Argentina's Second Nationally Determined Contribution

Ministerio de Ambiente
y Desarrollo Sostenible
Argentina

Secretaría de Cambio Climático,
Desarrollo Sostenible e Innovación

Date of Publication: DECEMBER 2020

To cite this document: MAyDS, 2020. Argentina's Second Nationally Determined Contribution. Ministerio de Ambiente y Desarrollo Sostenible, República Argentina.

Table of contents

Prologue

The pandemic has forced us to reflect on the importance of human health and its interconnection with our planet's health. Climate change is a reality that is affecting humankind as a whole and thus calls for the immediate and coordinated action of the world's leaders.

Rebuilding the world after the pandemic is the opportunity we have to move forward in that direction, with international cooperation and multilateralism unavoidably playing a leading role. "Rebuilding better" is the slogan that drives us towards comprehensive and sustainable development, in the framework of a fair transition allowing us to get back on our feet and be better when we exit this crisis.

The Argentine Republic reaffirms its commitment to the Paris Agreement, in the light of science, and adopts climate change as a permanent State policy. Therefore, and despite the economic and social situation stemming from unsustainable indebtedness and the recession due to the COVID-19 pandemic, we have decided to bring forward to 2020 the presentation of the Second Nationally Determined Contribution.

Our country pays a high price for the impact of climate change on its territory and social and productive structures, and makes great efforts through mitigation and adaptation actions, totalling an estimated amount of USD 15 billion, with international funding. Although ambitious, it does not suffice. Greater commitment and cooperation of the most developed countries is imperative to increase these funds.

With true conviction, we undertake the following commitments that will guide Argentina's climate policies and actions in forthcoming years:
Firstly, and in response to a call to enhance climate ambition, with a view to 2030, we have defined a goal to curb greenhouse gas emissions to 26% below the NDC established in 2016. Additionally, this new Contribution includes the Adaptation Communication, reinforcing the importance of this issue for countries like Argentina.

Secondly, we are committed to submitting our new long-term low emission development strategy, with a view to achieving carbon-neutral development by 2050.

Thirdly, in fulfilment of the National Law on "Minimum Standards for Global Climate Change Adaptation and Mitigation", we will work through our National Climate Change Cabinet (known by its Spanish acronym GNCC) to outline a clear and ambitious National Adaptation and Mitigation Plan to guide the necessary actions and agreements to honour our commitments.

Let us jointly face the challenge of promoting a fair, ambitious, and decisively inclusive transformation as a way of "rebuilding better", aware of our individual and collective responsibility towards the environment.

We will work on a solidarity-based design of rebuilding packages that envisage means of implementation considering the common but differentiated responsibilities, genuinely grounded on each country's circumstances.

Within this same spirit of solidarity, let us promote a high-level dialogue on equitable access to means of implementation, namely financial resources, transfer of technology and capacity-building for achieving climate-related commitments.

As Pope Francis says, we should open our eyes and our hearts to act with renewed sensitivity. Our planet is saying "enough". We must undertake our historical responsibility for shaping a better world, rebuilding on sound pillars of environmentally sustainable, innovative, solidarity-based, and inclusive development.

Alberto Fernández
President of the Argentine Republic

This new Nationally Determined Contribution (NDC) is a commitment to increase climate ambition, which reasserts our firm decision to achieve a fair transition towards comprehensive and sustainable development. The Argentine Republic thus expresses its willingness to contribute to climate action with determination and urgency.

We need renewed awareness. Climate change is a distinct event that translates into a reduction of water flow in the Parana River basin (the main MERCOSUR waterway), the loss of agricultural production, and record temperatures of 20°C in Antarctica. This is evidenced in strong droughts in different regions across the country, more forest and grassland fires, soil desertification, and an increase in severe climate events, and appearance of zoonotic diseases linked to deforestation, destruction of natural habitats, among other signals of depletion of a development model that disregards persons and goods.

With a view to taking good care of our common home and protecting our people, we cannot ignore climate change or its consequences that call for specific actions by the State. Therefore, this second NDC includes different implementation pillars, such as the promotion of energy transition, sustainable transport, preservation of ecosystems (forests, wetlands, oceans, among others), sustainable productive transformation (in agriculture, livestock, industry, and services) and improvement of comprehensive waste management.

Likewise, in order to adapt to the new climate scenarios, the proposal is to reinforce awareness-raising, capacity-building and implementation of measures to reduce the vulnerability of communities, infrastructure and production systems.

The goal is to not go beyond 349 megatons of carbon dioxide equivalent by 2030. Honouring this commitment will be a significant challenge, which will call for collectively building a long-term country vision targeted to the common good.

This NDC was prepared by the National Climate Change Cabinet (GNCC), a formal inter-institutional working space targeted to outlining and designing public policies on climate change by strategically coordinating among the different national government, sub-national government, and civil society stakeholders.

We need to rethink the way we do things. Only through fraternal dialogue can we ensure a fair transition that mainstreams the environment in development and ensures that no one is left behind.

This challenge we undertake requires a change in lifestyles, the adoption of sustainable production and consumption practices, the redefinition of our bonds with nature considering we are a part of it, and innovation to better rebuild our country and our planet ensuring the necessary conditions for our people's progress.

Juan Cabandié
Minister for the Environment and Sustainable Development

Executive summary

The Argentine Republic has a representative, republican and federal form of government in place. It is made up of 23 provinces and the Autonomous City of Buenos Aires (CABA). Its total area is 3,761,274 km^2, of which 74% is mainland and 26% is accounted for by Antarctica (including the South Orkney Islands) and the southern islands (Malvinas, South Georgia, and South Sandwich)[1]. Likewise, Argentina has a maritime area[2] of 6,683,000 km^2, besides its mainland. In 2020, its total population is estimated to be in the order of 45 million inhabitants, mostly concentrated in the country's main urban centres.

The country is endowed with diverse and abundant natural resources. Its vast stretches of fertile land have historically determined the development of agriculture and livestock production chains that support food and biofuel production. Moreover, it is rich in energy resources, among which are hydrocarbons, hydraulic, wind and solar power, besides uranium deposits.

Heterogeneity in terms of resource availability is correlated to the country's productive structure, with a significant insertion of different export sectors —particularly agri-food— in the global and regional value chains. It is worth mentioning that the size of the country's mainland entails a significant demand for long-haul transport, both for passengers and freight. Thus, the national circumstances as to its geography, climate, demography and institutions account for its main economic activities and land use planning.

All the above-described circumstances translate into a given matrix of emissions by sources and removals by sink that, in 2016, entailed net emissions totalling 364 million tons of carbon dioxide equivalent ($MtCO_2e$), as reflected in the National Greenhouse Gas Emission Inventory.

Argentina is a highly vulnerable country that needs to adapt, since it has a great diversity of areas susceptible to the effects of climate change. For instance, its low-lying coastal areas; arid and semi-arid areas; those with forest cover and exposed to forest deterioration; disaster prone areas; areas exposed to drought and desertification; and those with fragile ecosystems, including those in the mountains.

Argentina commits to an absolute and unconditional goal, applicable to all sectors of the economy, to not exceed the net emission of 349 $MtCO_2e$ in 2030. Furthermore, for that same year, there will be a reduction in the territorial, socio-economic and environmental vulnerabilities, an increase in the capacity to adapt and a strengthening in the resilience of the different sectors through awareness-raising and capacity-building measures, allowing the country and its population to respond in solidarity to the urgent challenge of protecting the planet.

This Second Nationally Determined Contribution (NDC) reflects a balanced treatment and improvement in the basic pillars to fight against climate change. In this regard, the Argentine Republic increases its commitment to the mitigation goal submitted in 2016, incorporates an adaptation goal in accordance with article 7.1 of the Paris Agreement, and mentions the need to have enough means of implementation to face the challenge of climate change, in line with its commitment to promote comprehensive and sustainable development within the framework of a fair transition.

The new goal is ambitious, since it is equivalent to a total reduction of 21% in emissions by 2030 compared to the maximum historical level of emissions reached in 2007[3],

[1]The Malvinas Islands, South Georgia and South Sandwich are a part of Argentina's territory. Since they are illegally occupied by the United Kingdom of Great Britain and Northern Ireland, there is a sovereignty dispute over them between both countries, recognized by the United Nations General Assembly, its Special Decolonization Committee and other international organizations.

[2]Includes the territorial sea, exclusive economic zone and continental shelf beyond 200 nautical miles.

[3]Government Secretariat for the Environment and Sustainable Development (SGAyDS) (2019). Tercer Informe Bienal de Actualización de la República Argentina a la CMNUCC (p. 127). Ciudad Autónoma de Buenos Aires (CABA), Argentina. Available at: link. Available at: link

and a reduction of 27.7% compared to the previous NDC. Likewise, and in compliance with article 4.4 of the Paris Agreement, this goal is absolute, unconditional and applicable to all sectors of the economy.

This Second NDC is fair and equitable, whereas the country would have an 0.9% share of global emissions[4] in 2030. Additionally, in this Second NDC, efforts have been made to strike a balance in addressing mitigation, adaptation and means of implementation, establishing synergies among these elements. Regarding transparency, and in fulfilment of paragraph 4.8 of the Paris Agreement and paragraph 7, Decision 4/CMA.1, improvements have been made by submitting the necessary information on Clarity, Transparency and Understanding.

Towards 2030, the Argentine Republic will undergo an energy transition, focusing efforts on promoting energy efficiency, renewable energies and distributed or on-site generation. During this period, natural gas will be used as a transition fuel. New nuclear and hydroelectric plants will have been commissioned, and a hydrogen production chain will have been developed. For the promotion of sustainable transport systems, policies derived from the Avoid-Shift-Improve approach will have been implemented, particularly promoting energy efficiency and a greater use of natural gas, hydrogen, electricity, and biofuels. Ecosystem protection policies (for forests, wetlands, oceans, among others) will have been strengthened. In forestry, deforestation will have been drastically reduced and cultivated forests will have been boosted. On the other hand, livestock and agriculture will have increased their yields due to the use of new technologies based on the knowledge economy, the diversification of production systems and practices, thus increasing production without any significant expansion of the effective area of cultivated land. In the industrial and services sector, a structural change will have been implemented for sustainable production, in coordination with the private sector. Finally, the necessary infrastructure will have been generated so that comprehensive solid waste management is appropriately carried out, within a framework of innovative practices, using circular economy as one of the available tools, among others, to contribute to the achievement of sustainable development.

The Second Adaptation Communication is submitted through this NDC. It is therein established that adaptation capacity will be increased, strengthening resilience, and reducing vulnerability in the different social, economic and environmental sectors. To achieve the above, 35 adaptation measures are proposed, divided into cross-cutting and sectoral measures that prioritize vulnerable communities and social groups, and mainstream the gender perspective and intergenerational equity.

The commitment undertaken prioritizes poverty eradication by promoting a fair transition, addressing the needs of the whole of the population to ensure comprehensive and sustainable development, without affecting future generations.

Along these lines, the Second NDC spells out 17 guiding principles for the design, implementation and monitoring of all national adaptation and mitigation actions:

- United Nations 2030 Agenda and Sustainable
- Development Goals
- Federalization
- Participation
- Human rights
- Just transition
- Equity
- Gender
- Interculturality
- Health
- Community-based adaptation
- Comprehensive risk management
- Innovation, science and technology
- Environmental education
- Ecosystem-based adaptation
- Energy security
- Food security
- Transparency, accuracy, comparability, consistency, and completeness.

Intra and inter-institutional coordination, as well as public participation, were core elements in the process for preparing this

[4] United Nations Environment Programme (2019). “Emissions Gap Report 2019”, (p. 11) Available at: link

Second NDC. This document resulted from the joint work of 15 WG within the national public administration, federal coordination groups and working meetings with different sectors of society that, coordinated by the National Climate Change Cabinet (GNCC), led to achieving the necessary consensus for the collective construction of a 2030 vision for the Argentine Republic.

On the other hand –and taking into account national circumstances and capacities– access to means of implementation is essential so as to achieve inclusive economic growth within the framework of sustainable development and, at the same time, deepen and accelerate the fight against climate change. In this regard, although the implementation of this NDC is not contingent upon international support, Argentina believes that the support developed countries can provide to fulfill its national ambition will bring about significant global benefits. Therefore, this Second NDC includes an initial analysis and prioritization of the international support needed.

Finally, domestic follow-up and monitoring of progress made regarding the Second NDC is considered essential to achieve the effective implementation of climate action, both nationally and globally.

It should be recalled that, as established in article 4.9 of the Paris Agreement, and pursuant to Law No. 27520 on Minimum Standards for Global Climate Change Adaptation and Mitigation (Law on Climate Change), Argentina's Second NDC will be updated every five years, following a process of continuous improvement concerning accuracy, transparency and soundness of the information related to climate change policies.

Compliance with this Second NDC thus becomes a milestone on Argentina's path towards a fair, resilient, sustainable, supportive, inclusive, and innovative transition, in which none of its citizens is left behind. Along these lines, and with a mid-century view, the country will submit its long-term low-emission and resilient development strategy at the next Conference of the Parties to be held in Glasgow in 2021.

Introduction

The Argentine Republic has participated actively and uninterruptedly in international negotiations on environmental matters in general, and particularly those related to climate change. In this regard, through Law No. 24295, enacted in December 1993, our country approved the United Nations Framework Convention on Climate Change (UNFCCC) as a non-Annex I country. Along those same lines, Law No. 25438 of June 2001 approved the Kyoto Protocol, whilst the Paris Agreement was adopted by Law No. 27,270, in September 2016.

In October 2015, the Argentine Republic submitted its Intended Nationally Determined Contribution (INDC). According to UNFCCC principles, provisions and structure; Articles 3, 4, 7.10, 7.11 and 13 of the Paris Agreement; and the provisions of Decisions 1/CP.19, 1/CP.20, 1/CP.21, 1/CP.24, 4/CMA.1, 9/CMA.1 and 18/CMA.1, the INDC was revised and updated in 2016, and submitted within the framework of the 22nd Conference of the Parties (COP 22) in Morocco, in compliance with the requirements of paragraph 24, Decision 1/CP.21. In that updated version, Argentina established an absolute goal of not exceeding the net emission of 483 MtCO2e in the year 2030, increasing its level of ambition and transparency with respect to its first presentation. Moreover, as a part of this NDC, the First Adaptation Communication was submitted.

Taking into consideration the main elements spelled out in Article 2 of the Paris Agreement, this Second NDC of the Argentine Republic is structured to include adaptation, mitigation, and the necessary means of implementation, as well as monitoring, evaluation and updating mechanisms. Likewise, and for the purpose of greater contextual clarity, additional information is provided on the country's national circumstances and the vision for development by 2030.

In response to the call for increasing climate ambition, in this Second NDC, the Argentine Republic presents a new absolute mitigation goal for the year 2030, expressed in millions of tons of carbon dioxide equivalent (MtCO2e) that is supplemented by an adaptation goal, to provide a comprehensive response to the climate crisis.
For greater clarity, this Second NDC includes the necessary information to facilitate Clarity, Transparency and Understanding, as established in Decision 18/CMA.1, and the Second Adaptation Communication, pursuant to the provisions of Articles 7.10 and 7.11 of the Paris Agreement.

National circumstances

Country characterization

The Argentine Republic has a representative, republican and federal form of government in place. It is made up of 23 provinces and the Autonomous City of Buenos Aires (CABA). Its total area is 3,761,274 km², of which 74% is mainland, and 26% is accounted for by Antarctica (including the South Orkney Islands) and the southern islands (Malvinas, South Georgia and South Sandwich)[5]. In addition, Argentina has a maritime area[6] of 6,683,000 km². Due to the size of its territory, temperatures vary greatly, from warm weather in the north to cold conditions in the south and in the heights of the mountainous areas and the Andes Cordillera. It has a great biodiversity —currently threatened by the climate crisis— divided into 18 ecoregions,for which conservation is a high priority.

The country has a broad maritime area with great hydrological and geomorphological complexities, offering different habitats for a great variety of species. The del Plata basin, the second most important in South America given its geographical extension and river flows, is part of the country and provides important ecosystem services and fishery resources of commercial interest that are relevant to global fisheries.

As of 2020, the Argentine Republic has an estimated population of 45 million inhabitants, 49% male and 51% female[7], with an annual growth rate of 0.958%[8]. The country is home to 26 indigenous ethnic groups that, together with the Afro-descendants, accounted for 2.71% of the population in 2010[9]. 92% of the population lives in urban areas[10], and 39% in the Buenos Aires Metropolitan Region[11].

In 2019, the country had a Human Development Index of 0.714, adjusted for inequality[12]. In 2020, the population below the poverty line by income amounted to 40.9%, with 10.5% of the population living in abject poverty[13]. In both groups, the majority is children between 0 and 14 years old[14].

The Argentine Republic has abundant and diverse natural resources. Its large stretches of fertile land and the development of agricultural and livestock production chains support food and biofuel production. Likewise, its long maritime coastline and rich continental waters allow the development of the fishing industry. It also has significant reserves of gas, minerals and strategic metals, necessary for the transition to a low-carbon economy based on renewable energy generation, affordable energy supply and sustainable transport.

Due to its geography and climate characteristics, Argentina has a high potential for renewable energy generation, since it has good radiation levels in the northwestern region and appropriate winds in Patagonia, plus

[5]The Malvinas Islands, South Georgia and South Sandwich are a part of Argentina's territory. Since they are illegally occupied by the United Kingdom of Great Britain and Northern Ireland, there is a sovereignty dispute over them between both countries, recognized by the United Nations General Assembly, its Special Decolonization Committee and other international organizations.

[6]Includes the territorial sea, exclusive economic zone and continental shelf beyond 200 nautical miles.

[7]INDEC. Proyecciones nacionales. Población estimada al 1 de julio de cada año calendario por sexo. Total del país. Años 2010-2040. Available at: link

[8]INDEC. Proyecciones nacionales. Tasa anual de crecimiento total, crecimiento natural, natalidad, mortalidad y migración neta. Total del país. Período 2010-2040 (2020).

[9]Own calculations based on INDEC (2010). Grupos poblacionales (Population Groups). Available at: link

[10]Economic Commission for Latin American and the Caribbean (ECLAC). Population Division (CELADE) (2017). Argentina. Estimaciones y proyecciones de población a largo plazo. 1950-2100. Revisión 2017. Available at: link

[11]Ministry of the Interior, Public Works and Housing - (2018). Plan Estratégico Territorial Argentina Urbana, p. 25.

[12]United Nations Development Programme (UNDP) (2019). Panorama general. Informe sobre Desarrollo Humano 2019 (2019 Human Development Report), p. 39. Available at: link

[13] INDEC (2020). Encuesta Permanente de Hogares. Incidencia de la pobreza y de la indigencia. Resultados del primer semestre de 2020. Available at: link

[14] INDEC (2020). Encuesta Permanente de Hogares. Incidencia de la pobreza y de la indigencia. Resultados del primer semestre de 2020. Available at: link

a significant potential in terms of hydrogen production.

Gross Domestic Product (GDP) per capita was USD 12,069 in 2018, USD 9,962 in 2019, and USD 8,317 in the first two quarters of 2020[15].

The country's productive structure is characterized by its heterogeneity and diversity. Within it, it is worth noting the insertion of export-oriented sectors in the regional and global value chains, particularly agri-food. The main domestic economic sectors are industry —especially related to food processing— followed by services, transport, communications, real estate activities and agriculture.

In turn, foreign trade is strongly led by the export of primary products and manufactures of agricultural origin. According to 2019 figures, the main exporting sectors were oilseeds (29% of the total share), grain (15.5%), automotive (10.9%), oil-petrochemical (7.8%), and metal mining (7.8%)[16].

In the domestic services sector, it is worth highlighting the financial sector, with recent developments based on knowledge and innovation and a high component of new technologies, besides the international expansion of the tourism sector as a generator of foreign exchange.

It is also worth noting that the methodology used for measuring GDP does not include Domestic and Unpaid Care Work (known by its Spanish acronym TDCNR). In this regard, based on the analysis carried out by the National Directorate on Economy, Equality and Gender, it was calculated that the contribution of TDCNR to GDP is approximately 15.9%[17].

Current situation: Covid-19 and public debt

The year 2020 has been a particularly complex year for the country, as it suffered the impact of the COVID-19 pandemic within the framework of a recession that began in 2018, aggravated by a strong external debt. By the third quarter of 2020, the national economy accumulated a drop in GDP of 11.8%[18], a situation that affected social and employment indicators.

Faced with this situation, the national government prioritized the protection of the life and health of the population, strengthening the health system through investments in the sector. At the same time, assistance policies were deployed, for companies and individuals, consistent with the heterogeneity of the Argentine labor market, in which formal and informal sectors coexist, with asymmetries in income distribution.

The Argentine Republic faced the double challenge of addressing the pandemic whilst carrying out a process of sovereign debt restructuring[19]. Within this framework, and despite the difficult economic and social situation, the national government decided to bring forward the submission of the Second NDC —scheduled for 2021— to the year 2020, in order to contribute to global climate action and align economic recovery packages with the commitments established in the Paris Agreement.

Health and education

The Argentine health system provides universal coverage, which means that whoever resides or is in transit in the country can receive free assistance at public health care centers. Infant mortality per 1,000 live births is 9.3; a significant decrease was achieved between 2002-2015[20] from 16.8 to 9.7, a figure that has remained stable ever since.

State-run education is free at all levels, including universities. The period of

[15]Argentine Ministry of Economy (2020). Portal de datos económicos. Available at: link

[16]INDEC (2020). Exportaciones por complejos exportadores. Revisión 2018. Años 2016-2019. Available at: link

[17]Argentine Ministry of Economy (2020). Los cuidados, un sector económico estratégico. Medición del aporte del Trabajo Doméstico y de Cuidados no Remunerado al Producto Interno Bruto; p. 7. Available at: link

[18]INDEC (2020). Informe de avance del nivel de actividad. Tercer trimestre 2020. Available at: link

[19]In 2019, gross external debt accounted for 89.4% of GDP calculated at 323,38 billion US dollars (Ministry of Economy and Public Finance, 2020).

[20]INDEC (2018). Tasa de mortalidad por mil habitantes, según grupo de edad y sexo. Total del país. Años 2012-2017. Available at: link

compulsory schooling is 14 years and the percentage of illiteracy in the 10-year-old population is 1.9%, with a decreasing trend, since in 1991 it was 3.7% and 2.6% in 2001[21]. Regarding its scientific and technological system, the historical educational level of the population has allowed Argentine science to traditionally develop at a high level, thus becoming an important national asset with strong potential for expansion.

Energy and transport

As already mentioned, Argentina is rich in natural energy resources, namely, hydrocarbons, hydraulic, wind and solar energy, as well as uranium deposits.

