Ríos, Tucumán, Santiago del Estero</p> <ul style="list-style-type: none"> • NGOs/associations: AVINA, ACDI, ProAdapt
Integral land management	<ul style="list-style-type: none"> • National public agencies: APN, MAyDS, Agro-industry. • Provinces: Chaco, CABA, Corrientes, Córdoba, Formosa, La Rioja, Santa Fe, Santa Cruz, Tierra del Fuego, Tucumán, Santiago del Estero, Río Negro, Jujuy, Salta, Entre Ríos, Mendoza • Municipalities/communes: Crespo, Las Flores, Guaminí, Herrera, Armstrong, Chañar Ladeado, Malabrigo, Camilo Aldao, Daireaux, Moreno, Caseros, Paraná, Ciudad de Mendoza, Potrero de Los Funes. • NGOs/associations: Fundación Vida Silvestre, CISP
Vulnerability reduction	<ul style="list-style-type: none"> • National public agencies: Agroindustry, Transport, Energy, MAyDS, SMN, MINCYT • Provinces: Salta, Tierra del Fuego, Buenos Aires, Santiago del Estero, San Juan, Mendoza, Misiones, Córdoba, Jujuy, Entre Ríos • Private sector: UpGrid • NGOs/associations: Fundación C40
Identification and promotion of good practices and tools for adaptation	<ul style="list-style-type: none"> • National public agencies: Agro-industry, MAyDS • Provinces: Río Negro, Jujuy • NGOs/associations: AVINA+ACDI+ProAdapt, CTA-A, Fundación C40
Institutional strengthening and capacity building	<ul style="list-style-type: none"> • National public agencies: MinCyT, SMN, MAyDS • Provinces: Jujuy, Misiones, Chaco, Córdoba, CABA, Tierra del Fuego, Buenos Aires, Entre Ríos, Tucumán, San Juan • Municipalities/communes: Daireaux, Totoras • Universities: USAL • NGOs/associations: AVINA+ACDI+ProAdapt
Education and communication	<ul style="list-style-type: none"> • National public agencies: SMN

	<ul style="list-style-type: none"> • Provinces: CABA, Santiago del Estero, Tucumán • Universities: UNGS – UMET • NGOs/associations: AVINA+ACDI+ProAdapt, ONG Proyectar- Fundación Nehuen – Bioproyectual, CIPPEC
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3.4 Improvements on the institutionalism of climate change

After the change of administration at the end of 2015, climate change has taken a new dimension through a strategic approach, with a strong political support and a new commitment, considering the global needs to tackle one of the largest challenges the humanity now faces.

The Environment and Sustainable Development Ministry was created in December 2015, strengthening the institutional structure for climate change governance, with a Secretary, an Under-Secretary and a National Direction with specific competence on the issue. Starting on March 2016, the National Cabinet of Climate Change became fully functional (Decree 891/2016), grouping 12 ministries. This decision allowed having an instance of participation, review and high-level political validation to agree on measures over which the reviewed NDC was built upon.

The cabinet coordinates its work in thematic sectorial meetings (energy, agriculture and forests, waste, transport and industry) as well as in transversal meetings (awareness and education, adaptation and finance). It also includes a formal instance of participation for the provinces through COFEMA and non-governmental organisms (NGOs), work associations, private, academic and scientific sectors and municipalities through the Extended Table of the National Cabinet of Climate Change.

The Cabinet agreed to present the result of the work carried out throughout the year as a revised contribution, without interrupting the pending tasks to continue increasing the ambition and improving the inventory and monitoring systems, to be presented in the future under the form of a new NDC.

The current revision of the contribution incorporates the results of the review of the measures of the national contribution, as well as the results of the 2014 second Biennial Update Report (BUR), done with the IPCC 2006 methodology. That allowed improving the methodological consistency of the NDC by showing, among other things, the particularities of the agricultural practices used in Argentina.

At the same time, the government worked alongside the National Congress for the fast approval of the Paris Agreement, accomplishing a wide support by the majority of the lawmakers of all the political parties (Law 27.270 passed on September 1st 2016). By depositing the ratification instrument on September 21, 2016, Argentina contributed to the rapid entry into force of the Agreement.

3.5 Use of markets

On its article 6 paragraphs 2 and 4, the Paris Agreement makes a reference to a cooperative focus that involves the use of mitigation results transferred internationally, as well as mentioning the establishment of a mechanism to contribute to the mitigation of greenhouse gasses among the parties of the Agreement. In this regard, any transfer of units of emissions reductions reached in the Argentine territory must have the authorization of the national government. All emissions reductions in the national territory will be accounted for the accomplishment of the goal of the NDC, except a disposition that specifically says otherwise.

Acronyms

COP21: Twenty-first Conference of the Parties

UNFCCC: United Nations Framework Convention on Climate Change

INDC: Intended Nationally Determined Contribution

NDC: Nationally Determined Contribution

tCO₂eq: Tons of carbon dioxide equivalents

PNA: National Adaptation Plan

IPCC: Intergovernmental Panel on Climate Change

GWP: Global Warming Potential

UNEP: United Nations Environment Program

GHG: Greenhouse gasses

COFEMA: Federal Council of the Environment

NGOs: Non-governmental organizations

BUR: Biennial Update Report