In 2019, total domestic supply of primary energy reached 81 thousand ktoe. Eighty-seven percent (87%) of the energy produced locally is of fossil origin, 59% comes from natural gas, 27% from oil and its derivatives, and 1% from mineral coal[22]. Hydro and nuclear energy contribute 4% and 3%, respectively, and non-conventional renewables (biomass, small hydroelectric, wind and solar plants), 6%[23].

Fossil fuels are used mainly for the production of thermal electric power (non-nuclear), for residential and industrial consumption (gas distributed by networks), and for transport and industry (refined liquids). Demand is driven by population growth, the evolution of the economy and the large size of the country, which has an impact on the use of fuel for transport. The energy resources are mostly situated far away from consumption centers, and therefore, a big energy transport and distribution infrastructure network is needed to meet demands.

Six percent (6%) of electricity generation in 2019 was based on non-conventional renewable sources. Wind generation accounts for 42% of this energy; solar, 3%; small hydroelectric plants, 43%; and other non-conventional renewables, 12%. Biodiesel production totaled 2.1 million tons in 2019, of which 47% was for export, while bioethanol production reached 1.07 million cubic meters[24].

In 2019, the transport sector accounted for 33% of the country's energy demand, the residential sector, 26%, the industrial sector, 26%, the agricultural sector, 8%, and the commercial and public sectors, 7%[25].

In the residential sector, the highest demands are associated with population concentration and climate conditions. According to the 2010 Population Census, at the residential level, 98% of households had grid electricity and 57% used natural gas from the network as the main fuel for cooking, and 40%, liquefied petroleum gas in its different commercial presentations, bottled or in bulk[26].

In the industrial sector, the greatest demands come from industries related to food processing, beverages and tobacco, iron and steel production, the non-metallic minerals industry (including lime and cement), chemical products, pulp, paper and printing and the non-ferrous metals industry (including aluminum). In 2019, the industrial sector was the second largest consumer of natural gas, after power plants.

The significant participation of the transport sector in energy demand is accounted for by the size of Argentina's mainland, which entails a significant demand for long-haul transport, both for passengers and freight. The productive activities are spread out across the country, while the ports, through which international demand is met, as well as the large cities from which domestic demand arises, are concentrated in a few locations across the country. In 2019 consumption demands were met with 39% diesel, 36% petrol, 12% natural gas, 9% biofuels and 4% other fuels[27].

[21]INDEC (2020). Sistema Integrado de Estadísticas Sociodemográficas (SESD). Available at: link

[22]It is hereby noted that these data differ from those presented in December 2020 through the Second NDC of the Argentine Republic, due to an involuntary typing error in the original document. The correct data are those reported in this document.

[23]Argentine Ministry of Economy (2020). Balance Energético Nacional de la República Argentina, año 2019; Available at: link.

[24]Estadísticas de biodiésel y bioetanol; Argentine Energy Secretariat.

[25]Estadísticas de biodiésel y bioetanol; Argentine Energy Secretariat.

[26]Ibid.

[27]Argentine Ministry of Economy (2020). Balance Energético Nacional de la República Argentina, año 2019; Available at: link.

The road network comprises around 40 thousand km of national roads[28], which make up the main primary network, 189 thousand km of provincial roads, and approximately 285 thousand km of roads managed by the municipalities, which are the tertiary road network. Urban passenger mobility by bus, private vehicles and railways is concentrated in the Metropolitan Area of Buenos Aires (AMBA[29]), where more than a third of the country's population lives, and in the urban conglomerates of the provinces of Cordoba, Santa Fe, Mendoza and Tucuman. The Argentine automotive fleet includes 14 million vehicles, of which 10.6 million are cars, 2.6 million light utility vehicles, 678 thousand are cargo trucks, and 84 thousand are passenger buses[30].

Furthermore, production of hydrofluorocarbon gasses (HFCs) regulated by the Montreal Protocol and the Kigali amendment totals 5,200 tons a year. The main consumers of these gasses are the refrigeration and air conditioning equipment manufacturing and services sector, amounting to 89.4% of the total[31].

Agriculture, livestock and forestry

In 2019, the sown area totaled 40,507,400 hectares, of which 41.7% is devoted to soybean, 23.4% to corn and 17.1% to wheat[32]. This activity is supplemented by the livestock sector. In this regard, animal farming is mainly carried out on the extensive grasslands of the Pampa, Espinal and Humid Chaco regions, where bovine stocks totaled around 52.9 million head in 2020[33], while in 2019 13.9 million heads of cattle were slaughtered[34]. Although most of the beef production is for domestic consumption, in 2018, 28.4% of the production was for export[35].

Additionally, the Argentine Republic has an extensive area of native forests, which amounts to 53,654,545 hectares[36]. Due to the different geographical, geological, topographic and climate conditions, there are different types of native forests, which are located mainly in seven forest regions: Paranaense Forest, Yungas, Parque Chaqueño, Argentine Espinal, Andean-Patagonian Forest, Argentine Monte and Parana River Delta and Islands, each one subject to different natural and human pressures. The annual percentage of native forest loss has diminished since the enactment of National Law No. 26,331 on Minimum Standards for the Environmental Protection of Native Forests, in December 2007, from an average of 368 thousand ha/year during the period 2002-2013 to an average of less than 179 thousand ha/year in the 2014-2018 period[37]. Regarding cultivated forests, the country currently has an approximate area of 1.4 million hectares.

Waste

In 2019, in the Argentine Republic, the average daily waste generated was 1.15 kg per capita, that is to say, around 49,300 tons a day, and about 18 million tons a year. From the analysis of the composition of the Urban Solid Waste (USW) going to the landfills, over

[28]Includes roads and highways. National Road Safety Agency, 2016 (reproduced by the Technological Centre for transport and highway traffic safety of the National Technological University UTN, C3T)

[29]AMBA is the urban area made up of CABA and the following 40 municipalities in the Province of Buenos Aires: Almirante Brown, Avellaneda, Berazategui, Berisso, Brandsen, Campana, Cañuelas, Ensenada, Escobar, Esteban Echeverría, Exaltación de la Cruz, Ezeiza, Florencio Varela, General Las Heras, General Rodríguez, General San Martín, Hurlingham, Ituzaingó, José C. Paz, La Matanza, Lanús, La Plata, Lomas de Zamora, Luján, Marcos Paz, Malvinas Argentinas, Moreno, Merlo, Morón, Pilar, Presidente Perón, Quilmes, San Fernando, San Isidro, San Miguel, San Vicente, Tigre, Tres de Febrero, Vicente López, and Zárate.

[30]Asociación de Fábricas de Automotores (ADEFA). Anuario 2019. Available at: link

[31]Information provided by the authors based on the Ozone Programme import records.

[32]Ministry of Agriculture, Livestock and Fisheries (2020). Estimaciones agrícolas. Informe semanal al 17/12/2020, p. 26. Available at: link

[33]Servicio Nacional de Sanidad Animal (SENASA) (2020). Distribución de Existencias Bovinas por Categoría - Marzo 2020. Available at: link

[34]Ministry of Agriculture, Livestock and Fisheries (2020). Principales Indicadores del Sector Bovino. Noviembre 2020; p. 3. Available at: link

[35]Ministry of Agriculture, Livestock and Fisheries (2020). Principales Indicadores del Sector Bovino. Noviembre 2020; p. 7. Available at: link

[36]Ministry for the Environment and Sustainable Development (2020). Causas e impactos de la deforestación de los bosques nativos de Argentina y propuestas de desarrollo alternativas. Julio 2020. p. 6. Available at: link

[37]Green Climate Fund (2020). Consideration of funding proposals - Addendum II. Funding proposal package for FP142. Available at: link

40% is potentially compostable material that could be biologically treated to reduce the volume and mass of the waste to be sent to final disposal. The proportion of paper and cardboard waste remains at 13% to 20% of the total amount. Plastic waste that was negligible in 1972 (around 2-3%) increased to 15 to 20% from 2005 to date. Glass and its percentage remained steady over time at 3 to 6%, while disposable diapers, bandages and sanitary pads increased since 2001, accounting for up to 11%. With regard to recovery rates, the paper and cardboard industry achieves 50%, while the plastic recycling industry contributes less than 10%. Moreover, 1.2 million tonnes of steel are also recovered. In the case of the glass industry, there is still not enough reliable data on the quantities recovered or revalued.

Finally, regarding hazardous waste, its generation is closely linked to industrial activities and, therefore, growth in such activities would certainly go hand-in-hand with more waste generation.

Environmental legal framework

At the national level, article 41 of Argentina's Constitution —amended in 1994— enshrines the right of all inhabitants to a healthy and balanced environment, fit for human development and for productive activities that meet current needs, without compromising those of future generations; and the duty to preserve the environment.

Likewise, it empowers the National Congress to enact regulations on the minimum standards for environmental protection, establishing a uniform environmental protection for the whole of the territory, within the framework of a federal country in which the provinces and the Autonomous City of Buenos Aires hold the original ownership of natural resources and may issue supplementary regulations. These norms regulate certain activities in order to promote the care of natural resources and the environment in general through ecosystem conservation, management, sustainable use and restoration. Moreover, they ensure access to public environmental information and public participation. To date, twelve (12) minimum standard laws are in force, supplemented by other specific regulations and by those of subnational governments.

Argentine environmental law is governed by principles that must be used when interpreting and applying legislation. In particular, the General Law on the Environment No. 25,675 lists the preventive, precautionary, progressive, consistency, responsibility, subsidiarity, sustainability, intergenerational equity, solidarity and cooperation principles.

As a result of the federal nature of Argentina's government system, the Federal Environment Council (COFEMA, for its Spanish acronym) was created in 1990 as a permanent body for agreeing on and outlining a coordinated environmental policy among its members (the provinces, the Autonomous City of Buenos Aires, and the National Government). To this end, the National Executive Branch proposes to the COFEMA Assembly the issuance of recommendations or resolutions for the due validity and effective enforcement of the minimum standard laws, provincial supplementary laws and their regulations in the different jurisdictions.

In December 2019, the Argentine Republic ratified its political commitment to fight against climate change by adopting Law No. 27,520 on Minimum Standards for Global Climate Change Adaptation and Mitigation (Law on Climate Change)[38] and its Regulatory Decree No. 1030/2020[39]. Said law reaffirms and regulates the international commitments undertaken and strengthens the national climate policy and sub-national planning, by establishing minimum environmental protection standards to ensure appropriate actions, instruments and strategies for climate change mitigation and adaptation across the country.

This law supplements the principles established in the aforementioned General Law on the Environment, adding common but differentiated responsibilities at the international level, the cross-cutting nature of climate change in permanent State policies, the prioritization of the needs of social groups that are vulnerable to climate change, and the complementariness of adaptation

[38]Available at: link
[39]Available at: link

and mitigation actions. Furthermore, it institutionalizes the National Climate Change Cabinet (GNCC, for tis Spanish acronym) as a national governance body for the coordinated design of policies for climate change adaptation and mitigation agreed upon by consensus, and sets forth the preparation of the National Climate Change Adaptation and Mitigation Plan (known by its Spanish acronym PNAyMCC), defined as the set of strategies, measures, policies, and instruments developed in compliance with the law's objectives. At the same time, it establishes the preparation of the Jurisdictional Response Plans, which are the adaptation and mitigation plans that the provinces and the Autonomous City of Buenos Aires must prepare. It also creates the National Climate Change Information System, as a core tool for transparency and promotion of information.

Public participation and access to information are key objectives established by law and must be prioritized by the national and provincial authorities when enforcing regulations.

Moreover, in 1988 Argentina signed the Montreal Protocol on Substances that Deplete the Ozone Layer, which was ratified on 18 September 1990. In 2016, at the meeting held in Rwanda, the Kigali Amendment was adopted, and, in 2019, Argentina ratified this amendment, which aims at phasing out the consumption and production of HFCs. Although these substances do not deplete the ozone layer, they are powerful greenhouse gases that are often times used as substitutes for ozone-depleting substances.

In October 2020, the National Congress enacted Law No. 27,566 to adopt the Regional Agreement on Access to Information, Public Participation and Access to Justice in Environmental Matters in Latin America and the Caribbean (Escazú Agreement)[40]. The purpose of this Agreement is to "guarantee the full and effective implementation in Latin America and the Caribbean of the rights on access to environmental information, public participation in the environmental decision-making process and access to justice in environmental matters, and the creation and strengthening of capacities and cooperation, contributing to the protection of the right of every person of present and future generations to live in a healthy environment and to sustainable development."

Finally, it is relevant to note that the country recently enacted the so-called "Yolanda Law" No. 27.592[41], which ensures comprehensive and mandatory training in environmental matters, from a sustainable development standpoint and with special emphasis on climate change, for all public servants, in the different branches and levels of the national government. In addition, the Executive Branch sent to Congress a bill on Comprehensive Environmental Education that seeks to incorporate the new paradigms of environmental sustainability into the fields of formal and non-formal education.

Governance

Since the Argentine Republic considers climate change a permanent State policy, it structures its governance scheme in the understanding of how serious and urgent it is to face this issue, the multidimensional and cross-cutting nature of its impacts, and the need to generate a deep shift in the development model paradigm. It is in this context that the Law on Climate Change institutionalizes the National Climate Change Cabinet, chaired by the head of the ministerial cabinet, and four working spaces: the Meeting of Ministers, the Focal Points Roundtable, the Federal Coordination Roundtable, and the Expanded Roundtable.

This Second NDC, as part of the climate policy, was developed in coordination with all GNCC working spaces, resulting in a new commitment agreed to in a participatory, inter-institutional and inter-jurisdictional manner.

Meeting of Ministers

This working space includes the highest ministerial authorities from the different National Public Administration areas. It is chaired by the head of the ministerial cabinet and made up of all ministries of the National Executive Branch.

[40] Available at: link

[41] Available at: link

Focal Points Roundtable

It brings together political and technical representatives of all National Public Administration areas. It is, in turn, organized into 15 Working Groups (Figure 1) that, through different technical and political interactions, provide inputs and comments within their sectoral and cross-cutting jurisdictions, to build the countries common vision on climate action.

Focal Points' Working Groups, National Climate Change Cabinet

Federal Coordination Roundtable

The COFEMA Technical Committee on Climate Change participates in the GNCC Federal Coordination Roundtable. This Committee has representatives of each of the jurisdictions —both a full and an alternate focal point— that participate in the general, regional or bilateral meetings, identifying common needs and exchanging experiences in the search for joint and collective solutions that go beyond territorial boundaries. Activities that promote the development of climate change Response Plans at the subnational level are carried out within this coordination forum, such as exchange and training meetings and workshops.
The commitment undertaken by the provinces and the Autonomous City of Buenos Aires within this federal framework is evidenced in the consolidation of specific working structures on this topic at the subnational government level, and in progress made to enact local legislation reflecting climate planning and governance criteria.

Expanded Roundtable

The Expanded Roundtable is a coordination forum aimed at bringing together the contributions of the different sectors and stakeholders, both public and private. This body convenes civil society organizations, scientists, universities and think tanks, trade unions, youth associations, business chambers, councils and federations, professional associations, groups of citizens, the media, social movements, municipal governments, indigenous communities, the legislative branch; the Judiciary, and political parties. It is supplemented by an online citizen participation mechanism, that allows any citizen or organization to make contributions, send suggestions and comment on the different GNCC working bodies.

External Advisory Council

The Climate Change Act establishes the creation of a GNCC External Advisory Council, that can be consulted on an ongoing basis, and provides technical assistance and advice for outlining public policies on climate change. The Council includes scientists, experts, researchers, representatives of environmental organizations, trade unions, indigenous communities, universities, academic and business entities, public and private research centers, as well as members of political parties in Parliament.

2030 vision

The Argentine Republic is committed to the implementation of the Paris Agreement and to the collective fulfillment of the UNFCCC objective. Therefore, and as a result of the intra and inter-institutional coordination work of the National Climate Change Cabinet, a shared 2030 country vision was outlined, as a horizon to guide the implementation of the Second NDC, the 2030 Agenda and the Sustainable Development Goals.

This vision of a sustainable, inclusive and innovative Argentina in 2030 is provided on an informative basis only, it is not a part of the Second NDC goal. Based on the best available science, it was prepared taking into account the national circumstances as a starting point. Furthermore, it takes into consideration the equity principle within the global efforts, in line with the principle of common but differentiated responsibilities and respective capabilities.

Achieving this vision will entail the inter-institutional, inter-jurisdictional and collective work of different national and subnational stakeholders. In this regard, from 2021 onwards, Argentina will promote a broad nation-wide dialogue leading to the consolidation of a National Climate Change Adaptation and Mitigation Plan that, as established by Law No. 27,520 on Minimum Standards for Global Climate Change Adaptation and Mitigation, will reflect the 2030 vision, turning it into a roadmap with specific measures to implement the Second NDC.

Sustainable economics and finance

By 2030, Argentina will have achieved inclusive, solidarity-based, stable, federal, sovereign and dynamic social and economic development. In this regard, the main challenges addressed include a significant decline in multidimensional and extreme poverty, the eradication of hunger and all forms of malnutrition, an improvement in the resilience of vulnerable people and social groups vis-à-vis the adverse effects of climate change, a reduction in labor informality, coverage of housing and habitat shortfalls, the solution of infrastructure deficiencies and the deconcentration of the population beyond the Buenos Aires Metropolitan Area (known by the Spanish acronym AMBA). Regarding the economy, macroeconomic volatility will be reduced, as well as the structural foreign exchange scarcity, ensuring appropriate conditions for a productive, inclusive and sustainable growth for comprehensive human development.

At the macroeconomic level, building overall consistency that allows the country to follow a path of greater stability, production and inclusion calls for public credit recovery. In this regard, the recent agreement to renegotiate the sovereign debt and shift priorities in the National Budget allocations —increasing the importance of investing in infrastructure, the care economy, and gender mainstreaming— will be the foundations for this process.

For this purpose, continuous and balanced economic growth will be promoted between sectors and regions of the country, social security efficiency indicators will be improved, and a pension system with a high coverage rate will be developed, while the gender income gap will be progressively reduced.

The results will translate into a stabilization of the exchange rate and an improvement in income distribution indicators, which will encourage savings in local currency, positively stimulating the expectations of the agents that determine the development of a capital market, and favoring mortgage loans, within the framework of a fiscal balance compatible with an inclusive and sustainable long-term growth path.

By 2030, the idea is to have a diversified and strengthened productive structure, a balanced sectoral development at the national level from a federal standpoint, and a harmonious relationship between the State and the private sector. To this end, the national economic policy, framed in a vision of social and environmental integrity, will include several

government areas and all sectors with export capacity or potential, designing policies to incentivize sustainable economic development.

Productive development

The growth of production towards 2030 will result from a structural shift in sustainable production, comprising active policies that advance economic recovery based on the promotion of exports, the growth of the domestic market and an increase in productivity and efficiency based on measures that foster creativity and innovation.

Growth and sustainable development will generate the necessary economies of scale for a competitive positioning of national production in international markets, by reducing average costs and genuinely boosting the country's export capacity within the context of effective regional integration, without neglecting the development of the most vulnerable sectors. This momentum will be achieved through a development banking system, adequate land use planning, the improvement of the productive and logistics infrastructures, the supply of affordable energy, and an unavoidable commitment to the environmental, economic and social dimensions of sustainable development in all production processes.

Thus, the productive development policy will itself be a regional development policy with a direct impact on the territory. For this purpose, new industrial complex programmes will be implemented, and innovations and technologies for transport and logistics in general will be adopted, furthering local production and increasing exports.

Regarding production processes, by 2030 there will be a significant increase in the degree of technification, energy efficiency and rationality in the use of resources, which will be feasible once a comprehensive view of the life cycle of products and active financing policies are duly internalized. Direct support programmes for SMEs and cooperatives will be especially promoted, as well as strategic sectors such as renewable energy providers, mining, medical equipment, the naval, rail and automotive industries, 4.0 industries, biotechnology, nanotechnology, software services and sustainable mobility, among others. Furthermore, hydrogen value chains will be developed, which will pave the way for sustainable, low-carbon industry and transport.

Since the transition towards a resilient and low-emission development will increase the demand for certain minerals and metals, the development of a sustainable management system for extractive industries will be strategic for our country. To this end, the exploration of reserves and the exploitation of mineral resources will be promoted based on the adoption of the best international techniques and practices, ensuring a sustainable and responsible management of the activity.

The Argentine Republic has initiatives in place that contribute directly to supporting the shift towards sustainable consumption and production patterns (SCP). These programmes promote resource efficiency, pollution prevention, corporate responsibility, sustainable procurement, and the promotion of sustainable food and construction systems, improving their environmental performance. The Sustainable Consumption and Production Strategy will be drawn up, based on scientific evaluations, inter-ministerial cooperation and inter-sectoral dialogue to ensure the programmes' comprehensive implementation.

Likewise, by 2030, the Kigali Amendment of the Montreal Protocol will have been fulfilled, consolidating a regulatory framework to ensure the elimination of HFC consumption, in line with the control measures included in the amendment. This framework will be supplemented with a national strategy geared towards converting the sectors that are the main consumers of these gasses.

The combination of scheduled public policy measures and actions will result in a network of companies that carry out their activities in the country respecting the human right to a healthy environment and the sustainable use and conservation of ecosystems, particularly in native forests, wetlands, peatlands, natural grasslands and other ecosystems with a significant carbon content, as well as great biological diversity, paying special attention to the close and sensitive relationship of these

ecosystems with the indigenous peoples, Afro-descendant communities, and rural populations.

Energy

Regarding the energy sector, by the year 2030, the Argentine Republic will have implemented policies, actions and measures to promote a fair energy transition, ensuring an affordable supply of energy in a clean, reliable and sustainable manner, together with economic and population growth and the responsible use of energy. This will be carried forward by promoting energy efficiency as the guiding principle. The energy matrix in 2030 will be more inclusive, dynamic, stable, federal, sovereign[42] and sustainable, based on the significant potential of clean sources from wind, solar, hydroelectric and bio-energies, as well as on the development of nuclear energy and other energy vectors such as hydrogen, which will play a key role in achieving the energy transition.

Likewise, in the medium run, this outlined path will include a greater use of natural gas as a transition fuel in thermal power plants, through the incorporation of flexible, quick start-up machines that will replace other more carbon-intensive and less efficient fossil fuels.

In 2030, the generation of electricity from renewable sources will have increased significantly, and there will be a growing infrastructure for distributed generation. In turn, a remarkable increase in cogeneration is expected in thermal power plants, besides other large emission-free plants. Finally, specific plans for adapting to the impact of climate change will be implemented in order to achieve a resilient electricity system.

Transport

By the year 2030, the transport sector will focus on inter-modality, and will promote optimization and flexibility criteria through virtuous interaction between different means of transport, enhancing the ability to carry goods and people according to the realities and specific needs for the socioeconomic development of each of the country's regions.

Likewise, active mobility will have been favored through urban land use planning, and sustainable energy matrices will be promoted, focusing on gasification, biofuels, electrification of mobility and use of hydrogen. By 2030, effective energy efficiency measures will have been implemented in all modes of transport, with an Avoid-Shift-Improve approach to reduce greenhouse gas emissions in the sector and promote the Sustainable Development Goals.

Additionally, measures will be planned and implemented to strengthen transport systems with a focus on resilience and sustainability, considering the new climate parameters.

Agriculture, livestock, fisheries and forestry

Agricultural and agro-industrial production will continue to be one of the most significant contributions to national GDP, as a source of employment and a generator of foreign currency. In 2030, there will be an increase in total grain production thanks to the increase in agricultural yields, without significant increase in the effectively sown area. To this end, public policy instruments will be put in place to create incentives for innovative agricultural intensification, promoting the implementation of new technologies and practices, and the diversification of production systems will be promoted to consolidate a resilient and sustainable food system. At the same time, an increase in meat production is expected to supply the domestic market and improve export performance, through a two-fold mechanism: on the one hand, an increase in herd productivity and, on the other, an increase in the meat produced per slaughtered animal. Likewise, dairy cattle production rates will continue to increase, through genetic improvements and the adoption of technologies and good practices.

Regarding native forests, the necessary skills and capacities for their sustainable management and preservation based on a social inclusion approach will be in place. More effective tools for monitoring and planning will

[42]Energy sovereignty must be construed with a view to building an energy matrix based on local resources and capacities.

be adopted, and sustainable forest use will be promoted by adding greater competitiveness to the timber and non-timber value chains. The enforcement of Law No. 26,331 on Minimum Standards for the Environmental Protection of Native Forests will be strengthened, the deforestation rate will be substantially reduced, and planning projects at landscape scale will be increased through Forest Basin Plans and Comprehensive Community Plans (known by the Spanish acronym PIC), the National Forest Management Plan with Integrated Livestock (MBGI, for its Spanish acronym) will be implemented, and the national forestry extension system and the Deforestation Early Warning System (EWS) will be expanded.

The current promotion regimes will be expanded to increase the area of forest plantations by 2030.

There will thus be an integrated forestry sector, together with an appropriate industrial development contributing to the growth of regional economies, to ensure the sustainability of the resources involved and to help mitigate climate change, based on the sector's potential as a carbon sink.

On the issue of risk management, by 2030, the development of fire, flood and drought prevention measures will have been deepened, which is particularly important for the agricultural, livestock and forestry sectors. At the same time, progress will be made in implementing specific measures and actions for these sectors with the aim of including the current and future impacts of climate change in plans, including risk transfer.

Regarding cooperation and marine scientific research activities, the Argentine Republic will generate valuable information to address climate change and the oceans. The work carried out and the scientific conclusions will serve as a basis for the planning and implementation of public policies that can address the specificities of the impact of climate change in Argentine maritime and coastal areas. As a part of these efforts, the Pampa Azul initiative —a project coordinated among several ministries and national organizations— will generate scientific knowledge to be used as an input for the preservation and sustainable management of marine resources and ecosystems. Additionally, it will promote the generation of technological innovations that contribute to strengthening industries linked to the sea, and the economic development of the Argentine maritime regions, as well as greater awareness in society regarding the national maritime heritage and the responsible use of its resources.

And, lastly, by 2030, sustainable fisheries will have been reinforced, thus contributing to food security from an approach that shall ensure the sector's adaptation to the impacts of climate change.

Infrastructure, territorial development and habitat

Comprehensive land use planning will be promoted, envisaging sustainable and resilient infrastructure, city-regions and habitat. In this regard, and in line with the decisions of the Convention on Biological Diversity, Ecosystem-based Adaptation measures will be implemented, promoting preservation, particularly of native forests, wetlands, peatlands, natural grasslands and other ecosystems with significant carbon contents[43]. In turn, community-based approaches will be adopted to ensure care of the most vulnerable population exposed to climate risks.

The consolidating of compact and biodiverse cities will be promoted, with a prevalent use of public transport, and a trend towards harmonious coexistence with nature and integrated hydrological systems and natural cycles, preserving the environmental services they offer.

All levels of subnational agencies will have instruments for land use and environmental planning, which prioritize conservation and sustainable use of natural resources and, particularly, efficient land use.

[43]This kind of approach considers biodiversity and the use of its ecosystem services a part of a broader adaptation strategy to face the adverse effects of climate change, promoting inclusive development to ensure a continuous production of ecosystem goods and services.

Waste

Around 2030, and with the aim of reducing waste generation to a minimum, improvements will have been adopted in terms of sustainable consumption and production; the circular economy will be promoted as one of the available tools, among others, to achieve sustainable development; appropriate waste management —including separation at the source and the promotion of the recycling industry— and implementation of innovative practices and technologies for proper waste treatment. Additionally, management and recovery programmes for universally generated special waste and industrial waste will be implemented.

Science and technology

Science, technology and innovation will be fundamental to achieve this vision by 2030. Therefore, a permanent and growing support of the scientific-technological system will correlate to an increase in disciplinary and transdisciplinary knowledge, as well as support of researchers devoted to disruptive innovation projects that will contribute to the development of more and better climate change adaptation and mitigation action. A stronger national scientific-technological system will allow the Argentine Republic to have new information and measurement systems by 2030, with models and projections that will reinforce existing capacities and focus on bringing about improvements in mapping climate vulnerabilities and risks, in early warning systems and comprehensive disaster risk management, in standardized geospatial information quality, in monitoring hydrometeorological and multi-hazard variables, and in monitoring potential adverse events.

Comprehensive risk management

By 2030, the integration of Early Warning Systems (EWS) will provide information on the impact of meteorological phenomena within the context of climate change. Thus, response actions will be designed and deployed across all sectors, achieving effective territorialization through agreements and inter-jurisdictional work between the national State, provincial governments and local governments. Regional Platforms will be created to address extreme events, considering the specificities of each region, and the integrated use of available technologies will be promoted, both for the digitally active population and for those that lack access to internet services, to achieve greater dissemination and effectiveness of comprehensive risk management. Finally, the strengthening of the National System for Early Warning and Emergency Monitoring (SINAME, for its Spanish acronym) will increase the potential and effectiveness of decision-making mechanisms.

Health

In the field of health, by 2030, policies, measures and actions will have been implemented to ensure universal coverage and access, providing a timely response to the new epidemiological profiles emerging from environmental and climate changes, while ensuring operability of the health system during emergencies and disasters related to climate hazards. The Early Warning Systems will have been strengthened for events that have an impact on health, and climate-sensitive diseases that expand their geographic frontier will be addressed. Additionally, greenhouse gas emissions generated by health care institutions will have been reduced[44].

Labour and just transition

In all response measures proposed for the implementation of the Second NDC, the Argentine Republic will consider the economic and social consequences thereof, so as to ensure a just transition. It is important to address the specific needs and concerns of developing countries stemming from the economic and social impact of the application of response measures, in line with Article 4.8 of the UNFCCC and Article 4.15 of the Paris Agreement.

The consequences of climate change have and will continue having an impact on different

[44]Plan de Acción Nacional de Salud y Cambio Climático (PANSyCC). Version 1, year 2019. Available at: link

aspects of labor and employment. The health of workers will be one of the most affected aspects, especially with regard to outdoor professions. New occupational diseases will emerge, besides the already existing ones, and will become a challenge for occupational health and safety.

In this regard, by 2030, the environmental dimension will have been mainstreamed into collective bargaining negotiations, in the regulation and compliance with worker protection protocols and several employment programmes, promoting the creation of new sustainable and decent jobs. Likewise, special attention will be paid to the effects on vulnerable groups, such as women and diversities, the youth, indigenous peoples and people with disabilities, considering that these groups have limited participation in decision-making and access to resources, and are overrepresented in the informal economy and in unemployment rates. It will thus ensure that workers have better access to resources (loans, technology, adequate supplies and training, among others) which will allow them to adapt their activities to climate change. To this end, capacity-building will be promoted so that workers can maintain their jobs and grow in them when their jobs are transformed by more sustainable production methods.

Gender

By 2030, policies will have been developed in such a way that gender will not be a reason for social, political and economic inequality. In this regard, the physical, political and economic autonomy of women and LGBTI+, sovereignty over their bodies, lives and territories, and their capacity to make decisions will have been strengthened. Policies will be implemented so that women and LGBTI+ have social and environmental livability conditions across the territory.

To this end, an active participation of women and diversities in the consultation and decision-making processes in all aspects of climate policy is considered essential —and will be promoted. The voice and representation of women and LGBTI+ across the territories they inhabit will be strengthened through access to material, educational, informational, training, financial and technological resources; and the creation of strategic partnerships will be promoted to strengthen their role as agents of change in climate change adaptation and mitigation.

Likewise, along the path to recognizing the social and environmental importance of care work, sustainability of development must necessarily be cut across by a fairer social reorganization, redistribution and revaluation of care work.

Education and culture

By 2030, educational and cultural policies in their environmental dimension will have been strengthened and enhanced, creating spaces for the exchange of intergenerational knowledge, promoting the empowerment of youth and gender equality in politics, and contributing to achieving the Sustainable Development Goals. (SDG), and the national and international regulatory instruments related to this matter[45].

Therefore, and to promote the necessary paradigm shift to respond to the emergency, actions aimed at climate empowerment will be promoted (Articles 6 of the UNFCCC, and 12 of the Paris Agreement), as well as cross-cutting educational and cultural policies that promote environmental and climate awareness, public participation of youth organizations and different local stakeholders, teachers' training in environmental education for climate change, training and technical assistance for projects that allow communities and citizens to access and acquire knowledge on environmental and climate change issues.

The process of institutionalizing education and environmental culture as public policy will promote the consolidation of comprehensive

[45]In this regard, it is worth mentioning the National Environmental Education Strategy (known by its Spanish acronym ENEA) aimed at raising awareness and promoting environmental responsibility among citizens, pursuant to the provisions of Article 41 of the National Constitution, and Article 8 of the General Law on the Environment No. 25,675, Article 89 of National Education Law No. 26,206 and its amendments, the Yolanda Law No. 27,592 (in the process of being enacted), and the International Treaties and Agreements in this field, such as UNESCO's Universal Declaration on Cultural Diversity (2001) and its Convention on the Protection and Promotion of the Diversity of Cultural Expression (2005).

regulatory frameworks, the mainstreaming of the environmental and climate dimension in educational and cultural policies, the training of technical management teams and the design of public policy in the field of education and culture, the strengthening of innovation projects and lines of research, the systematization and strengthening of existing pedagogical experiences, specific studies on the impacts of climate change in accessing the right to education, the perception of climate change in the educational community, and the targeting of cultural policies and programmes at vulnerable populations, such as young girls and boys, the elderly, and people with disabilities.

Foreign affairs

International trade contributes to development and job creation. Therefore, the adoption of barriers to international trade for climate change purposes must be avoided.

Argentina supports and promotes an open international economic system, leading to the economic growth and sustainable development of all countries, ensuring that the measures adopted to combat climate change, including unilateral ones, do not constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade, in accordance with the UNFCCC (Article 3.5). This becomes even more relevant in the context of the unprecedented economic, social and health crisis caused by COVID-19, in which trade plays a fundamental role in contributing to an inclusive and sustainable post-pandemic economic recovery.

Argentina is convinced that the response to contain, mitigate and overcome the pandemic and its consequences should contemplate an increase in international cooperation through multidimensional, coordinated, innovative and effective actions that include multi-stakeholder partnerships, and that are directed above all to the most vulnerable sectors.
It will therefore be necessary to discuss the architecture of international cooperation and favor the design of new cooperation schemes within the framework of the 2030 Agenda and the SDGs, particularly in relation to goal 17, which calls upon us to revitalize partnerships to achieve these goals and their associated targets. With regard to international cooperation, Argentina proposes progress towards a balanced and mutually beneficial relationship with traditional partners, while resuming a constructive agenda for Latin America and the Caribbean, capable of contributing to a joint approach of the development gaps faced by each country.

With this horizon in sight, Argentina will deepen South-South and triangular cooperation, promote the expansion of multi-stakeholder partnerships, promote joint actions with the private sector, international organizations and agencies, and start up mechanisms to attract innovative sources of financing in order to join forces to accelerate progress.

Guiding principles

This new climate commitment undertaken by the country must support the processes of poverty eradication, fostering a just transition towards comprehensive and sustainable development that ensures no one is left behind, and that addresses the needs of the whole of the current population without affecting the wellbeing of future generations.

It is also essential to consider the adverse effects that climate change has on biological diversity and natural resources, as well as its potential effects on human health. Additionally, comprehensive climate action will only be possible if human rights are taken into account from an intercultural point of view, with a gender and diversity perspective, considering the differential impacts of climate change on children, the youth, the elderly, people with disabilities, Afro-descendants, migrants, refugees, rural population, workers, indigenous and peasant communities, and other vulnerable groups.

Therefore, and with the purpose of systematizing each of these cross-cutting notions, seventeen guiding principles have been defined, to supplement those established in the current legal framework. These will guide the design, implementation and monitoring of all national adaptation and mitigation measures designed to fulfill the Second NDC's goals.

Guiding principles of Argentina's Second Nationally Determined Contribution and Second Adaptation Communication

- The United Nations 2030 Agenda and the Sustainable Development Goals
- Federalization
- Participation
- Human rights
- Just transition
- Equity
- Gender
- Interculturality
- Health
- Community-based Adaptation
- Comprehensive risk management
- Innovation, science and technology
- Environmental education
- Ecosystem-based Adaptation
- Energy security
- Food security
- Transparency, Accuracy, Comparability, Consistency and Completeness

The United Nations 2030 Agenda and the Sustainable Development Goals (SDGs)

The 2030 Agenda for Sustainable Development and its 17 SDGs will serve as a guide for the planning and implementation of climate action to fulfill the Second NDC's goals. The design and implementation of these actions will be carried out by systematically considering and analyzing their consequences on each one of the dimensions of sustainable development: social, economic and environmental; moreover, they will take into account their institutional implications.

Federalization

The cross-cutting nature of climate policy requires joint and coordinated work between the different instances of the national, provincial and local governments to provide appropriate responses to the climate emergency whilst ensuring representation of

the various social and environmental realities, expectations, needs and opportunities.

Thinking about climate policy in a federal manner generates the necessary momentum to mainstream the approach to climate change in the different territory-based sectoral structures. Under this premise, provincial and local institutions become essential in identifying vulnerable sectors and what measures can bring about the greatest impact, as well as further citizen engagement.

Thus, the commitment undertaken by subnational governments that jointly defined the Argentine climate policy will allow the identification of additional or supplementary actions that maximize the probability of achieving the established objectives. Therefore, national and provincial authorities will work in coordination to strengthen the capacities and specific competencies of local governments in planning sustainable urban and territorial development, through tools such as technical advice, skill-building and innovation support. Likewise, the task of federalizing climate policy will be carried out considering territorial equity, in order to incorporate the diverse realities and capacities present in the different parts of the country and to balance historical inequality.
Participation

The size of the undertaken challenges requires the commitment of the different sectors and stakeholders in society, within a framework of both planning and participatory and transparent management. To ensure the responsible enjoyment of the right to public participation, it is essential to promote environmental education, both formally, non-formally and through the media. Furthermore, it is essential to count on multiple voices to build a social-economic-environmental perspective, in which different environmental knowledge, learning, know-how, values and practices converge in a regional and local awareness of the problems, promoting action-oriented public participation.

Human rights

The right to a healthy environment is an independent right with individual and collective connotations that is recognized in various international human rights instruments. Likewise, it is closely linked to other fundamental rights, and its protection ensures the enjoyment of economic, social and cultural rights, as well as civil and political rights. Therefore, it is included as the backbone of climate planning in the short, medium and long term, considering the interdependency, comprehensiveness and cross-cutting nature of all rights.

Just transition

Just transition is a roadmap that guides the actions of States, social stakeholders and international organizations to transform societies and economies in favor of sustainable development centered on people, with solidarity-based and inclusive policies that ensure social justice for all. Just transition involves the adaptation of productive systems and their impacts on the world of labor, both formal and informal, as well as the changes in people's lives brought about as a result of this adaptation. It encompasses the importance of social dialogue and tripartite work between the government, employer organizations and trade unions, as well as social organizations, setting common objectives. This principle also encompasses the relevance of decent work and sustainable jobs, the need for training and acquisition of skills for new jobs, as well as the contributions of the circular, social and informal economy as tools, among others, to achieve sustainable development. This perspective also entails a commitment to achieve development, including the protection of the most vulnerable groups and territories, and workers' health.

Equity

Climate change does not affect everyone equally, since certain stakeholders and sectors are at a disadvantage due to not having the resources, skills and instruments to face the negative impacts. In this regard, Argentina reiterates its commitment to contribute to the protection of the climate system on the basis of equity, in the belief that the response to climate change must also become an opportunity to improve people's living conditions, particularly the

disadvantaged. At this stage, it is also worth mentioning the intergenerational equity approach that underscores the need to ensure the conservation of natural resources and the environment for access and enjoyment of present and future generations.

Gender

The Argentine Republic will mainstream the gender and diversity perspective in climate change adaptation and mitigation policy. In this regard, active and effective intervention is required in its design and implementation, to reduce inequality gaps based on the different dimensions of gender. This places people at the center as subjects of law, under the principles of equality, non-violence and non-discrimination, whilst also promoting the autonomy and participation in decision-making of women and LGBTI+, through the deconstruction of gender-based power mechanisms.

Interculturality

The Argentine Republic deems it essential to incorporate the principle of interculturality into its climate policy in order to respect the country's cultural, ethnic, religious and language diversity. This principle entails the recognition and integration of local knowledge, ancestral knowledge and practices, cultural values and guidelines, systems, habits and communities in climate actions, acknowledging and respecting current laws and regulations.

Health

Health is the backbone of the population's general wellbeing, and is directly linked to citizens' quality of life. The Second NDC highlights the importance of mainstreaming health as a focus of work, particularly in the context of a pandemic, and in the medium and long-term, aware of the impacts of climate change on health, through heat waves and cold waves, disasters related to climate threats and the spread of disease-transmitting vectors. Therefore, actions will focus on community health as an instrument to reach out to the vulnerable populations to raise awareness, prevent disease, and promote collective health care.

Community-based Adaptation

The Argentine Republic emphasizes the importance of using the Community-based Adaptation (CBA) approach, since communities are the leading players in the processes to reduce both their vulnerability and GHG emissions, and to increase their capacity to face the impacts and risks of climate change. Furthermore, these short, medium and long-term action planning processes against climate change, when led by the communities themselves, recognize their priorities, needs, knowledge and capacities, and lead to community empowerment.

Comprehensive risk management

Climate change is considered one of the key factors that contribute to increasing disaster risks, exerting additional pressure on environmental degradation and urban growth, especially unplanned growth.

It is therefore essential to work on the identification, forecasting and prevention of risks and threats stemming from climate change, strengthening local response capacities and the structured participation of communities in building resilience.

Innovation, science and technology

The promotion of active policies in science, technology and innovation, within the framework of climate change, is essential to adopt appropriate adaptation and mitigation strategies. In this regard, the scientific-technological system plays a fundamental role in generating knowledge and methodology as a basis for outlining sectoral plans at the municipal, provincial and national levels. The incorporation of innovation into climate policy as a cross-cutting pillar will be the basis for a deeper and accelerated achievement of the global objectives of climate action through projects, disruptive actions and technology development and transfer.

Environmental education

The Argentine Republic envisages environmental education in a comprehensive and cross-cutting manner, as a critical social practice aimed at promoting environmental and climate literacy. Thus, it will shape environmentally sensitive and responsible citizenship in enjoying and advocating for the right to a healthy and diverse environment that ensures sustainable development. In this regard, environmental education and the promotion of a culture with a climate perspective are aligned with the principles of intergenerational equity, human rights, interculturality and gender equality.

Ecosystem-based Adaptation

The country recognizes the importance of Ecosystem-based Adaptation (EbA) and promotes its inclusion as a fundamental pillar for the conservation, restoration and sustainable management of ecosystems, especially native forests, wetlands, peatlands, natural grasslands and other ecosystems with significant carbon contents. This approach contributes therefore to the removal and storage capacity of carbon, reducing vulnerability and increasing the resilience of ecosystems and the communities that live within and depend on them.

Energy security

Energy security is one of the main pillars of energy transition in Argentina in the medium and long term. An inclusive, dynamic, stable, federal, sovereign and sustainable energy matrix must ensure the availability of energy to users and the system's reliability. In order to achieve energy security, it will be essential to migrate towards schemes that promote the rational use of energy, innovation, technology development, transfer and incorporation that is appropriate to the national context.

Food security

Food security is recognized as a fundamental priority in the Paris Agreement, which states that its objective will be achieved "in a way that does not compromise food production." In the Argentine Republic, climate action related to the agricultural sector are designed and implemented taking into account the key role that agriculture plays in national development, and particularly recognizing the fundamental priority of safeguarding food security, contributing to the reduction of poverty, hunger and the vulnerability of food production systems to the adverse impacts of climate change.

Transparency, accuracy, comparability, consistency and completeness

Climate policy instruments should be based on scientific evidence, and on sound and transparent data. It is thus essential to bear in mind the guiding principles established in Decision 18/CMA.1: Transparency, Accuracy, Comparability, Consistency and Completeness, which will be considered a guide for the implementation and continuous improvement of the National Information System on Climate Change, established by the Climate Change Act.

Target

By 2030, the Argentine Republic shall not exceed the net emission of 349 million tons of carbon dioxide equivalent (MtCO2e), applicable to all sectors of the economy.
By 2030, Argentineans will have knowledge on the adverse effects of climate change, the pertinent adaptation measures and they will have built capacities allowing them to provide a solidarity-based response to the urgent need for protecting our planet

Climate policies in Argentina will have increased adaptation capabilities, strengthened resilience and diminished vulnerability of the different social, economic and environmental sectors through measures prioritizing vulnerable communities and social groups and mainstreaming the gender approach and inter-generational equity.

All the above, with a view to contributing to sustainable development, building a more equitable, fair, and solidarity-based society, and achieving an appropriate response to climate change, compatible with the Paris Agreement objectives.

The contribution of the Argentine Republic to global efforts is based on the best available science and is, in turn, ambitious and equitable. However, it must be noted that both UNFCCC and the Paris Agreement state that developed country Parties should take the initiative in combating climate change and its adverse effects through the provision and mobilization of new and additional financial resources, including resources for technology transfer.

In this regard, the Argentine Republic reaffirms the principle of common but differentiated responsibilities and respective capabilities, as referenced in Principle 7 of the 1992 Rio Declaration, UNFCCC -Articles 3 and 4- and the preamble of the Paris Agreement. This is a principle that the National Law on Climate Change revisits and reaffirms.

In that regard, the policies and actions required to achieve the contribution's goal will be implemented, notwithstanding the use of the financial mechanisms foreseen by the Convention. And although the implementation of this Second NDC is not contingent on international support, Argentina believes the support developed countries can provide to fulfil its national ambition will generate significant global benefits.

Market Mechanisms

The Argentine Republic will not disclose its national position and decision-making with regard to the potential use of any market mechanism, referred to in Article 6 of the Paris Agreement, and that may be established in the future, until the negotiations on the aforementioned article are completed under the UNFCCC. Meanwhile, and should these market approaches be in place and become operational, the following national criteria have been established for their use, based on national circumstances and interests:

- Argentina recognizes there is intrinsic value in the natural resources and ecosystem services that cannot be captured only through market mechanisms.

- All cooperation mechanisms established within the UNFCCC, whether it be a market mechanism or not, shall be transparent, contribute to ensuring environmental integrity, avoid double counting and increase global ambitions to reduce GHG, as well as be aligned with the SDGs.

- The above-mentioned market mechanisms should not deepen current inequity in the

distribution of efforts vis-à-vis climate change. In this regard, the principle of common but differentiated responsibilities and respective capabilities of the Parties must be borne in mind, as well as any additional factors such as the geographic location and differentiated impacts of climate change, the trade profile, the degree of economic and social development, the contribution to global food security, and adaptation-related urgencies.

- The above market mechanisms and operations must contribute to the capabilities of developing countries -inter alia, Argentina- to honour nationally determined climate commitments that should in no event become concealed mechanisms of trade protectionism or unilateral impositions.

- The above market mechanisms shall ensure full respect for national and provincial legislation, and be consistent with the pertinent REDD+ approaches and safeguards, as well as others defined within the framework of the Paris Agreement's implementation.

Long-term strategy

The goals presented in this Second NDC reflect the willingness of the Argentine Republic to contribute to sustainable development and are a part of a long-term analysis. Their fulfilment thus becomes a milestone on the path of a fair transition towards a resilient, sustainable, inclusive and innovative country in which none of its citizens will be left behind. Along these lines, the country will submit its long-term low-emission development strategy at the next Conference of the Parties to be held in Glasgow in 2021, with a view to achieving carbon-neutral development by 2050.

This goal will require long-term structural changes and a gradual action plan in the short term. Climate action fosters efficiency and innovation and, therefore, it also entails an opportunity for a productive structural change with the purpose of achieving economic reactivation, job creation and the improvement of the economic competitiveness of national production, in a framework of fair transition.

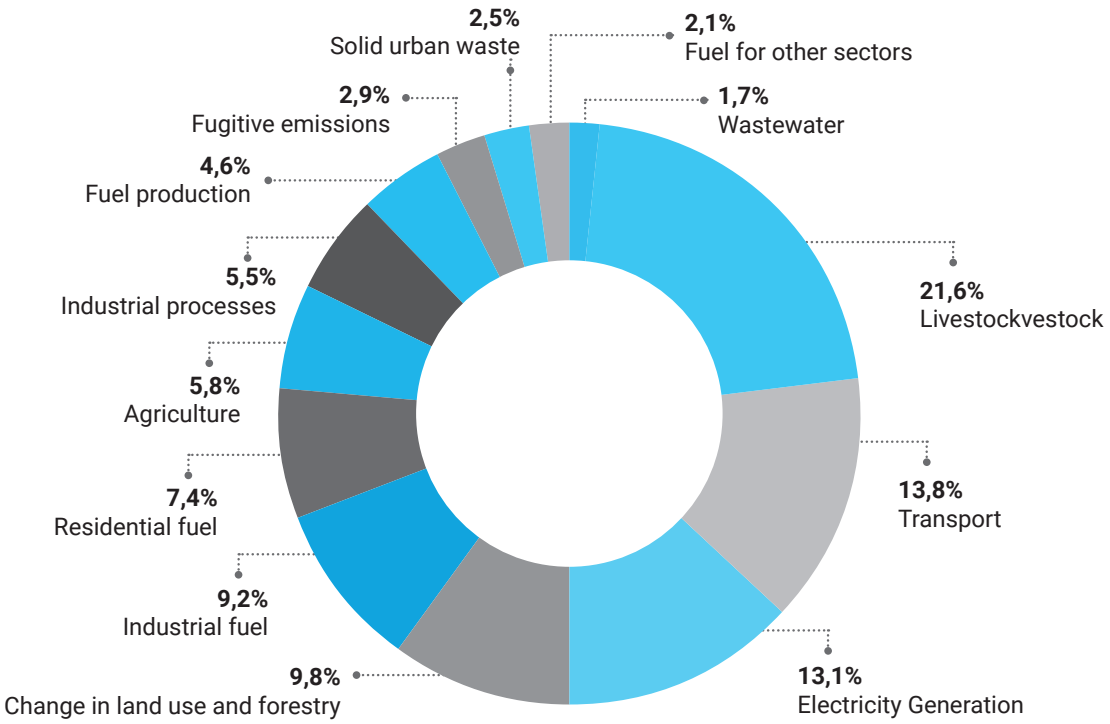
Mitigation

Mitigation context in Argentina

In 2017, the National Greenhouse Gas Inventory System for Argentina (SNI-GEI-AR) was set up to structure and arrange institutional relations, defining roles and responsibilities for the calculation and reporting of the National Greenhouse Gas Inventory (known by the Spanish acronym INGEI).

At the end of 2019, the Argentine Republic submitted its last Biennial Update Report (BUR 3) to the UNFCCC, in which the total net emissions for the year 2016 were estimated at 364.44 MtCO2e. Additionally, the BUR 3 includes the time series for the period 1990-2016 that was calculated under a systematized scheme in terms of data acquisition, information processing, and calculation and reporting methods, which entailed a qualitative leap in the way in which the INGEI was prepared. Furthermore, the BUR 3 was the first to include a general annex with a National Inventory Report (NIR) as an extended INGEI report, explaining in greater detail all aspects related to its preparation. The BUR 3 also included the REDD+ Technical Annex[46], which describes Argentina's results in reducing emissions from deforestation for the 2014-2016 period.

As can be seen in Figure 4, the BUR 3 shows that, between 1990 and 2016, the country's net emissions presented an increasing trend until 2007, and a decreasing trend in recent years, with an absolute peak in emissions in 2007 and a secondary peak in 2013. Based on the sectoral analysis, it can be inferred that the evolution of the Energy, Industrial Processes and Product Use (IPPU) and Waste sectors was more related to the economic and/or population conditions, with a growing trend for the period. On the other hand, the AFOLU sector showed fluctuations linked to foreign trade variables, as well as to sector-based policies and weather conditions, with no constant trends. Likewise, this sector reflected the changes in the deforestation patterns of native forests.

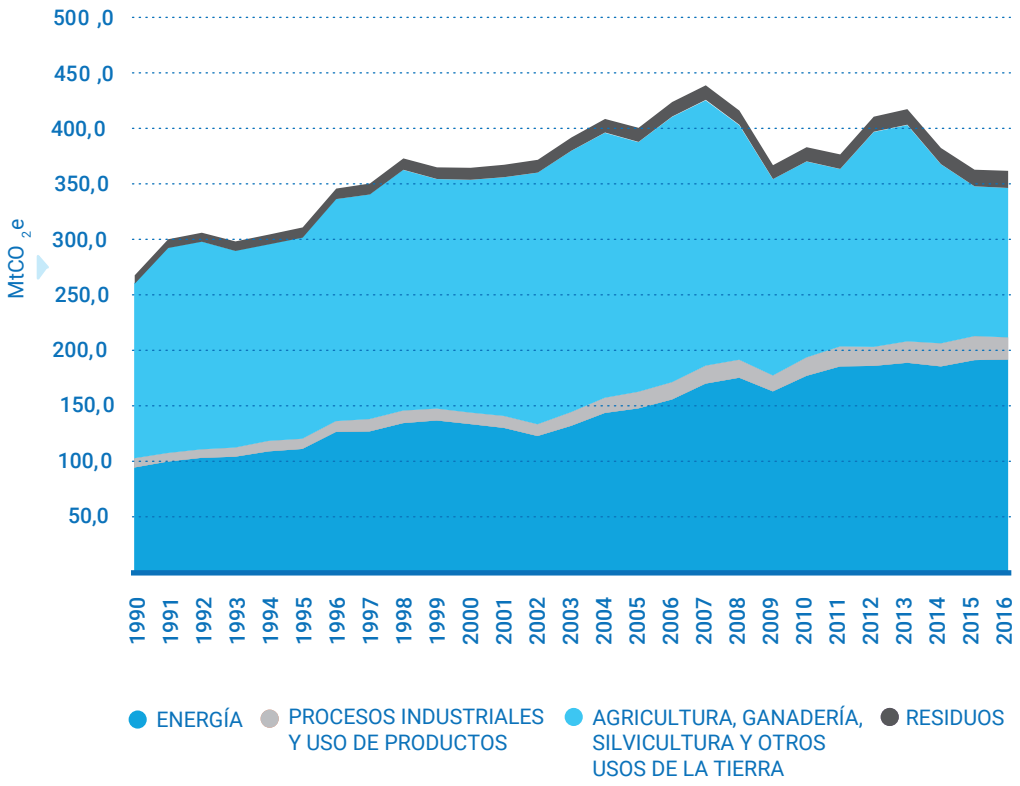


Source: SGAyDS. 2019

[46]The REDD+ Technical Annex refers to reducing emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries.

GHG Emission trends in the Argentine Republic. Source: Argentina's Third Biennial Update to UNFCCC

Serie histórica total



Source: SGAyDS. 2019

Information to facilitate Clarity, Transparency and Understanding of Argentina's Second NDC

Hereafter is the Information to facilitate Clarity, Transparency and Understanding (ICTU), in fulfilment of paragraph 4.8 of the Paris Agreement and paragraph 7, Decision 4/CMA.1 and the requirements of its Annex I.

Information to facilitate Clarity, Transparency and Understanding of Argentina's Second NDC	
1. Quantifiable information on the reference point (including, as appropriate, a base year):	
a) Reference year(s), base year(s), reference period(s) or other starting point(s);	Argentina's Second NDC submits an absolute target applicable to all sectors of the economy by 2030, so no reference year or period is used.
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 target year;	The Second NDC has an absolute target and there is thus no reference indicator. The indicator to monitor NDC progress shall be the net annual emissions reported in subsequent National GHG Inventories.
c) For strategies, plans and actions referred to in Article 4, paragraph 6, of the Paris Agreement, or polices and measures as components of nationally determined contributions where paragraph 1(b) above is not applicable, Parties to provide other relevant information;	Not applicable to the Argentine Republic.
d) Target relative to the reference indicator, expressed numerically, for example in percentage or amount of reduction;	Not applicable to the Argentine Republic since it is submitting an economy-wide absolute target as of 2030.
e) Information on sources of data used in quantifying the reference point(s);	Not applicable to the Argentine Republic since it is submitting an economy-wide absolute target as of 2030.
f) Information on the circumstances under which the Party may update the values of the reference indicators.	Argentina's INGEI will be updated based on a continuous improvement process in estimating GHG emissions and removals. It will include, *inter alia*, methodological updates, calculations of categories not included so far, improvements in activity data and in the parameters used as, for instance, the Global Warming Potential (GWP) value for different gases. These improvements will be reflected in subsequent BURs, NCs and future Biennial Transparency Reports (BTRs). Information update will lead to improving the accuracy and quality of the estimates and will transparently reflect the country's

	mitigation efforts in INGEI.
2. Time frames and/or period 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 Agreement (CMA);	The implementation period is January 1st, 2021, through December 31st, 2030.
b) Whether it is a single-year or multi-year target, as applicable.	Argentina's Second NDC submits a single target for 2030 and includes, for information purposes, a mid-term expected emissions indicator (372 $MtCO_2e$) as of 2025, which is not a part of this NDC's target.
3. Scope and coverage:	
a. General description of the target;	Argentina's net emissions will not exceed 349 $MtCO_2e$ in 2030. This is an economy-wide, absolute, and unconditional 2030 target covering the whole country[47].
b. Sectors, gases, categories and pools covered by the nationally determined contribution that, as applicable, will be consistent with Intergovernmental Panel on Climate Change (IPCC) guidelines;	The target covers the whole of the country[48], taking into account all emission sources and sinks reported in BUR 3 submitted to UNFCCC in December 2019[49], together with the National Inventory Report (NIR), pursuant to the 2006 IPCC Guidelines. Furthermore, it includes the emissions and removals of carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFC) and perfluorocarbons (PFC).
c. How the Party has taken into consideration paragraph 31(c) and (d) of decision 1/CP.21;	The target will apply to all categories and gases reported in the last BUR 3 and its pertinent NIR, which includes all sectors, categories and sub-categories of sources and sinks in the country for which information was duly obtained. Tables 14 to 17 of BUR 3 (pages 109 to 113) depict the comprehensiveness, methodology and data source by INGEI sector, and Table 18 (page 117), the non-estimated categories with a pertinent explanation, and finally, Table 19 (page 119) includes those from other categories.

[47]Due to the illegal occupation by the United Kingdom of Great Britain and Northern Ireland of the Malvinas Islands, South Georgia and South Sandwich Islands, it not been possible to include any information on emissions and removals on these islands.

[48]Save, as already mentioned, the Malvinas, South Georgia and South Sandwich Islands.

[49]Reports are available at https://unfccc.int/BURs.

d. 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.	For additional information on the mitigation co-benefits resulting from the adaptation measures see Section 7.2.3 National Adaptation Measures – Sectoral Measures
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:	
i) Domestic institutional arrangements, public participation and engagement with local communities and indigenous peoples in a gender-responsive manner;	Regarding the planning and implementation process, see sub-sections on Governance and Guiding Principles (pages 17 and 25, respectively). The absolute target of Argentina's Second NDC will be achieved by implementing a series of economy-wide mitigation and adaptation measures, generated by the different working groups at GNCC. This would allow the internalization of international commitments in local climate planning, in accordance with the terms and instruments established in the law on climate change.
ii. Contextual matters, including, inter alia, as appropriate:	
ii. b. Best practices and experience related to the preparation of the nationally determined contribution;	The institutionalization of governance for building climate policies in Argentina was essential for developing the Second NDC agreed upon by consensus among institutions at the federal level. In this regard, the joint planning framework of the climate policy through GNCC provides continuity and stability to the short-, medium- and long-term climate actions. Furthermore, it is worth noting the efforts made to build capacities among government agents and the public at large, with a view to generating a more substantive participation in the preparation of the Second NDC, agreed upon by consensus at the federal level.
ii. c. Other contextual aspirations and priorities acknowledged when joining the Paris Agreement;	The nationally defined Guiding Principles of Section 4 were taken into consideration for preparing this NDC and for its implementation at the domestic level. See page 25.

b) 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	Not applicable to the Argentine Republic.
c) 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;	Argentina participated in the 2018 Talanoa Dialogue, and the expectations are that Argentina's Second NDC will be taken into consideration for the first Global Stocktake, whose results will be submitted in 2023. Subsequent national reports (BURs or BTRs) and the outcomes of the Global Stocktake will feed into successive NDCs. It is worth noting the importance of this new mechanism to progressively increase the ambition, proposed by article 14 of the Paris Agreement, to contribute to achieving the mitigation, adaptation and means of implementation objectives, and thus be able to rise to the challenge of the climate crisis faced by our planet.
d) Each Party with a nationally determined contribution under Article 4 of the Paris Agreement that consists of adaptation actions and/or economic diversification plans resulting in mitigation co-benefits consistent with Article 4, paragraph 7, of the Paris Agreement to submit information on:	
i. How the economic and social consequences of response measures have been considered in developing the nationally determined contribution;	The importance of response measures leading to a fair transition has been assessed and considered a guiding principle. In this regard, it is deemed important to meet the specific needs and concerns of developing countries stemming from the economic and social impact of enforcing the response measures, in line with Article 4.8 of the UNFCCC and Article 4.15 of the Paris Agreement.

ii. 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 such as manufacturing and industry, energy and mining, transport and communication, construction, tourism, real estate, agriculture and fisheries.	Not assessed in Argentina's Second NDC.
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;	To account for its target, Argentina's Second NDC will follow an inventory-based approach to estimate anthropogenic greenhouse gases and carbon dioxide emissions and removals, pursuant to the 2006 IPCC Guidelines and in line with the requirements of Decision 4/CMA.1.
b. Assumptions and methodological approaches used for accounting for the implementation of policies and measures or strategies in the nationally determined contribution;	Follow-up of the implementation of the Second NDC's target will be carried out through the INGEI reported in forthcoming BURs, NCs and future BTRs. The soundness and transparency of INGEI and the domestic follow-up of the mitigation measures will be done via the National Information System on Climate Change, created by Article 17 of the Law on Climate Change.
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, of the Paris Agreement, as appropriate;	Argentina uses the 2006 IPCC Guidelines for national greenhouse gas inventories to estimate all categories in the country for which information was obtained. Thus, it meets the principles of quality in the preparation of inventories established by the IPCC regarding completeness, transparency, consistency, comparability, and accuracy.

d. IPCC methodologies and metrics used for estimating anthropogenic greenhouse gas emissions and removals;	The Global Warming Potential (GWP-100) is used for the Second NDC, based on the metrics of the Second IPCC Assessment Report, with the possibility of updating it in the future in accordance with Decision 18/CMA.1 (paragraph 37), and in line with what is set forth in Section 1.f.
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;	Not applicable to Argentina since they were not estimated in the INGEI reported in BUR 3.
ii. Approach used to account for emissions and removals from harvested wood products;	Not applicable to Argentina since they were not estimated in the INGEI reported in BUR 3.
iii. Approach used to address the effects of age-class structure in forests;	Not applicable to Argentina since they were not estimated in the INGEI reported in BUR 3.
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;	Although Argentina's Second NDC did not utilize baselines or benchmark levels, this text box specifies the assumptions and methodological approaches used to understand the Nationally Determined Contribution and estimate the pertinent emissions and removals, to ensure the document's transparency. Within the framework of the GNCC, the projection of emissions and removals was coordinated by the Secretariat for Climate Change, Sustainable Development and Innovation, and carried out together with the technical cadres of the enforcement agencies that provided the modelling of the explanatory variables. These are key variables that account for the greatest changes in GHG emissions in the country's different sectors. Among them, it is worth mentioning population, gross domestic product, energy demand and supply, cattle stocks, agricultural production, and land use change. The projection of emissions and removals for 2030 was carried out using a simplified model, consistent with the methodology and sources of emissions and removals estimated in the 2016 INGEI reported in BUR 3, in December 2019. In the NIR within BUR 3, reported in March 2020, details can be found on the methodology and the emission factors used for modelling purposes. In order to obtain the projections, several technical workshops were held to increase the ambition of the trajectories and maintain coherence and consistency between the different sectors. Each INGEI sector was modelled separately, and the results were then integrated and aggregated by the technical team of the National Climate Change Directorate. In the case of the variables related to the energy sector, the energy demand and supply models used for national energy planning were harnessed. The population's growing consumption demands together with energy efficiency measures in all sectors were considered, as well as a significant increase in the percentage of renewable energy and distributed generation, and a greater production of natural gas in absolute and relative terms regarding oil production. In the transport subsector, active policies were considered to increase the efficiency and use of natural gas and electricity. Biofuel blends were also included.

	For the IPPU sector, a slight increase in emissions is expected, given the growth in GDP; and for hydrofluorocarbon gases, compliance with the Kigali amendment was contemplated. Regarding waste, an increase is projected in the percentage of urban solid waste disposed of in landfills, as well as in the capturing of the methane they originate. These measures would allow the sector's emissions to be kept practically steady. In the livestock subsector, a slight increase in emissions was noted, mainly due to a greater production of cattle, poultry and pigs. In the case of cattle, an increase in production efficiency was considered. A higher level of emissions is also expected in agriculture due to increased production as a result of the use of fertilizers and improved crop yields. A decrease in emissions from the Forestry and Other Land Use subsector stems from a strong boost in forest plantations and a drastic reduction in deforestation. For all sectors, a unified economic growth percentage was used, which is consistent with the country's recovery and a sustained increase in population.
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 to the Argentine Republic.
iii. For climate forcers included in nationally determined contributions not covered by IPCC guidelines, information on how the climate forcers is estimated;	Not applicable to the Argentine Republic.
iv. Further technical information, as necessary;	Not applicable to the Argentine Republic.

g. The intention to use voluntary cooperation under Article 6 of the Paris Agreement, if applicable.	The Argentine Republic will not disclose its national position and decision-making regarding the potential use of any market mechanism that may be established under the Paris Agreement until negotiations on Article 6 of the Paris Agreement are concluded within the UNFCCC. Until then, any operation involving emission reduction units achieved in the country, both public and private, must be registered and have a clear-cut authorization from the National Government and, unless explicitly provided otherwise, all emission reductions across the national territory will be accounted for to achieve the NDC target.
6. How the Party considers that its nationally determined contribution is fair and ambitious in light of its national circumstances:	
a. How the Party considers that its nationally determined contribution is fair and ambitious in light of its national circumstances;	The Argentine Republic believes that an approach to the notions of equity, justice and ambition must be applied in the light of its national circumstances and based on the principle of common but differentiated responsibilities and respective capabilities.

b. Fairness considerations, including reflecting on equity;	The equity, fairness and ambition of this Contribution are analysed from several standpoints, in the understanding that there is no single indicator that can accurately reflect a global distribution of the Parties efforts that is equitable, fair, and ambitious. In this country, the factors accounting for the profile and trend of its emissions and removals are not related to merely population or economic aspects and, therefore, emission indicators by intensity do not fully address the country's equity, fairness, and ambition efforts. Likewise, as a developing country vulnerable to the impacts of climate change, the Argentine Republic has the responsibility of promoting actions and policies to achieve a sustainable, inclusive, and balanced development model, ensuring it does not leave anyone behind, and consistent with the 2030 Agenda and its Sustainable Development Goals. Although the country's emissions have increased in absolute terms with regard to 1990, there is a decrease in the historical trend of recent years, after reaching a peak in 2007. This accounted for a maximum share of 0.95%[50] of total global emissions for the same period. On the other hand, if we consider 2005 as the benchmark year, there was a 4.3% reduction of net emissions[51] in 2010 and of 9.6% in 2016. Since the policies and measures to respond to climate change must consider each country's circumstances and ensure coordination with the national development priorities, Argentina's Second NDC is considered fair, equitable and ambitious because: ▶ As at 2030 it will maintain a similar level of emissions to those reported in BUR 3 (2019); ▶ Through its target, it will achieve an 0.9% share of global emissions, according to the Emissions Gap Report 2019 projections[52]. Therefore, Argentina's share of emissions will remain under the maximum achieved in 2007;

[50] Argentina's 2007 emissions reported in the BUR amounted to 441.44 MtCO2e and, converted using the GWP 4AR instead of the 2AR to facilitate comparison with global EGR emissions, totalled 455.84 MtCO2e. Global 2007 emissions, according to the Emission Gap Report 2019 totalled 48,100 MtCO2e.

[51] Argentina's Third Biennial Report to UNFCCC. SGAyDS. 2019.

[52] According to the Emission Gap Report 2019, Table 2.2, page 11.

	▶ It submits an economy-wide unconditional and absolute emission reduction target, in fulfilment of Article 4.4 of the Paris Agreement. ▶ It includes an adaptation component, with a specific target; ▶ Efforts have been made to achieve a balanced approach among the mitigation, adaptation and means of implementation components, and to establish synergies among them; ▶ Improvements in terms of transparency have been included by providing the necessary information to facilitate Clarity, Transparency and Understanding, in fulfilment of paragraph 4.8 of the Paris Agreement, and the provisions of paragraph 7, Decision 4/CMA.1, together with the Second Adaptation Communication. Argentina, besides considering the three core dimensions of mitigation, adaptation and means of implementation, believes that the notions of ambition, fairness and equity entail the need for plans and policies to be inclusive and take into account cross-cutting contributions to promote synergies in climate action. In line with the above, the Second NDC moves forward in the design of a cross-cutting approach to the gender dimension across the different sectors, as well as of notions to ensure a just transition of the workforce. Likewise, the proposal is to deepen the role of education as a driver of social change and to consolidate a sound link with the scientific-technological system, as a source of knowledge, and potential tools to address climate change.

c. How the Party has addressed Article 4, paragraph 3, of the Paris Agreement;	Argentina's Second NDC entails an improvement with regard to the update of the first NDC of 2016, since it submits an unconditional, absolute target that is 27.7% more ambitious. Moreover, the current target was estimated using a model based on the INGEI 2016 reported in BUR 3, which means a significant improvement regarding INGEI 2014, corresponding to BUR 2, and used as the basis for estimating the previous target. This improvement in the quality of the inventories consists of a significant increase in the area represented, improvements in the calculation method and the emission factors used, greater consistency in the time series, a greater number of sources and sinks included – for instance, emissions associated with the use of lubricants, grease, and paraffin wax, and of products as substitutes for substances that deplete the ozone layer —among others[53]. In turn, it is an improvement in terms of the transparency of the information included when reporting, according to the requirements of the Katowice Decision 4/CMA.I guidelines on Clarity, Transparency and Understanding (ICTU). Finally, this Second NDC includes new sections on Guiding principles, Means of implementation, and Monitoring and Evaluation, which makes it easier to understand the goal in light of the country's national circumstances.

[53] In Table 46 of BUR 3 the main improvements between BUR 2 and BUR 3 are depicted, by sector and category.

d. How the Party has addressed Article 4, paragraph 4, of the Paris Agreement;	Argentina's Second NDC submits an economy-wide absolute target.
e. How the Party has addressed Article 4, paragraph 6, of the Paris Agreement.	Not applicable to the Argentine Republic.
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 2;	Argentina's Second NDC, as detailed in sections 6.a and 6.b, is fair and ambitious, and shows that the country's efforts are in line with the inputs and recommendations provided by science, with the collective efforts to achieve the objective of the Convention spelled out in Article 2, and with the purpose of the Paris Agreement, in light of the national capabilities and circumstances. Likewise, it reflects the national sustainable development priorities in the long term, depending on the necessary means of implementation. Finally, in line with this objective and in accordance with the invitation of the Paris Agreement in its article 4.19 and in decision 1 / CP.21, paragraph 35, in 2021, the Argentine Republic will submit its long-term low greenhouse gas emission development strategy.
b. How the nationally determined contribution contributes towards Article 2, paragraph 1(a), and Article 4, paragraph 1, of the Paris Agreement.	

Adaptation communication

This section should be considered as Argentina's Second Adaptation Communication, in accordance with Articles 7.10 and 7.11 of the Paris Agreement and Decision 9/CMA.1. Both frameworks guided the preparation and contents of the Adaptation Communication.

The Argentine Republic is a developing country particularly vulnerable to the adverse effects of climate change, whilst it has made early progress in identifying and planning adaptation measures. It hereby sets out a National Adaptation Goal, which contributes to the Global Goal on Adaptation established in article 7.1 of the Paris Agreement, within the context of sustainable development and poverty eradication.

Pursuant to the outlined objective, 35 priority adaptation measures were identified in seven of the country's sectors to address the different territorial, socioeconomic and environmental vulnerabilities to climate change. In turn, the measures consider the gender and diversity perspectives and contribute to other international regulatory frameworks, such as the 2030 Agenda for Sustainable Development, the Convention on Biological Diversity, the Convention to Combat Desertification, the Sendai Framework, and the Ramsar Convention on Wetlands of International Importance. It should be noted that several of the prioritized measures could have mitigation co-benefits.

The objective of this Adaptation Communication is to report on and highlight the progress and outcomes already achieved within the country's adaptation process, as well as Argentina's adaptation efforts so that they are recognized in the Global Stocktake. Likewise, it identifies barriers, financial support needs —particularly grants for adaptation—, technology transfer and capacity-building to move forward in the implementation of prioritized measures and includes a clear reference to the National Adaptation Plan, which spells out the objectives and proposed measures, as well as monitoring and evaluation actions.

Finally, and to facilitate understanding of this document as per the provisions of Decision 9/CMA.1, an indicative table is included with the contents of the Decision's Annex.

Argentina's adaptation context

National circumstances, institutional arrangements, and national legal frameworks

See Section 2.2 Legal Framework and 2.3 NDC Governance.

Argentina's vulnerabilities with regard to the adverse effects of climate change.

The Argentine Republic is a developing country particularly vulnerable to the adverse effects of climate change according to Article 7, paragraph 2, of the Paris Agreement, and Article 4, paragraph 8, of the UNFCCC: it has low-lying coastal areas, arid and semi-arid areas, forested areas and areas liable to forest decay, disaster prone areas, areas liable to drought and desertification, and areas with fragile ecosystems, including mountain ecosystems.

In most of the non-Patagonian areas of Argentina, in the period 1960-2010, an increase in mean temperature of around 0.5 °C was observed, with maximum temperatures over 1 °C in several zones of Patagonia. In the east and north of the country, changes in frequency of extreme temperatures were also noted, along with fewer frost spells and more heat waves. Moreover, the number of days per year with heat waves doubled between 1960 and 2010, and a considerable increase was noted with regard to the number of days with heat waves, particularly in the regions close to the city of Buenos Aires. In the temperature

projections, towards the end of the century an increase across the whole of the national territory is foreseen, mainly in the Northwest region, with an increase of over 3 °C for a high-concentration scenario (RCP8. 5) (PNAyM, 2019).

In turn, based on the information reflected in the 2019 PNAyMCC for the period 1960-2010, increases in the average annual rainfall were noted across most of Argentina, with interannual and interdecadal variations. The largest nominal increases were recorded in specific areas of the east of the country, with over 200 mm/year, although percentage increases were more significant in semi-arid areas.

This alteration has brought about important consequences in the region's water balance and hydrology. Thus, in the east and center of the province of Buenos Aires, south of Santa Fe and south of Corrientes, several fields have become permanent lakes and water bodies, such as the Mar Chiquita lake in Córdoba and the Picasa lake in Santa Fe, which have considerably increased their size. Simultaneously, a negative variation was recorded in the mean annual precipitation over the Patagonian Andes for the period 1960-2010. In the particular case of the Cuyo region, the trends in the flows of certain rivers in the north of Mendoza and in San Juan throughout the 20th century seem to indicate lower rainfall in high-mountain basins along the Cordillera. If this trend continues, it would affect, for instance, availability of the necessary irrigation for viticulture and fruit and vegetable farms. In the period 1960-2010, there was an increase in the frequency and intensity of extreme rainfall in most of the country, with higher values in some areas, such as the humid littoral region. This has translated into more frequent floods, also influenced by inappropriate land occupation and use, resulting in areas with high exposure and vulnerability, and water infrastructure exposed to different climate conditions to those for which they were planned.

Nevertheless, in the west and most notably in the north, the dry winter periods have become longer. In these regions, there is little or no rainfall in winter and, therefore, the increase in the maximum number of consecutive dry days indicates a shift towards an extension of the dry winter period. This has brought about problems in the availability of water for some populations and for livestock activities, creating more favorable conditions for grassland and forest fires.

In addition, the strong interannual and interdecadal variability of rainfall is largely accounted for by the El Niño-Southern Oscillation (ENSO) phenomenon: in the region in which Argentina is located, it causes precipitation over and above the average, whilst La Niña generates dry periods.

For a scenario of higher concentrations (RCP8.5), a decrease of between 10 and 20% in the mean annual rainfall is forecast for the end of the century over the west of Patagonia and in the mountain range of Mendoza, and an increase of the same characteristics in the center and most of the east of the country. Also, in line with recent observations, increases in the frequency of heavy rainfall events are projected.

In addition to the present and future climate conditions noted above, several other vulnerabilities and adverse climate impacts have been already identified as present or expected. They are listed in Table 1 for the different regions of Argentina, according to the differentiation based on the Third National Communication (TNC), submitted by our country.

Vulnerabilities and adverse impacts linked to climate change in different regions of the Argentine Republic

The Northwest region, comprises the provinces of Salta, Jujuy, Tucumán, Santiago del Estero and Catamarca

- For different reasons, some populations have difficulties in accessing water.
- Greater impacts foreseen due to floods and the pollution of drinking water and, therefore, an increase in internal migration.
- Increase in the number of heat waves, in a region that has greater social vulnerabilities vis-à-vis disasters.
- Settlements in low-lying areas can affect human health due to the spread of vectors which could reach out to other urban areas.
- More favorable conditions for forest, rural and grassland fires, and more stress for livestock and other productive sectors due to longer dry periods in winter and spring.
- Increase in the emergence of agricultural pests.
- Acceleration of desertification processes with an impact on ecosystems, changes in the geographical scope and extinction of the less tolerant species.
- Adverse impacts on tourism due to an increase in temperature that, for instance, fosters an increase in the frequency and intensity of algae and cyanobacteria, thus affecting water recreational activities.
- Incremental pressure on existing infrastructure, for instance, in electricity distribution and generation during heat waves or extended drought spells.
- More damages to road and hydraulic infrastructure, such as bridges, highways and dams, due to the incremental risk of floods.
- Retreat of glacier debris

The Northeast Region comprises the provinces of Chaco, Corrientes, Formosa, Entre Rios, Misiones and Santa Fe

- High risk of vector-borne diseases such as dengue, yellow fever and leishmaniasis.
- Flood-related diseases that have an impact on the population.
- The adverse impacts of climate change will promote an increase in internal migration seeking better economic livelihood conditions.
- Incremental impacts due to floods and waterlogging in communities and infrastructure, including rural roads.
- Increase in rainfall and other meteorological phenomena that have an impact on plantations and infrastructure (industrial, productive, housing, roads and other urban conditions).
- Extraordinarily low-water levels in the rivers affect water supply in most of the region, and also subsistence fishery activity.

- Greater exposure of low-income indigenous populations to climate change threats, due to their close relationship with nature and natural resources, loss of biodiversity, the endemic nature of the ecosystems in which they live, forced displacement from their territories, their fragile economic conditions and little participation in decision-making spheres.

- Loss of crops overall, including soybean, sunflower, cotton, corn, wheat and rice, and an increase in agricultural pests.

- Risks for the production system and indirect consequences on animal, plant and human health, and on the health conditions in general due to an increase in the region's mean temperatures.

- Increase in periods of extreme drought, leading animals to die and thus harming livestock farmers (particularly small farmers) and, in turn, promoting favorable conditions for fires and damaging native forests, wild fauna and flora.

- Soil erosion due to drought and an increase in rainfall, deforestation and degradation that bring about changes in the physical conditions and loss of soil fertility.

- Greater impact of heat waves, particularly on the most vulnerable social groups.

The Cuyo Region comprises the provinces of Mendoza, San Juan, La Rioja and San Luis

- More protracted periods of greater water scarcity in the region, with significant negative effects on all sectors of the population, particularly on vulnerable communities and on agriculture and livestock activities.

- Restrictions on the availability of water for irrigation of olive, viticulture, fruit and vegetable farms, and also for hydroelectricity generation and other industries, such as mining.

- More periods of extreme drought, which promote favorable conditions for forest, rural and grassland fires, harming wild fauna and flora.

- Acceleration of desertification processes with an impact on ecosystems, and changes in the geographical scope and extinction of the less tolerant species.

- Increase in regional mudslides in the way of extraordinary events.

The Patagonia and Northern Patagonia regions, comprising the provinces of La Pampa, Neuquén, Río Negro, Chubut, Santa Cruz, Tierra del Fuego, Antarctica and South Atlantic Islands

- Reduction in river water flows and decrease in water availability which negatively impacts hydroelectricity generation, irrigation, water supply and recreation and tourism activities.

- Flood risks and loss of infrastructure due to an increase in the sea level along coastal areas.

- Greater frequency and intensity of extreme events, such as rainfall, wind, frost, snowfall and heat waves.

- High exposure of housing and infrastructure to such extreme events, and to early thawing that affects the stability of mountainsides, riverbeds and slopes, particularly in areas that are either steep or have no vegetation.

- Impacts on the electricity system and roads facing more frequent and intense extreme events, with a potential to isolate populations that are left with no supplies.
- Increase in drought events, greater evapotranspiration and more intense desertification.
- Greater risk of soil loss from erosion that deepens the desertification process and, therefore, affects agriculture and livestock production activities, bringing about a rural exodus and a greater concentration of people in cities.
- Negative impact on mountain and winter tourism activities; for instance, a shortening of the ski season.
- A greater risk of avalanches due to a reduction in the snow-covered area and its thickness.
- Loss of scenic resources due to a retreat of glaciers.
- Increase in the periods of extreme drought, favoring forest fires and exposing communities and wild fauna and flora to more damages.
- More vectors and a greater spread of vector-borne diseases due to an increase in mean temperatures and other climate conditions.

The Center Region, comprising the provinces of Buenos Aires and Cordoba, and the Autonomous City of Buenos Aires

- Increase in the frequency and duration of heat waves, particularly affecting the elderly and children.
- Social vulnerability in face of hot climate events overall, considering the heat island effect.
- Incremental pressure on existing infrastructure; for instance, on electricity distribution constraints at times of high demand due to extreme temperatures.
- Greater loss of agriculture and livestock activities due to permanent or recurrent floods or droughts.
- Increase in the mean sea level in all provinces with a maritime coastline.
- Incremental impacts due to floods and waterlogging in rural communities.
- Potential ecological, tourism, residential and infrastructure-related effects due to coastal erosion and an increase in the sea level.
- Public services infrastructure affected as a result of floods linked to the mean level of the de la Plata river.
- Incremental damages to infrastructure and housing located in low-lying and floodable areas because of short, heavy downpours, particularly in informal settlements.
- Greater presence of vectors and higher risk of disease transmission, such as dengue, zika and chikunguña.
- Acceleration of desertification processes.
- Increased periods of extreme drought that promote favorable conditions for forest, rural and grassland fires and damage ecosystems and communities as a result of habitat losses.

Source: PNAyM, 2019, based on the survey carried out together with COFEMA.

It is important to recognize that the conditioning factors based on gender, social dimension, ethnicity, age and religion, among others, influence the development and determination of vulnerabilities and capacities, generating differences and inequalities when facing and recovering from the impacts of climate change[54]. Along the same lines, the higher rate of job insecurity and unemployment, income inequality, as well as participation in lower-productivity jobs, place women in a situation of greater vulnerability in face of disasters caused by climate change[55].

In recent years, Argentina has experienced an increase in the femininity index of poor households, which means there is a greater proportion of women in these homes. In this regard, the Economic Commission for Latin America and the Caribbean (ECLAC) estimates that, by 2013, women devoted an average of 15.2 weekly hours to paid work, compared to 33.2 weekly hours for men, and an average of 42.4 hours to unpaid work compared to 17.3 hours in the case of men[56]. Within this framework, and carrying out a more thorough gender analysis, women are in a greater state of vulnerability in the informal settlements in urban areas as a result of the lack of provision of public services, deficiencies in housing and habitat, and high probabilities of experiencing violence, which are exacerbated during a crisis. Given the dual role of rural women, who perform reproductive and productive tasks, they face greater barriers to the development and marketing of products, and have less experience in the management and use of credit. In addition, they have restrictions on land tenure and face a lack of drinking water[57].

Likewise, from a cross-border approach, vulnerabilities associated with shared resources have been identified, which are an opportunity for cooperation in adaptation management. In this regard, in the del Plata basin[58], the hydroclimatic scenarios of the main water courses foresee, by the end of the century, decreases in summer rainfall in the Paraguay river, upstream that will have an impact on access to water, agricultural productivity, energy generation and ecosystems, increases in rainfall —depending on the time of year— in the Paraguay river (downstream), the Paraná river (upstream and downstream), the Uruguay river (downstream) and the de la Plata river, and year-round increases in rainfall in the Uruguay river (upstream), with impacts linked to increased frequency and intensity of riverine flooding and coastal erosion.

Similar analyses were carried out in the Andes Cordillera, where a greater risk regarding the loss of permanent snow areas and their thinning out is envisaged, with very important effects on the hydrological regime in these mountains, affecting access to water, tourism and other productive activities, including viticulture and fruit and vegetable farms.

Notwithstanding the vulnerabilities identified above, Figure 5 shows Argentina's main vulnerabilities, based on those already spatially summarized during the preparation of the PNAyM, as well as those stemming from the Convention.

[54]Ministry of the Interior & Transport (2012). Documento País sobre Riesgo de Desastres en la Argentina. Available at: link

[55]Ibid.

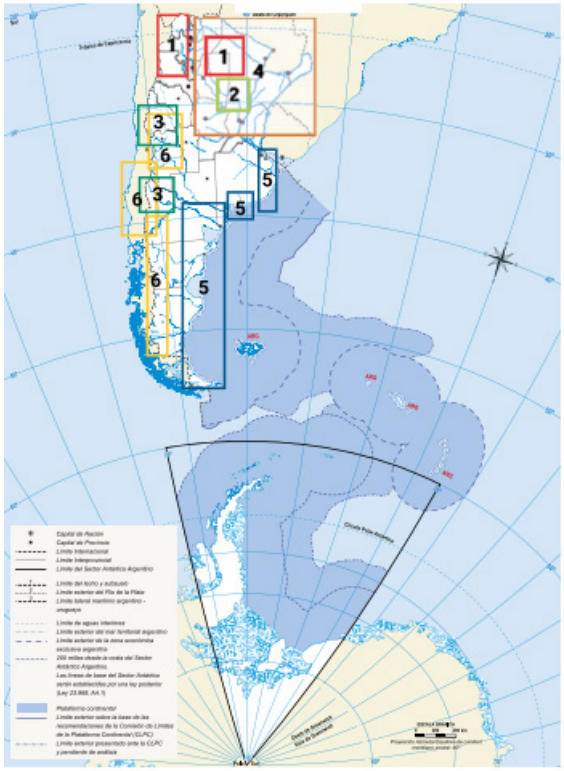
[56]ECLAC. Gender Equality Observatory for Latin America and the Caribbean. Available at: link

[57]Ministry of the Interior & Transport (2012). Documento País sobre Riesgo de Desastres en la Argentina. Available at: link

[58]Comité Coordinador de la Cuenca del Plata (2015). Programa Marco. Available at: link

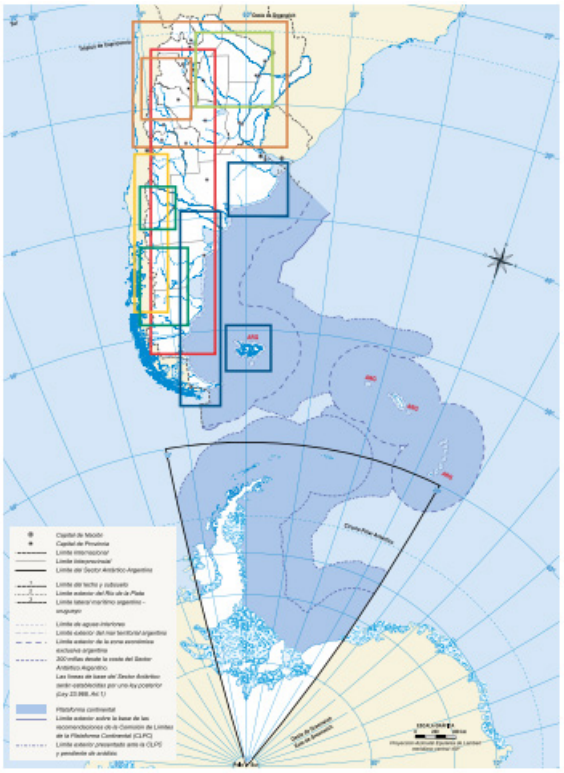
Map of Argentina's main vulnerabilities vis-à-vis the adverse effects of climate change

Threats



- Increase in mean annual temperature
- Water stress due to an increase in temperature
- High frequency of extreme rainfall and floods
- Potential water crises
- Lower average water flow in the del Plata basin rivers
- Sea level rise
- Retreat of glaciers

Vulnerabilities



- Areas with forest cover or exposed to forest decay
- Areas with fragile ecosystems
- Areas with fragile mountain ecosystems
- Arid and semi-arid areas
- Areas exposed to drought or desertification
- Low-lying coastal areas

Ex ante adaptation cycle

National Adaptation Goal

In order to have a broad strategic framework for the development of adaptation measures, the following National Adaptation Goal has been established:

> By 2030, Argentinians will be aware of the adverse effects of climate change, the pertinent adaptation measures, and will have built capacities that will allow them to respond in solidarity to the urgent challenge of protecting the planet.
>
> Argentina's climate policy will have increased the adaptation capabilities, strengthened resilience and diminished the vulnerability of the different local governments and social, economic and environmental sectors, through measures that, inter alia, prioritize the vulnerable communities and social groups and mainstream gender perspective and intergenerational equity. This process will be based on the best scientific knowledge available and could generate mitigation co-benefits.
>
> All the above will be carried forward with a view to contributing to sustainable development, building a more equitable, just, solidarity-based society, and to achieving an appropriate response to climate change, compatible with the Paris Agreement objectives.

Cross-cutting approaches guiding adaptation

Section 2 details all the guiding principles and approaches used by the country to guide the NDC implementation. Specifically for the Adaptation Communication, the following cross-cutting approaches will be taken into consideration: gender and diversity, Ecosystem-based Adaptation, Community-based Adaptation, and comprehensive disaster risk management[59].

National adaptation measures

Tables 2 to 14 detail the main adaptation measures to be implemented in fulfillment of the National Goal described above. The measures include a comprehensive description and identify the main vulnerabilities (Section 5.1.4) to be addressed by each of them. There is then a description, either of the overall benefits or mitigation co-benefits, if appropriate, and to which international frameworks and conventions each one shall contribute; namely, the Sustainable Development Goals adopted by the United Nations General Assembly within the 2030 Agenda, the Convention on Biological Diversity (CBD), the United Nations Convention to Combat Desertification (UNCCD), the Sendai Framework for Disaster Risk Reduction 2015-2030, or the Ramsar Convention on Wetlands of International Importance. Additionally, there is a description of their link to the National Climate Change Act.

The measures also include a gender-based analysis, by establishing classification criteria for each of them according to its impact on reducing inequality. In this regard, it is deemed appropriate to monitor all policies from this perspective, so as to identify opportunities to

[59]See Argentina's Second NDC's, Section 4: Guiding Principles.

reduce the gender-based inequality gap and also warn about potential negative impacts and their correction. Hereafter is a categorization based on a decreasing impact order:

- No gender-related impacts reported: measures that, a priori, do not consider the gender approach to be applicable or do not highlight or analyze their impact on social relationships.

- Potential gender-differentiated impact: measures that identify and recognize existing gender inequalities, although its objectives do not propose to transform or address such inequalities. These measures may include data disaggregated by gender or somehow mention gender. These are measures that have the potential to promote positive actions to reduce gaps but, by an action or omission, do not specify any guidelines in that regard.

- Gender-gap transformations: measures that seek to overcome gender-based inequalities and promote effective gender equity. Gender transformative policies identify, understand and implement actions to reduce gender gaps and overcome historical gender biases in policies and interventions, and contribute to actively promoting gender equality. These measures may include gender analyses showing existing gender gaps, as well as their causes and related factors.

Cross-cutting measures or related to capabilities

Cross-cutting adaptation measures in prioritized sectors

Table 2. Strengthening the capacities of teams at the relevant government offices for the preparation of the PNA, response plans and sector-based adaptation policies

Contributes to reducing the following vulnerabilities:

- Still incipient adaptation capabilities.

Overall co-benefits:

- On occasions, it is advisable to comprehensively strengthen capacities, in adaptation and mitigation, to identify the co-benefits, also at the local level, given the lack of technical staff that must address both matters directly.

Link with Law No. 27,520:	Contribution to other international frameworks:	Gender perspective:
Articles 18.f; 19.k; & 25.	SDG: 13, 14 y 17; CBD: Preamble and Articles 12 & 13; UNCCD: art. 3c, 10.4, 19, A.III. 4.a; Sendai: 24g, 24j, 27 and 33f; and Ramsar: 4.5.	Supports gender-gap transformations.

Table 3. Supporting the formulation of response plans to strengthen the construction of national climate policy according to the provisions of Law No. 27,520

Contributes to reducing the following vulnerabilities:

- Still incipient adaptation capabilities.
- Socio-economic vulnerabilities to climate or geophysical events by subnational region.

Overall co-benefits:

- According to legislation, the response plans mainstream adaptation and mitigation measures.

Link with Law No. 27,520:	Contribution to other international frameworks:	Gender perspective:
Article 20.	SDG: 13 & 17; CBD: Art. 6.a, 6.b; 10.e; UNCCD: Art 3.c, 10;	Potential gender-differentiated impact.

	Sendai: 19.b, 19.f, 27.a, 27.b, & 27.h, and Ramsar: 3.1.	

Table 4. Supporting an adaptation approach of sector-based action plans, together with different government offices, mainstreaming them in national climate policy

Contributes to reducing the following vulnerabilities:

- Still incipient adaptation capabilities.
- Socio-economic vulnerabilities to climate or geophysical events by subnational region.

Overall co-benefits:

- Sector-based plans can include adaptation and mitigation, at least for sectors and measures with clear co-benefits.

Link with Law No. 27,520: - Articles 16, 18, 19, 21 & 22.	Contribution to other international frameworks: SDG: 13 & 17; CBD: Art. 6 & 10.e; UNCCD: 3.b, 3.c; Sendai: 19.b & 27.a, and Ramsar: 3.1.	Gender perspective: Supports gender-gap transformations.

Table 5. Promoting coordination of the PNA's M&E system with the National Information System on Climate Change established in Law No. 27,520, Article 17

Contributes to reducing the following vulnerabilities:

- Still incipient adaptation capabilities.
- Socio-economic vulnerabilities to climate or geophysical events.

Overall co-benefits:

- Monitoring and evaluation systems may include adaptation and mitigation-related aspects, at least for sectors and measures with clear co-benefits.

Link with Law No. 27,520: ▸ Articles 17, 19.i & 19.j.	Contribution to other international frameworks: SDG: 13 & 17; CBD: Art. 7, 12; UNCCD: Art. 8, 10.2.g, 10.4, 16, 10.2.d, 10.3.a, 16, 17, AIII.4.a, AIII.4.h, AIII.5; Sendai: 24.j, 27.e, 23, 24.a, 24.c, 24.d, 27.e, and Ramsar: 4.3.	Gender perspective: Potential gender-differentiated impact.

Table 6. Supporting the ongoing development of the climate information services (among them, the Early Warning Systems), promoting adaptation-related research, development and innovation

Contributes to reducing the following vulnerabilities:

- Still incipient adaptation capabilities.
- Socio-economic vulnerabilities to climate or geophysical events.

Overall co-benefits:

- Information services, as well as research, development and innovation may include adaptation and mitigation-related aspects, at least for the sectors and measures with clear co-benefits.

Link with Law No. 27,520: ▸ Articles 17 & 26.	Contribution to other international frameworks: SDG: 13 & 17; CBD: Art. 14.c & 17; UNCCD: Art. 8, 10.2.e, 17, 18.1.e & 19.3.b; Sendai: 19.g, 24 & 27.e, and Ramsar: 4.3.	Gender perspective: Potential gender-differentiated impact.

Table 7. Mainstreaming comprehensive disaster risk management in the National Adaptation Plan, in the response plans and in the relevant adaptation related policies and measures, including the implementation of those aimed at increasing the response capabilities of human settlements, with the organized participation of the communities involved

Contributes to reducing the following vulnerabilities:

- Still incipient adaptation capabilities.

▶ Socio-economic vulnerabilities to climate or geophysical events.		
Overall co-benefits: ▶ Not applicable.		
Link with Law No. 27,520: ▶ Articles 18.d, 19.h & 22.d.	Contribution to other international frameworks: SDG: 11 & 13; CBD: Art 14.e; UNCCD: 10.1, 10.3.b, AIII.4.g; Sendai: 16, 17, 18, 30.b, 30.h, 30.f, and Ramsar: 3.1 & 2.	Gender perspective: Supports gender-gap transformations.

Table 8. Establishing processes and designing tools for mainstreaming Ecosystem-based Adaptation in the PNA, response plans and policies and measures stemming from the GNCC		
Contributes to reducing the following vulnerabilities: ▶ Still incipient adaptation capabilities. ▶ Socio-economic vulnerabilities to climate or geophysical events, particularly related to ecosystem-based services.		
Overall co-benefits: ▶ Ecosystem conservation allows different ecosystem-based services which frequently have comprehensive effects on adaptation and mitigation.		
Link with Law No. 27,520: ▶ Articles 2.a, 2.b, 22.c, 22.g, 22.h & 22.i.	Contribution to other international frameworks: SDG: 6, 11, 12, 13, 14 & 15; CBD: Art. 6.a, 6.b, 7.a, 8, 10; UNCCD: Art. 2.2, 10.1; Sendai: 5, 28.d, 30.n, 30.g, 24.g, and Ramsar: 2.6, 3.1, 3.2 & 4.1.	Gender perspective: Potential gender-differentiated impact.

Table 9. Establishing processes and design tools for mainstreaming gender perspective in the PNA, response plans and policies and measures stemming from the GNCC

Contributes to reducing the following vulnerabilities:

- Still incipient adaptation capabilities.
- Socio-economic vulnerabilities to climate or geophysical events, particularly related to gender inequalities.

Overall co-benefits:

- Gender perspective and diversity mainstreaming processes may include adaptation and mitigation-related aspects, at least for sectors and measures with clear co-benefits. This would create, *inter alia*, opportunities to improve the income of women and LGBTI+ in production activities —including energy and farming—, improve access, inclusion and participation in decision-making —including several adaptation-related aspects such as public services, health, livelihoods, etc.

Link with Law No. 27,520: - Article 4.c.	Contribution to other international frameworks: SDG: 5, 10 & 13; CBD: Preamble; UNCCD: Preamble, Art. 5.d, 10.2.f, 19.1.a & 3.e; Sendai: 19.d & 36.a.i, and Ramsar: 3.1.	Gender perspective: Supports gender-gap transformations.

Table 10. Establishing processes and design tools for mainstreaming Community-based Adaptation in the PNA, response plans and policies and measures stemming from the GNCC

Contributes to reducing the following vulnerabilities:

- Still incipient adaptation capabilities.
- Socio-economic vulnerabilities to climate or geophysical events, particularly related to the community.

Overall co-benefits:

- The planning and implementation of climate policies at the community level may include adaptation and mitigation-related aspects, at least for the sectors and measures with clear co-benefits. This builds on the fact that the community usually observes problems holistically, regarding their diagnosis and the quest for solutions.

Link with Law No. 27,520: ▶ Articles 2.a, 2.c, 4.c & 25.	Contribution to other international frameworks: SDG: 11 & 13; CBD: Art. 8.j & 10.d;	Gender perspective: Supports gender-gap transformations.
	UNCCD: Art. 3.a, 10.2.e, 16.b & 18.2; Sendai: 24.1, 30.j, 33.b & 36, and Ramsar: 3.1.	

Table 11. Promoting a participatory process for including intersectoral and interjurisdictional matters, and key stakeholders within the GNCC and the Expert Advisory Council, and specific mechanisms in the process of outlining and implementing the PNA

Contributes to reducing the following vulnerabilities: ▶ Still incipient adaptation capabilities. ▶ Socio-economic vulnerabilities to climate or geophysical events.		
Overall co-benefits: ▶ Participatory processes for climate policy formulation and implementation may include adaptation and mitigation-related aspects, at least for the sectors and measures with clear co-benefits.		
Link with Law No. 27,520: ▶ Articles 7, 8, 12, 13, 14 & 25.	Contribution to other international frameworks: SDG: 13, 16 & 17; CBD: Preamble, Art. 14.1.a; UNCCD: Preamble, Art. 5.d, 10.2.f & 19.1.a; Sendai: 19.d, 26, 33.a & 36, and Ramsar: 3.1.	Gender perspective: Supports gender-gap transformations.

Table 12. Fostering environmental education and culture through awareness-raising and promoting knowledge on climate change impacts, risks and vulnerabilities, with a view to having an effective public policy on adaptation

Contributes to reducing the following vulnerabilities:

- Still incipient adaptation capabilities.
- Socio-economic vulnerabilities to climate or geophysical events.

Overall co-benefits:

- Educational, social and community awareness-raising may include adaptation and mitigation-related aspects, at least for the sectors or measures with clear co-benefits. This builds on society's outlook that usually observes problems holistically, regarding their diagnosis and the quest for solutions.

Link with Law No. 27,520:	Contribution to other international frameworks:	Gender perspective:
- Articles 18.f, 19.k & 25.	SDG: 4, 12 & 13; CBD: Art. 12 & 13; UNCCD: Art. 5.d, 10.4, 18.2.c, 19, A.III. 4.a; Sendai: 19.f, 24.g, 24.l, 24.m, 33.h, 25.f, 36.d, and Ramsar: 4.3 & 4.5.	Supports gender-gap transformations.

Table 13. Reinforcing the development of hydro-meteorological models, allowing appropriate projections to be drawn up on the necessary atmospheric and hydrological variables for managing environmental risks, including extreme events

Contributes to reducing the following vulnerabilities:

- Still incipient adaptation capabilities.
- Socio-economic vulnerabilities to climate or geophysical events.
- Electricity-generation risks.

Mitigation co-benefits:

- Not applicable.

Table 13. Reinforcing the development of hydro-meteorological models, allowing appropriate projections to be drawn up on the necessary atmospheric and hydrological variables for managing environmental risks, including extreme events

Contributes to reducing the following vulnerabilities:

- Still incipient adaptation capabilities.
- Socio-economic vulnerabilities to climate or geophysical events.
- Electricity-generation risks.

Mitigation co-benefits:

- Not applicable.

Link with Law No. 27,520: ▸ Articles 2c, 18, 19 & 22a.	Contribution to other international frameworks: SDG: 13; CBD: Not applicable; UNCCD: 10.1, 10.3a, AIII.4a & AIII.4h; Sendai: 25g & 33b, and Ramsar: 4.3.	Gender perspective: Potential gender-differentiated impact.

Table 14. Outlining territorial planning to contemplate environmentally sustainable land use

Contributes to reducing the following vulnerabilities:

- Still incipient adaptation capabilities.
- Socio-economic vulnerabilities to climate or geophysical events.

Mitigation co-benefits:

- Many sustainable land use strategies lead to reducing vulnerability, whilst diminishing, avoiding or removing emissions.

Link with Law No. 27,520: ▸ Articles 2c, 18, 19 & 22h.	Contribution to other international frameworks: SDG: 13; CBD: Not applicable; UNCCD: AIII.4f; Sendai: 33j & 33k, and Ramsar: 3.1.	Gender perspective: Potential gender-differentiated impact.

Sector-based measures

Sector-based measures

Agriculture and livestock

Table 15. Carrying out a sustainable and resilient management of agroecosystems that contribute to achieving food security vis-à-vis the impacts of climate change

Contributes to reducing the following vulnerabilities:

- Still incipient adaptation capabilities.
- Socio-economic inequality and inequity reduction, including gender-based inequalities.

Diminishes impacts related to:

- An increase in mean annual temperature.
- Water stress due to temperature increases.
- A potential water crisis.
- Lower average water flow in the del Plata river basin.

Increases resilience in:

- Disaster prone areas.
- Fragile and degraded ecosystems.
- Arid and semi-arid areas.
- Areas exposed to drought and desertification.
- Areas of high agricultural, livestock, forestry and fishery value.

Mitigation co-benefits:

- The sustainable management of agroecosystems reduces the vulnerability of agricultural production and increases agroecosystem resilience. Furthermore, the best agricultural and livestock practices lead to reducing emission intensity and reinforce carbon sequestration.

Link with Law No. 27,520: - Articles 2c, 18, 19, 22a, 22c, 22f, 22h & 22i.	Contribution to other international frameworks: SDG: 1, 2, 12, 13 & 15; CBD: 1, 6, 7, 8 & 10 UNCCD: 10.1, 10.3e, AIII.4c & AIII.4f; Sendai: 30p, and Ramsar: 3.1.	Gender perspective: Potential gender-differentiated impact.

Table 16. Developing and promoting climate risk prevention and transfer of instruments and assistance in the event of an agricultural emergency

Contributes to reducing the following vulnerabilities:

- Still incipient adaptation capabilities.
- Socio-economic inequality and inequity reduction, including gender-based inequalities.

Diminishes the impacts related to:

- Water stress due to an increase in temperatures.
- A potential water crisis.
- Frequent extreme rainfall and floods.
- Increase in extreme events.

Increases resilience in:

- Disaster prone areas.
- Fragile and degraded ecosystem.,
- Arid and semi-arid areas.
- Areas exposed to drought and desertification.
- Areas of high agricultural, livestock, forestry and fishery value.

Mitigation co-benefits:

- Not applicable.

Link with Law No. 27,520:	Contribution to other international frameworks:	Gender perspective:
▸ Articles 2c, 18, 19, 22a, 22c, 22f, 22h & 22i.	SDG: 1, 2, 12 & 13; CBD: Not applicable: UNCCD: Not applicable; Sendai: 30b & 31b, and Ramsar: 3.1.	Potential gender-differentiated impact.

Table 17. Implementing measures that foster research, development and skill-building for climate change adaptation in the agricultural sector

Contributes to reducing the following vulnerabilities:

- Still incipient adaptation capabilities.
- Socio-economic inequality and inequity reduction, including gender-based inequalities.

Diminishes the impacts related to:

- Water stress due to an increase in temperatures.
- A potential water crisis.
- Frequent extreme rainfall and floods.
- Increase in extreme events.

Increases resilience in:

- Disaster prone areas.
- Arid and semi-arid areas.
- Areas exposed to drought and desertification.
- Fragile and degraded ecosystems.
- Areas of high agricultural, livestock, forestry and fishery value.

Mitigation co-benefits:

- None.

Link with Law No. 27,520:	Contribution to other international frameworks:	Gender perspective:
- Articles 2c, 18, 19 & 22i.	SDG: 1, 2, 12 & 13; CBD: 1, 6, 7, 8, 10; UNCCD: 4c, 8.3a, 8.3e, 10.3c & AIII.4c; Sendai: 30p, and Ramsar: 4.3.	Supports gender-gap transformations.

Production

Table 18. Increasing resilience of the industrial complexes and areas vis-à-vis extreme climate events

Contributes to reducing the following vulnerabilities:

- Still incipient adaptation capabilities.

Diminishes the impacts related to:

- High frequency of extreme rainfall and floods.
- A potential water crisis.
- Sea level rise.

Increases resilience in:

- Disaster prone areas.
- Low-lying coastal areas.

Mitigation co-benefits:

- Implementing an agenda of adaptation measures in industrial complexes and areas would also lead to developing a mitigation agenda for key, emission-intensive industrial processes.

Link with Law No. 27,520:	Contribution to other international frameworks:	Gender perspective:
Articles 2c, 18, 19, 22a & 22d.	SDG: 1, 8, 9, 12 & 13; CBD: Not applicable; UNCCD: Not applicable; Sendai: 30o, and Ramsar: Not applicable.	Potential gender-differentiated impact.

Table 19. Modeling and implementing impact scenarios for the industrial sector

Contributes to reducing the following vulnerabilities:

- Still incipient adaptation capabilities.
- Socio-economic inequities and inequalities, including those related to gender.

Diminishes impacts related to:

- High frequency of extreme rainfall and floods.
- A potential water crisis.
- Sea level rise.
- Lower mean water flow in the del Plata basin rivers.

Increases resilience in:

- Areas prone to disasters.
- Low-lying coastal areas.
- Areas with forest cover exposed to deterioration.
- Areas with fragile ecosystems.

Mitigation co-benefits:

- Avoiding losses due to the impact of disasters on the industrial sector can reduce energy demand because of repairs, commissioning of machinery and restructuring of plants and, therefore, diminish greenhouse gas emissions.

Link with Law No. 27,520:	Contribution to other international frameworks:	Gender perspective:
- Articles 2c, 18, 19, 22a & 22d.	SDG: 8, 9, 12 & 13; CBD: Not applicable; UNCCD: Not applicable; Sendai: 25b & 30o, and Ramsar: Not applicable.	Potential gender-differentiated impact.

Tourism

Table 20. Increasing resilience of tourist destinations that are highly vulnerable to climate change, including glaciers, important ecosystems and coastal areas

Contributes to reducing the following vulnerabilities:

- Still incipient adaptation capabilities.
- Socio-economic inequities and inequalities, including those related to gender.

Diminishes impacts related to:

- Increased mean annual temperature.
- High frequency of extreme rainfall and floods.
- A potential water crisis.
- Sea level rise.
- Retreat of glaciers.

Increases resilience in:

- Disaster-prone areas.
- Fragile ecosystems.
- Low-lying coastal areas.

Mitigation co-benefits:

- Implementing an agenda of adaptation measures at vulnerable tourist destinations would also lead to developing a mitigation agenda.

Link with Law No. 27,520:	Contribution to other international frameworks:	Gender perspective:
- Articles 2c, 18, 19, 22a, 22c, 22d, 22g, 22h & 22j.	SDG: 1, 8, 9, 11, 12, 13 & 15; CBD: Not applicable; UNCCD: Not applicable; Sendai: 30q, and Ramsar: 3.1 & 3.2.	Supports gender-gap transformations.

Health

Table 21. Implementing prevention measures to protect human health vis-à-vis climate change impacts.

Contributes to reducing the following vulnerabilities:

- Still incipient adaptation capabilities.
- Socio-economic inequities and inequalities, including those related to gender.
- Forced displacements due to environmental causes.

Diminishes impacts related to:

- Increased mean annual temperature.
- Water stress due to increases in temperatures.
- High frequency of extreme rainfall and floods.
- A potential water crisis.
- Lower average water flow in the *del Plata* river basin.

Increases resilience in:

- Areas with forestry cover.
- Areas or exposed to deterioration.
- Fragile ecosystems.
- Areas exposed to drought or desertification.
- Arid and semi-arid areas.
- Low-lying coastal areas.

Mitigation co-benefits:

- Not applicable.

Link with Law No. 27,520: - Articles 2c, 18, 19 & 22b.	Contribution to other international frameworks: SDG: 13; CBD: Not applicable; UNCCD: Not applicable; Sendai: 31e, 30k & 30i, and Ramsar: Not applicable.	Gender perspective: Supports gender-gap transformations.

Table 22. Strengthening the response of the health system and communities to extreme climate events, including heat waves, cold waves and floods

Contributes to reducing the following vulnerabilities:

- Still incipient adaptation capabilities.
- Socio-economic inequities and inequalities, including those related to gender.
- Forced displacements due to environmental causes.

Diminishes impacts related to:

- Increased mean annual temperature.
- Water stress due to temperature increases.
- High frequency of extreme rainfall and floods.
- A potential water crisis.
- Sea level rise.

Increases resilience in:

- Disaster-prone areas.
- Fragile ecosystems.
- Low-lying coastal areas.

Mitigation co-benefits:

- Not applicable.

Link with Law No. 27,520:	Contribution to other international frameworks:	Gender perspective:
Articles 2c, 18, 19, 22a, 22b & 22d.	SDG: 1, 3, 6, 11 & 13; CBD: Not applicable; UNCCD: Not applicable; Sendai: 31e, 30k & 30i; and Ramsar: Not applicable.	Supports gender-gap transformations.

Table 23. Strengthening the response of the health system and the communities to an increase in the spread of climate-sensitive diseases transmitted by vectors and rodents

Contributes to reducing the following vulnerabilities:

- Still incipient adaptation capabilities.
- Socio-economic inequities and inequalities, including those related to gender.

Diminishes impacts related to:

- Increased mean annual temperature.
- Water stress due to temperature increases.
- High frequency of extreme rainfall and floods.
- A potential water crisis.
- Lower average water flow in the del Plata basin rivers.

Increases resilience in:

- Areas with forestry cover.
- Areas exposed to deterioration.
- Fragile ecosystems.
- Areas exposed to drought or desertification.
- Arid and semi-arid areas.
- Low-lying coastal areas.

Mitigation co-benefits:

- Not applicable.

Link with Law No. 27,520:	Contribution to other international frameworks:	Gender perspective:
- Articles 2c, 18, 19, 22a, 22b & 22d.	SDG: 1, 3, 6, 11 & 13; CBD: Not applicable; UNCCD: Not applicable; Sendai: 31e & 30i, and Ramsar: Not applicable.	Supports gender-gap transformations .

Transport and infrastructure

Table 24. Strengthening the design and maintenance of climate-resilient transport infrastructure including railways, highways (bridges and tunnels), rural roads, ports and airports

Contributes to reducing the following vulnerabilities:

- Still incipient adaptation capabilities.
- Socio-economic inequities and inequalities, including those related to gender.

Increases resilience in:

- Railway, road and airport infrastructure vis-à-vis high temperatures and the high frequency of rainfalls, extreme storms and floods.
- Road safety.
- Security in accessing and operating ports and airports vis-à-vis sudden or slow onset climate events.
- Transport infrastructure in disaster-prone and low-lying coastal areas.

Mitigation co-benefits:

- Resilience and sustainability of transport infrastructure allow greater accessibility to the territory with less travel distances, fewer interruptions for the just in time arrival of goods and passengers, whilst reducing emission intensity per transported unit.

Link with Law No. 27,520:	Contribution to other international frameworks:	Gender perspective:
▸ Articles 2c, 18, 19, 22a, 22d, 22f, 22g & 22h.	SDG: 1, 7, 11, 12 & 13; CBD: Not applicable; UNCCD: Not applicable; Sendai: 33c, 30h & 30l; and Ramsar: Not applicable.	Potential gender-differentiated impact.

Table 25. Developing sustainable and climate-resilient river and maritime transport infrastructure

Contributes to reducing the following vulnerabilities:

- Still incipient adaptation capabilities.
- Socio-economic inequities and inequalities, including those related to gender.

Increases resilience in:

- Navigational safety vis-à-vis an increase in tide levels and changes in ocean conditions.
- Navigational safety in view of the high frequency of extreme rainfalls and floods that increase water flow in rivers.
- Navigational safety due to droughts and a decrease in the mean flows of the del Plata basin rivers.

Mitigation co-benefits: ▸ Development of new passenger and cargo transport schemes by river will lead to reducing intensity of emissions by transported unit.		
Link with Law No. 27,520: ▸ Articles 2c, 18, 19, 22a, 22c, 22d y 22g.	Contribution to other international frameworks: SDG: 1, 7, 8, 9, 12 & 13; CBD: Not applicable; UNCCD: Not applicable; Sendai: 33c, and Ramsar: Not applicable.	Gender perspective: Potential gender-differentiated impact.

Table 26. Assessing the short, medium and long-term impacts of climate change on transport systems

Contributes to reducing the following vulnerabilities: ▸ Still incipient adaptation capabilities. ▸ Reduction of socio-economic inequities and inequalities, including those related to gender. Increases resilience in: ▸ Implementation of strategies to address the impact of climate on the intermodal coordination of freight and passenger transport. ▸ Improvement of operational safety in railway, river, maritime and air transport.		
Mitigation co-benefits: ▸ The consideration of climate impacts on transport systems will allow for the development of strategies to prevent transport network imbalances and instability, improving territory-wide accessibility and, consequently, reducing the intensity of emissions by transported unit.		
Link with Law No. 27,520: ▸ Articles 2c, 18, 19, 22a, 22c & 22d.	Contribution to other international frameworks: SDG: 1, 7, 9, 11 & 12; CBD: Not applicable; UNCCD: Not applicable; Sendai: 19g, 23, 24h, 24j & 25b; and Ramsar: Not applicable.	Gender perspective: Potential gender-differentiated impact.

Energy

Table 27. Assessing the impacts of climate change on the energy system, energy demand and on the economic activities and fiscal balance

Contributes to reducing the following vulnerabilities:

- Still incipient adaptation capabilities.
- Socio-economic inequities and inequalities, including those related to gender.

Mitigation co-benefits:

- Consideration of the climate impact on the energy system and on energy demand can allow for the development of better strategies to include low-carbon emission renewable sources.
- Understanding the impacts on the energy system and on the macroeconomy as a whole will lead to better understanding of the actual capacity of clean energy generation.

Link with Law No. 27,520:	Contribution to other international frameworks:	Gender perspective:
▸ Articles 2c, 18, 19 & 22e.	SDG: 1, 3, 7, 11 & 13; CBD: Not applicable; UNCCD: AIII.4i; Sendai: 19g, 23, 24h & 25b; and Ramsar: Not applicable.	Potential gender-differentiated impact.

Table 28. Developing measures to ensure supply and access to energy by adopting sustainable and resilient infrastructure (for instance, for fuel production, power transmission, distribution and generation, with special emphasis on the evaluation of water resources and hydroelectricity generation)

Contributes to reducing the following vulnerabilities:

- Still incipient adaptation capabilities.
- Potential vulnerabilities in energy supply and in access to energy, overall.
- Potential vulnerabilities in hydroelectricity generation, in the power transmission and distribution system, overall.

Increases resilience in:

- Infrastructure that is not too sustainable or resilient vis-à-vis extreme climate events.
- Infrastructure that is not too sustainable or resilient, located in disaster prone areas, in fragile ecosystems, areas exposed to drought or desertification and in low-lying coastal areas.
- Infrastructure that is not too sustainable or resilient vis-à-vis an increase in mean annual temperatures and a high frequency of extreme rainfalls and floods.
- Infrastructure that is not too sustainable or resilient, and communities that are more vulnerable to a potential water crisis and a drop in the average flows of the del Plata basin rivers.

Mitigation co-benefits:

- Development of measures to ensure supply and access to energy by adopting clean, resilient and efficient technologies allows the efficient use of energy resources and thus avoids or reduces emissions. In turn, it reduces the vulnerability of the energy system vis-à-vis extreme climate events and the impacts of climate change.

Link with Law No. 27,520: - Articles 2c, 18, 19, 22c, 22d & 22e.	Contribution to other international frameworks: SDG: 1, 7, 9, 11, 12 & 13; CBD: Not applicable; UNCCD: AIII.4d, AIII.4f, AIII.4i & AIII.5; Sendai: 18d & 27b; and Ramsar: Not applicable.	Gender perspective: Gender-gap transformations.

Table 29. Developing measures to ensure supply through technological and territorial diversification, whilst deepening access to energy, particularly using sustainable energy sources

Contributes to reducing the following vulnerabilities:

- Still incipient adaptation capabilities.
- Socio-economic inequities and inequalities, including those related to gender.

Increases resilience in:

- Infrastructure that is not too resilient vis-à-vis extreme climate events;
- Infrastructure that is not too resilient, located in disaster-prone areas, in fragile ecosystems or exposed to drought or desertification and in low-lying coastal areas.
- Isolated vulnerable communities without access to the grid.

Mitigation co-benefits:

- Development of measures to ensure supply and access to energy through technology or territory-based diversification, allowing the inclusion of low-carbon emission renewable sources.

Link with Law No. 27,520: - Articles 2c, 18, 19, 22b 22d, 22e, 22f & 22h.	Contribution to other international frameworks: SDG: 1, 7, 9, 10, 11, 12 & 13; CBD: Not applicable; UNCCD: AIII.4d, AIII.4f, AIII.4i & AIII.5; Sendai: 18d, 19i & 25i; and	Gender perspective: Supports gender-gap transformations.

	Ramsar: Not applicable.	

Biodiversity and ecosystems

Table 30. Strengthening applied research to adaptive ecosystem management and biodiversity protection

Contributes to reducing the following vulnerabilities:

- Still incipient adaptation capabilities.
- Socio-economic inequities and inequalities, including those related to gender.

Diminishes impacts related to:

- Increased mean annual temperatures.
- Water stress due to temperature increases.
- High frequency of extreme rainfall and floods.
- A potential water crisis.
- Drop in average river flows in the del Plata basin rivers and from glaciers.
- Sea level rise.

Increases resilience in:

- Disaster-prone areas.
- Areas with fragile ecosystems or fragile mountain ecosystems.
- Areas with forest cover or exposed to its deterioration.
- Arid and semi-arid areas or those exposed to drought or desertification.
- Low-lying coastal areas.

Mitigation co-benefits:

- Many ecosystem conservation strategies allow greenhouse gas emission reduction and capture increase. Therefore, strengthening research in these strategies will lead to a better development of measures with co-benefits.

Link with Law No. 27,520: - Articles 2c, 18, 19, 22a, 22c, 22f, 22g, 22h & 22j.	Contribution to other international frameworks: SDG: 3, 6, 11, 13, 14 & 15; CBD: 7a & 7b; UNCCD: AIII.4j; Sendai: 30n; and Ramsar: 3.1, 3.2, 4.3 & 4.5.	Gender perspective: Potential gender-differentiated impact.

Table 31. Strengthening and expanding the System of National Protected Areas in coordination with the subnational jurisdictions, through the Federal Protected Areas System

Contributes to reducing the following vulnerabilities:

- Still incipient adaptation capabilities.
- Socio-economic inequities and inequalities, including those related to gender.

Diminishes impacts related to:

- Increased mean annual temperatures.
- Water stress due to temperature increases.
- High frequency of extreme rainfall and floods.
- A potential water crisis.
- Drop in average river flows in the del Plata basin rivers and from glaciers.
- Sea level rise.

Increases resilience in:

- Disaster-prone areas, with fragile ecosystems.
- Areas with forest cover or exposed to its deterioration.
- Arid and semi-arid areas or those exposed to drought or desertification.
- Low-lying coastal areas.

Mitigation co-benefits:

- Many ecosystem conservation strategies help to reduce emissions and increase carbon capture.

Link with Law No. 27,520:	Contribution to other international frameworks:	Gender perspective:
▸ Articles 2c, 18, 19, 22a, 22c, 22f, 22g, 22h & 22j.	SDG: 3, 6, 11, 13, 14 & 15; CBD: 6a, 6b, 7a & 8; UNCCD: AIII.4j; Sendai: 30n; and Ramsar: 3.1 & 4.1.	Potential gender-differentiated impact.

Table 32. Managing water resources from a comprehensive approach to ensure water availability, sustainable use and quality of this resource for different human and natural use vis-à-vis the impacts of climate change

Contributes to reducing the following vulnerabilities:

- Still incipient adaptation capabilities.
- Socio-economic inequities and inequalities, including those related to gender.

Diminishes impacts related to:

- Increased mean annual temperatures.
- Water stress due to temperature increases.
- High frequency of extreme rainfall and floods.
- A potential water crisis.
- Drop in average river flows in the del Plata basin rivers.

Increases resilience in:

- Disaster-prone areas.
- Areas with forest cover or exposed to its deterioration.
- Arid and semi-arid areas or those exposed to drought or desertification.

Mitigation co-benefits:

- Many ecosystem conservation strategies help to reduce emissions and increase carbon capture.

Link with Law No. 27,520: - Articles 2c, 18, 19 & 22c.	Contribution to other international frameworks: SDG: 2, 3, 6, 11, 13 & 15; CBD: 6a, 6b, 7a & 8; UNCCD: AIII.4j; Sendai: 30n; and Ramsar: 3.1 & 3.2.	Gender perspective: Gender-gap transformations.

Table 33. Mapping the areas that will be more vulnerable to desertification due to climate factors in future scenarios

Contributes to reducing the following vulnerabilities:
- Still incipient adaptation capabilities.
- Socio-economic inequities and inequalities, including those related to gender.

Diminishes impacts related to:
- Increased mean annual temperatures.
- Water stress due to temperature increases.
- High frequency of extreme rainfall and floods.
- A potential water crisis.

Increases resilience in:
- Arid and semi-arid areas.
- Areas exposed to drought or desertification.

Mitigation co-benefits:
- Loss of ecosystems and more erosion and desertification can generate carbon emissions from the soil.

Link with Law No. 27,520: - Articles 2c, 18, 19 & 22f.	Contribution to other international frameworks: SDG: 1, 2, 3, 6, 13 & 15; CBD: 7a, 8 & 10d; UNCCD: 16; Sendai: 23, 24, 30n & 30g, and Ramsar: 3.1.	Gender perspective: Potential gender-differentiated impact.

Table 34. Implementing a coastal management programme to protect ecosystems and populations in the most vulnerable areas

Contributes to reducing the following vulnerabilities:
- Still incipient adaptation capabilities.
- Socio-economic inequities and inequalities, including those related to gender.

Diminishes impacts related to:
- Sea level rise.

Increases resilience in:
- Low-lying coastal areas.

Mitigation co-benefits:

- Not applicable.

Link with Law No. 27,520:	Contribution to other international frameworks:	Gender perspective:
▸ Articles 2c, 18, 19 & 22g.	SDG: 1, 2, 3, 6, 13 & 15; CBD: 7a, 8 & 10d; UNCCD: 16; Sendai: 23, 24, 30n & 30g; and Ramsar: 3.1.	Potential gender-differentiated impact.

Table 35. Assessing changes in the glacial and periglacial systems, to develop protection mechanisms

Contributes to reducing the following vulnerabilities:

- Still incipient adaptation capabilities.
- Socio-economic inequities and inequalities, including those related to gender.

Diminishes impacts related to:

- Increased mean annual temperatures.
- Water stress due to temperature increases.
- A potential water crisis.
- Retreat of glaciers.

Increases resilience in:

- Disaster-prone areas.
- Areas with fragile mountain ecosystems.

Mitigation co-benefits:

- Not applicable.

Link with Law No. 27,520:	Contribution to other international frameworks:	Gender perspective:
▸ Articles 2c, 18, 19 & 22j.	SDG: 6, 11 & 13; CBD: 6a, 6b, 7a & 8; UNCCD: AIII.4e; Sendai: 30n, and Ramsar: 3.1.	Potential gender-differentiated impact.

Table 36. Strengthening adaptive management of natural resources from an ecosystem-based approach, to ensure the conservation and sustainable use of biodiversity, including land and water ecosystems

Contributes to reducing the following vulnerabilities:

- Still incipient adaptation capabilities.
- Socio-economic inequities and inequalities, including those related to gender.

Diminishes impacts related to:

- Increased mean annual temperatures.
- Water stress due to temperature increases.
- Very frequent extreme rainfall and floods.
- A potential water crisis.
- Drop in average river flows.
- Sea level rise.
- Retreat of glaciers.
- Potential changes in geographical ranges and extinction of the less tolerant species.

Increases resilience in:

- Disaster-prone areas, with fragile ecosystems or fragile mountain ecosystems.
- Areas with forest cover, or exposed to its deterioration.
- Arid or semi-arid areas or those exposed to drought or desertification.
- Low-lying coastal areas.

Mitigation co-benefits:

- Many ecosystem conservation strategies help to reduce emissions and increase carbon capture.

Link with Law No. 27,520:	Contribution to other international frameworks:	Gender perspective:
Articles 2c, 18, 19, 21, 22 & 24.	SDG: 3, 6, 11, 14 & 15; CBD: 6, 7 & 8; UNCCD: AIII.4j; Sendai: 30n, and Ramsar: 3.1.	Potential gender-differentiated impact.

National Adaptation Plan (PNA)

The Argentine Republic is in the process of formulating its PNA, in line with the Cancun Adaptation Framework, adopted by Decision 1/CP.16, at the Convention's 16th Conference of the Parties, and pursuant to Article 7, paragraph 9 of the Paris Agreement.

The PNA is also framed within the provisions of Article 16, Law on Climate Change, which states the Executive Branch's obligation of preparing the "National Plan on Climate Change Adaptation and Mitigation" and is related to the provisions of Article 20 of the above law, that spells out the formulation of Response Plans to climate change to be developed by the different jurisdictions across the country.

The PNA will allow the establishment of strategic lines that operate as a framework for the different adaptation planning processes at the sectoral and sub-national levels, facilitating and guiding these initiatives and, at the same time, considering determining factors and climate projections with a view to reducing climate-related risks.
The PNA thus becomes a key instrument for public policy development in the field of adaptation in Argentina, seeking to promote decentralized and co-construction processes in each of its phases. This means the PNA will consider sub-national and community experiences, whilst ensuring the sectors and communities have the necessary tools available to promote their own adaptation strategies and plans.

Monitoring and evaluation

See Section 9.3 Monitoring and Evaluation of Adaptation.

Ex post adaptation cycle

Progress and outcomes

Table 37 details the main progress made and outcomes achieved so far by Argentina with regard to adaptation.

Main progress made and outcomes achieved to date:
▶ Climate Change Act, which provides an advanced institutional, regulatory and strategic framework to implement adaptation at the national and subnational levels.
▶ Development of a strong institutional framework: National Climate Change Cabinet; Secretariat for Climate Change, Sustainable Development and Innovation; National Climate Change Directorate; Office for Coordinating Adaptation to Climate Change; External Advisory Council to the National Plan on Climate Change Adaptation and Mitigation; Federal Environment Council; Focal Points Roundtable on Climate Change; Expanded Roundtables, and several offices, networks or institutional bodies at the subnational level.
▶ Very sound technical teams at the national level to specifically address adaptation.
▶ Participation and leadership in adaptation-related negotiations under the Convention and the G77 + China framework.
▶ Leadership and development of the G20 adaptation approach.
▶ Leadership and expert participation in the Convention's Adaptation Committee.
▶ Leadership and expert participation in the Adaptation Fund.
▶ Formulation of the National Adaptation Plan.
▶ Analysis and maps on vulnerability regarding the adverse effects of climate change.
▶ Tools and capabilities to mainstream gender perspective in adaptation policies and measures.

- First State Party to the Paris Agreement to submit the First and Second Adaptation Communications.

- Implementation of large-scale adaptation projects with international financing, such as: Increasing climate resilience and enhancing sustainable land management in the Southwest of the Province of Buenos Aires and Enhancing the adaptive capacity and increasing the resilience of small farmers in Northeast Argentina, both with the support of the Adaptation Fund; Adaptation to climate change in vulnerable coastal cities and ecosystems of the Uruguay River, a regional project implemented together with Uruguay, with the support of the Adaptation Fund; and Sustainable Management of the Water Resources of the 'del Plata' Basin with Respect to the Effects of Climate Variability and Change, and Preparing the ground for the Implementation of the 'del Plata' Basin Strategic Action Programme, which are regional projects implemented with the del Plata basin countries, with the support of the Global Environment Facility.

Below is a summary of the qualitative progress status of the identified adaptation measures:

- Programming stage: there is conceptual consensus on the measure and a detailed technical design has been started, including the definition of the implementing institutions and the necessary support in terms of capacity enhancement, technology transfer or financing.

- Initial implementation stage: the measure has already been technically designed and its implementation has been started at least by one institution.

- Advanced implementation stage: the measure has been implemented and a few outcomes have already been identified.

- Completed: the measure has been implemented and the identification of outcomes allows its assessment.

Qualitative analysis of the current progress status of adaptation measures

Sector	Adaptation measure	Progress status
Cross-cutting	Strengthening the capacities of teams at the relevant government offices for the preparation of the PNA, response plans and sector-based adaptation policies.	Initial implementation stage
	Supporting the formulation of response plans to strengthen the construction of national climate policy according to the provisions of Law No. 27,520.	Programming stage
	Supporting an adaptation approach of sector-based action plans, together with different government offices, mainstreaming them in national climate policy.	Programming stage
	Promoting coordination of the PNA's M&E system with the National Information System on Climate Change established in Law No. 27,520, Article 17.	Initial implementation stage
	Supporting the ongoing development of the climate information services (among them, the Early Warning Systems), promoting adaptation-related research, development and innovation.	Initial implementation stage
	Mainstreaming comprehensive disaster risk management in the National Adaptation Plan, in the response plans and in the relevant adaptation related policies and measures, including the implementation of those aimed at increasing the response capabilities of human settlements, with the organized participation of the communities involved.	Initial implementation stage
	Establishing processes and designing tools for mainstreaming Ecosystem-based Adaptation in the PNA, response plans and policies and measures stemming from the GNCC.	Initial implementation stage
	Establishing processes and designing tools for mainstreaming gender perspective in the PNA, response plans and policies and measures stemming from the GNCC	Initial implementation stage
	Establishing processes and designing tools for mainstreaming Community-based Adaptation in the PNA, response plans and policies and measures stemming from the GNCC	Initial implementation stage

	Promoting a participatory process for including intersectoral and interjurisdictional matters, and key stakeholders within the GNCC and the Expert Advisory Council, and specific mechanisms in the process of outlining and implementing the PNA.	Initial implementation stage
	Fostering environmental education and culture through awareness-raising and promoting knowledge on climate change impacts, risks and vulnerabilities, with a view to having an effective public policy on adaptation	Initial implementation stage
	Reinforcing the development of hydro-meteorological models, allowing appropriate projections to be drawn up on the necessary atmospheric and hydrological variables for managing environmental risks, including extreme events.	Advanced implementation stage
	Outlining territorial planning to contemplate environmentally sustainable land use.	Initial implementation stage
Agriculture and livestock	Carrying out a sustainable and resilient management of agroecosystems that contribute to achieving food security vis-à-vis the impacts of climate change.	Initial implementation stage
	Developing and promoting climate risk prevention and transfer of instruments and assistance in the event of an agricultural emergency.	Initial implementation stage
	Implementing measures that foster research, development and skill-building for climate change adaptation in the agricultural sector.	Initial implementation stage
Production	Increasing resilience of the industrial complexes and areas vis-à-vis extreme climate events.	Programming stage
	Modeling and implementing impact scenarios for the industrial sector	Programming stage
Tourism	Increasing resilience of tourist destinations that are highly vulnerable to climate change, including glaciers, important ecosystems and coastal areas.	Programming stage
Health	Implementing prevention measures to protect human health vis-à-vis climate change impacts.	Programming stage

	Strengthening the response of the health system and communities to extreme climate events, including heat waves, cold waves and floods.	Initial implementation stage (except for heat waves, which are at an advanced stage)
	Strengthening the response of the health system and the communities to an increase in the spread of climate-sensitive diseases transmitted by vectors and rodents.	Programming stage
Transport and infrastructure	Strengthening the design and maintenance of climate-resilient transport infrastructure including railways, highways (bridges and tunnels), rural roads, ports and airports.	Programming stage
	Developing sustainable and climate-resilient river and maritime transport infrastructure.	Programming stage
	Assessing the short, medium and long-term impacts of climate change on transport systems.	Programming stage
Energy	Assessing the impacts of climate change on the energy system, energy demand and on the economic activities and fiscal balance.	Programming stage
	Developing measures to ensure supply and access to energy by adopting sustainable and resilient infrastructure (for instance, for fuel production, power transmission, distribution and generation, with special emphasis on the evaluation of water resources and hydroelectricity generation).	Programming stage
	Developing measures to ensure supply through technological and territorial diversification, whilst deepening access to energy, particularly using sustainable energy sources.	Programming stage
Biodiversity and ecosystems	Strengthening applied research to adaptive ecosystem management and biodiversity protection.	Programming stage
	Strengthening and expanding the System of National Protected Areas in coordination with the subnational jurisdictions, through the Federal Protected Areas System.	Programming stage

	Managing water resources from a comprehensive approach to ensure water availability, sustainable use and quality of this resource for different human and natural use vis-à-vis the impacts of climate change.	Programming stage
	Mapping the areas that will be more vulnerable to desertification due to climate factors in future scenarios.	Programming stage
	Implementing a coastal management programme to protect ecosystems and populations in the most vulnerable areas.	Programming stage
	Assessing changes in the glacial and periglacial systems, to develop protection mechanisms.	Initial implementation stage
	Strengthening adaptive management of natural resources from an ecosystem-based approach, to ensure the conservation and sustainable use of biodiversity, including land and water ecosystems.	Programming stage

Cooperation to improve adaptation at the national, regional, and international levels

To ensure an appropriate implementation of adaptation, within a context of incremental climate threats, it is necessary to strengthen cooperation processes at the domestic, regional, and international levels. To reinforce adaptation-related actions in programming and implementation, the Argentine Republic actively participated in cooperation in each and every one of these levels.

At the national level, and framed within the Law on Climate Change, a serious of cross-cutting institutional processes were developed to reinforce inter-institutional and multi-level cooperation, particularly by creating the GNCC, its Working Groups, and soon to come, the Advisory Council. These arrangements have brought about a deep change in the way of working on adaptation and are a key element to increase knowledge on vulnerabilities, to implement inter-sectoral actions and cross-cutting adaptation measures in the planning of several institutions.

At the sub-national level, concrete progress has been made within COFEMA, with the active participation of the provinces. In this regard, the sub-national levels are expected to develop Response Plans as set forth in the Law on Climate Change to strategically mainstream relevant adaptation actions to face the main identified territorial vulnerabilities.

At the regional and cross-border level, Argentina, together with Uruguay, started implementing an adaptation project for vulnerable cities and ecosystems along the Uruguay River, with funding from the Adaptation Fund. This programme will implement pilot adaptation actions to reduce incremental vulnerabilities vis-à-vis floods and improve knowledge and management of river ecosystems.

In this regard, Argentina has been an active participant in developing the Strategic Action Plan for the del Plata Basin on adaptation to climate variability and change, leading to prioritize adaptation measures at the basin level, together with Brazil, Bolivia, Paraguay and Uruguay, with the support of the Global Environment Facility.

Lastly, at the international level, the country has undertaken a constructive leadership role

advocating for and developing adaptation according to the terms and conditions of the UNFCCC, often times representing all developing countries in adaptation negotiations within the Group of 77 + China, and actively participating in the A-B-U negotiating group on the Convention, made up of Argentina, Brazil and Uruguay, technically contributing to the negotiations on adaptation implementation under the Paris Agreement, and to the design of the Adaptation Communication instrument.

In line with the above, experts from Argentina actively participate in the UNFCCC Adaptation Committee, in the Adaptation Fund Board, in the Green Climate Fund Board, in the Council of the Global Environment Facility and in the Convention's Technology Executive Committee, contributing to knowledge on adaptation and to the support to developing countries in financial and technological matters. Finally, it is worth mentioning that the Argentine Republic, during the rotating presidency of the G20 that it held in 2018, managed to include the issues related to adaptation, allowing a new geopolitical scope for them.

Barriers to implementing adaptation

BUR 3 submitted by Argentina in 2019, thoroughly analysed existing barriers to implementing adaptation, regarding the financial resources, transfer of technology and capacity-building for the prioritized areas. Below are the main findings:

Qualitative analysis of barriers for prioritized topics

Topics	Means of implementation	Barriers
Research and development: monitoring networks, warning systems and climate services	Technology transfer and financing	Limited resources, insufficient monitoring stations, monitoring networks not approved or not integrated into the National Monitoring System, incompatibility between the systems for collecting and processing climate data and services, limited access to necessary information and/or baseline data, and limited human, technical and financial resources to develop a consistent and regular information system.
Research & Development: R&D and Technology and good productive practices	Technology transfer and financing	Limited resources, low level of public-private coordination and of science and R&D, limited technical capacity for the design of R&D projects and scalable technologies; limited knowledge of the private sector on adaptation issues to promote the development of projects, technologies and solutions to address climate change.
Research & Development: vulnerability and risk maps	Capacity-building	Scarce, scattered, non-homogeneous and difficult to access information; complexity to adapt climate change models and projections to the local scale; limited technical and financial resources to develop a consistent and regular information system.

Research & Development: economic quantification of climate impacts	Capacity-building	Scarce, scattered, heterogenous and difficult to access information; heterogeneity of the quantity and quality of the information available for the different activities and localities across the country; lack of methodologies, indicators, and data to monitor adaptation measures consistently; and limited technical and financial resources to develop a consistent and regular information system.
Institutional strengthening: specialized human resources and inter-institutional coordination	Capacity-building	Limited resources, lack of trained technical resources, complexity of coordinating and monitoring activities from a local approach, given the country's geographical size and political organization.
Institutional strengthening: specialized and multidisciplinary human resources, and land-use planning.	Capacity-building	Limited resources; lack of trained technical resources; complexity of the coordination and monitoring of activities from a local approach given the country's geographical size and political organization.
Reducing vulnerability: financial and risk transfer instruments.	Financing	Little experience in the country on climate risk transfer instruments, little public-private coordination, and limited knowledge of the private sector on issues regarding climate change adaptation.
Reducing vulnerability: infrastructure to prevent climate-related impacts	Financing	Limited resources, limited technical capacity to design projects that include a climate change perspective, gap between short-term and long-term priorities that negatively interfere with planning, and difficulty to monitor and evaluate adaptation measures consistently and to quantify the benefits of the implemented measures.
Reducing vulnerability: land recovery and EbA	Financing	Limited knowledge on ecosystem-based adaptation measures as a viable, effective option, and their co-benefits; overlap between EbA measures and other activities; difficulty in monitoring and evaluating adaptation measures consistently and in quantifying the benefits of the implemented measures; and coordination between stakeholders and jurisdictions involved in the implementation of ecosystem-based adaptation measures.
Awareness-raising and education: communication strategy	Capacity-building	Limited resources, difficulty for the public at large to understand due to the use of technical language in communications on climate change, and little knowledge of the private sector and the media on the subject.

Awareness-raising and education	Capacity-building	Little coordination between the stakeholders involved in education policies and scarce supply of formal and non-formal education on issues regarding climate change adaptation.

Good practices and lessons learned, and exchange of information: mainstreaming gender in adaptation

Among other cross-cutting approaches, the Argentine Republic prioritized the gender perspective in climate action in general, and particularly in adaptation. In this regard, the country deems it pertinent to share this approach, as a good practice in adaptation planning and implementation.

A work plan was thus developed with a view to mainstreaming gender in the PNAyMCC, in the response plans, and in the policies and measures stemming from the GNCC. The work plan establishes several development and implementation stages. As a first step, during the diagnostic stage, existing gender inequalities will be identified in all fields involved in the aforementioned policies and plans. In the training and awareness-raising stage, the necessary link between gender and climate change and its methodological and institutional instances will be developed. Finally, and based on the generation of spaces for the exchange of experiences and good practices, experts in the subject, technical teams from other countries and indigenous communities will interact to achieve an inclusive and comprehensive gender mainstreaming strategy.

With regard to awareness-raising, a discussion was held to mainstream gender in the climate change agenda, which included the views of the government and science sectors. The discussion was targeted to the public at large and included the participation of youth organizations that work to raise awareness and sensitize in the fight against climate change.

A training course on "Gender and Climate Change" was also held to include this perspective in the PNA. The course was targeted to all staff at the National Climate Change Directorate and its purpose was to introduce the subject from its more general notions through to more specific conceptual and methodological issues on how to mainstream gender in adaptation. These courses are considered to be of special importance, since gender relations can be sources of social inequalities, both internally within organizations and in the actions that they promote.

Based on the results and conclusions of these awareness-raising and training courses, an initial identification of socioeconomic vulnerabilities was carried out from a gender perspective, and adaptation measures were classified according to their differential impact on gender. This was a fundamental step forward in reflecting how the gender perspective can become a pillar of climate policies.

Furthermore, within the framework of capacity-building, a course was held on the monitoring and evaluation (M&E) system with the aim of applying it to the NAP. In this regard, the medium-term objective is to achieve the implementation of an M&E system taking into account gender considerations in the monitoring and evaluation of adaptation policies.

Likewise, bonds were strengthened with the Ministry for Women, Gender and Diversity, in order to define lines of joint work; and contacts were initiated with technical teams from other countries that allowed the sharing of strategies, methods and instruments to mainstream the gender perspective, as well as provide visibility to the obstacles and emerging challenges during the process. These actions also enabled to spell out potential commitments at the regional level to advance gender and climate policies.

The need to support adaptation and efforts to achieve recognition

Needs for support to adaptation in Argentina

See Section 8 of the NDC – Means of implementation.

Argentina's adaptation efforts for recognition purposes

In accordance with the provisions of paragraphs 9, 10, 11 and 12 of Decision 11/CMA.1, and within the framework of paragraph 14.a, Article 7 of the Paris Agreement on the recognition of developing countries' adaptation efforts in the Global Stocktake, the Argentine Republic informs the following adaptation efforts, which are being carried out based on the enforcement of the Climate Change Act.

Argentina's adaptation efforts for recognition purposes

Argentina's adaptation efforts to be recognized in the Global Stocktake:
A sound legal and programmatic framework has been agreed upon by consensus among all political parties. It has been enshrined in the Argentine Climate Change Act, which strategically mainstreams adaptation. After the Climate Change Act was enacted, a National Climate Change Cabinet was created, which is a new cross-cutting institutional framework for climate action, including adaptation. The main adaptation measures have been legally established in the country. A national planning process has been legally established to develop the National Plan for Climate Change Adaptation and Mitigation, including the National Adaptation Plan, being formulated at the time of this publication. A subnational planning process, in which each jurisdiction must develop Response Plans that strategically mainstream adaptation, has been legally established.

Elements of the Annex to Decision 9/CMA.1	Table of Contents of this Adaptation Communication
a) National circumstances, institutional arrangements and legal frameworks;	2. National Circumstances
b) Impacts, risks and vulnerabilities, as appropriate;	7.1. Argentina's adaptation context
c) National adaptation priorities, strategies, policies, plans, goals and actions;	7.2.1. National Adaptation Goal 7.2.2. Cross-cutting approaches guiding adaptation 7.2.3. National Adaptation Measures 7.2.4. National Adaptation Plan
d) Implementation and support need of, and provision of support to, developing country Parties;	8. Means of implementation
e) Implementation of plans, including: i) Progress and results adaptation actions and achieved; ii) adaptation efforts of developing countries for recognition; **iii)** Cooperation on enhancing adaptation at the national, regional and international level, as appropriate **iv)** Barriers, challenges and gaps related to the implementation of adaptation v) Good practices, lessons learned and information sharing vi) Monitoring and evaluation	7.3.1. Progress and outcomes 7.4. The need to support adaptation and efforts to achieve recognition 7.3.2. Cooperation to improve adaptation at the national, regional and international levels 7.3.3. Barriers to implementing adaptation 7.3.4. Good practices and lessons learned, and exchange of information:

	mainstreaming gender in adaptation 9.3. Monitoring and evaluation of adaptation
f) Adaptation actions and/or economic diversification plans, including those that result in mitigation co-benefits;	Potential mitigation co-benefits included in each of the adaptation actions of section, *II.1 National adaptation goals, principles, cross-cutting approaches and measures.*

These efforts contribute to Argentina's National Adaptation Goal stated in this Adaptation Communication, as well as to the Global Goal on Adaptation established in the Paris Agreement (Article).

Information for a better understanding of the contents of this Adaptation Communication with regard to elements spelled out in the Annex to Decision 9/CMA.1

Information for a better understanding of the contents of this Adaptation Communication with regard to the elements of the Annex to Decision 9/CMA.1

g) How adaptation actions contribute to other international frameworks and/or conventions;	Contributions to other international frameworks and/or conventions (particularly the Convention on Biological Diversity, the Convention to Combat Desertification, the Sendai Framework and the 2030 Agenda – Sustainable Development Objectives) are set forth in each of the adaptation measures of Section: *II.1 National adaptation goals, principles, cross-cutting approaches and measures.*
h) Gender-responsive adaptation action and traditional knowledge, knowledge of indigenous peoples and local knowledge systems related to adaptation, where appropriate; and	The gender perspective cuts across the whole of the Adaptation Communication, the gender approach clearly appears in each of the adaptation actions included in section *II.1 National adaptation goals, principles, cross-cutting approaches and measures.*
i) Any other information related to adaptation.	Not included in this Adaptation Communication

Means of implementation

Introduction

Taking into consideration Argentina's national circumstances and capacities, and depending on the needs that the country prioritizes, it is crucial to have access to financial mechanisms in order to develop and transfer technology, and to strengthen capacities that were created or will be created by the UNFCCC and the Paris Agreement.

Although there is an absolute unconditional target and a set of specific actions to be implemented at the national and subnational levels, it is deemed essential to have sufficient means of implementation, as established in the Paris Agreement, Articles 2.1c, 3, 4.5, 9, 10 and 11, if the intent is to ensure a cost-effective implementation while allowing existing abatement costs to be borne. Argentina will thus achieve inclusive economic growth, sustainable development and the desirable effectiveness in the fight against climate change.

With a view to facing these challenges, within the framework of the GNCC, the Sustainable Finance Working Group and the International Financing Unit (IFU) were set up. The former shall design an enabling framework to align financial flows with the promotion of the 2030 Agenda and climate action in the Argentine Republic, as well as to strengthen the country's position for regulating Article 6 of the Paris Agreement. On the other hand, the IFU will be in charge of evaluating, prioritizing and monitoring the projects that the country submits to climate investment funds and multilateral and bilateral loan organizations. The Undersecretariat of International Financial Relations for Development, reporting to the Secretariat of Strategic Affairs —the President's Office—, together with the GNCC, will develop the National Strategy, looking towards coordinating actions with the Green Climate Fund and other funds for climate financing. It will also seek to include the financing of projects regarding climate change response in the annual programming of other multilateral and bilateral loan organizations.

In addition, and to increase the transparency and traceability of the State's climate investment, the National Budget Office, Ministry of Economy and Public Finance, is working on the identification and labeling, in the National Budget, of activities and programmes related to climate change adaptation and mitigation. To supplement the above, the BUR4 will report on the needs and support received in terms of international cooperation, formulated on the basis of a sound and transparent national methodology, to allow for ongoing and consistent monitoring.

Based on these instruments and initiatives, Argentina will draw up its climate financing long-term strategy after a proper identification of needs and priorities.

Priority lines of action

Table 40 shows an initial, non-binding and non-exhaustive analysis of the means of implementation prioritized for the Second Nationally Determined Contribution. For each pillar, the required levels of support are established in terms of skill-building, technology development and transfer, and concessional financing: +++ indicates a high need, ++ a moderate need, and + a low need. It is worth highlighting the very high priority attached to financing in the way of grants for adaptation measures that strategically serve particularly vulnerable areas and sectors of the Argentine Republic.

Additionally, the strategic priorities of the subnational jurisdictions regarding climate policy aim at obtaining funds and achieving jurisdictional and regional financing policies that will allow compliance with the actions required in Art. 20 of the Climate Change Act. In the same vein, it also aims at an ongoing strengthening of the institutions that implement the climate policy in each jurisdiction, regarding access and skill-building for setting up technical teams.

Qualitative analysis of the needs regarding means of implementation for the prioritized mitigation pillars

Sector	Focus area for mitigation	Description	Needs[60]		
			Capacity-building	Technology transfer	Financial resources
Energy	Energy supply	Renewable electricity generation, distributed generation, hydroelectricity generation, nuclear generation, efficiency of thermal plants and substitution of liquids for natural gas, and biofuel blends.	++	++	++
Energy	Energy demand	Efficiency in residential electricity consumption, efficiency in residential gas use, and improvements in building envelopes.	++	++	++
Agriculture & Forestry	Risk prevention and reduction in the farming, forestry and fisheries areas	Sustainable infrastructure, resilient to climate variability and change; sustainable management of agroecosystems; recovery of degraded systems; and development, improvement and adoption of varieties adapted to climate conditions.	+++	++	+++
Agriculture & Forestry	Afforestation	Increase in forested areas .	++	+	+++
Agriculture & Forestry	Crop rotation	Increase in the area sown with grain (wheat and corn) and decline in oilseed area (soybean and sunflower).	++	+	+
Agriculture & Forestry	Land-use planning	Participatory environmental planning of resources and land use	++	++	++
Agriculture & Forestry	Sustainable forest management	Integrated productive activities and use for multiple purposes of the native forests, perpetuating their ecological functions and environmental services.	+++	++	+++

[60]+++ High, ++ Moderate and + Low

Agriculture & Forestry	Productive landscape conservation	Integrating the conservation of native forest environmental services with socio-economic development by coordinating their use.	+++	++ +	+++
Agriculture & Forestry	Forest fire prevention	Planning actions targeted to avoiding or mitigating the spread of forest fires and facilitating their control by applying effective measures at different levels.	+++	++ +	++
Productive Development	Energy efficiency	Efficient engines and change of enclosed commercial fridges	+	++	+++
Productive Development	Renewable energies	Promoting renewable energies, solar energy, ferrous scrap recovery, recovery of lead batteries, of plastic, of cardboard and paper, recovery of tyres, more additives in the production of cement and use of alternative fuel in the cement industry.	+	++	+++
Infra-structure	Cross-cutting	Foster the inclusion of climate criteria in new projects.			+++
Infra-structure	Housing and urban planning	Promote access to housing by building new, efficient social housing, improve the qualitative deficit of housing focused on energy efficiency, and the promotion of an energy efficient building of new social housing.			+++
Health	Mitigation	Calculate greenhouse gas emissions from the sector and define reduction actions.	+++	+++	+++
Transport	Passenger transport in urban areas: develop sustainable, low-emission mobility	Energy efficiency labelling of vehicles, promoting alternative energy buses, light vehicles using low-emission technology (hybrid or electric), renewal of Bus Fleets (Euro 3 to Euro 5) and active mobility.	+	+++	+++

Transport	Freight: improve land cargo transport efficiency	Trucks with trailers and scalable trucks, Smart Transport Programme (including driver training), fleet renewal and scrapping of trucks (National Road Safety Plan for 2025); limited maximum speed for trucks	+++	+++	+++
Transport	Freight: railway improveme nt (cargo)	Reduction of freight transport emissions by designing a Freight Railway Investment Plan and sustainable railway transport.	+	++	++
Transport	Freight: sustainable river transport	River fleet renewal, using alternative energies.	+	+	+++
Gender	Territorial Diagnosis	Prepare a territorial diagnostic study based on disaggregated information allowing for the building of gender-sensitive climate policies to achieve a transformative intervention.	++	+++	+++
Gender	Autonomy	Strengthen the sovereignty of women and LGBTI+ groups over the land they live on, transfer material, educational and technological resources to reinforce autonomy and self-determination in the mitigation and adaptation to climate change measures.		+	+
Mining	Renewable energies and energy efficiency	Projects on renewable energies or energy efficiency in small non-metal mining facilities, mainly implemented by SMEs.		+	+

Mining	Integration into the national value chain	Foster and support integration into the national value chain, through goods and service providers, linked to the generation of renewable energies and energy efficiency. In this way, they can support more sustainable mining projects, with less GHG emissions.	+	+	+++
Labour and just transition	Cross-cutting	Strengthening the promotion of sustainable jobs, strengthening sustainable employment, producing relevant information for decision-making linked to the impact of climate change on the different economic sectors, and skills anticipation policies for relevant professional training.	+		+
Labour and just transition	International cooperation	International cooperation in areas such as capacity-building, financing and technology transfer for measures regarding mitigation and climate change.	+		+
Science & Technology	Cross-cutting	R&D capacity-building and strengthening by financing R&D projects, and training highly qualified Human Resources to contribute to developing policies and measures regarding mitigation and climate change adaptation.	++	++	+++
Science & technology	Information management and upgrading	Development of information systems, models and projections related to climate change.	++	++	+++

Qualitative analysis of the needs regarding means of implementation for the prioritized adaptation measures

Sector	Adaptation actions	Needs [61]		
		Skill-building	Technology transfer	Concessional financing
Cross-cutting	Strengthening the capacities of teams at the relevant government offices for the preparation of the PNA, response plans and sector-based adaptation policies.	+++		+
	Supporting the formulation of response plans to strengthen the construction of national climate policy according to the provisions of Law No. 27,520.	+++		++
	Supporting an adaptation approach of sector-based action plans, together with different government offices, mainstreaming them in national climate policy.	+++	+	++
	Promoting coordination of the PNA's M&E system with the National Information System on Climate Change established in Law No. 27,520, Article 17.	+++	+	+++
	Supporting the ongoing development of the climate information services (among them, the Early Warning Systems), promoting adaptation-related research, development and innovation.	++	+	++
	Mainstreaming comprehensive disaster risk management in the National Adaptation Plan, in the response plans and in the relevant adaptation related policies and measures, including the implementation of those aimed at increasing the response capabilities of human settlements, with the organized participation of the communities involved.	+++	++	+++

[61]For this analysis, needs are classified into high (+++), moderate (++) and low (+).

	Establishing processes and designing tools for mainstreaming Ecosystem-based Adaptation in the PNA, response plans and policies and measures stemming from the GNCC.	+++	+	++
	Establishing processes and designing tools for mainstreaming gender perspective in the PNA, response plans and policies and measures stemming from the GNCC.	+++		++
	Establishing processes and designing tools for mainstreaming Community-based Adaptation in the PNA, response plans and policies and measures stemming from the GNCC.	+++	+	++
	Promoting a participatory process for including intersectoral and interjurisdictional matters, and key stakeholders within the GNCC and the Expert Advisory Council, and specific mechanisms in the process of outlining and implementing the PNA.	+++		+
	Fostering environmental education and culture through awareness-raising and promoting knowledge on climate change impacts, risks and vulnerabilities, with a view to having an effective public policy on adaptation.	+++	+	+++
	Reinforcing the development of hydro-meteorological models, allowing appropriate projections to be drawn up on the necessary atmospheric and hydrological variables for managing environmental risks, including extreme events.	++	+	+++
	Outlining territorial planning to contemplate environmentally sustainable land use.	+++	+	+
	Carrying out a sustainable and resilient management of agroecosystems that	++	+++	+++

Agriculture and livestock	contribute to achieving food security vis-à-vis the impacts of climate change.			
	Developing and promoting climate risk prevention and transfer of instruments and assistance in the event of an agricultural emergency.	++	+++	+
	Implementing measures that foster research, development and skill-building for climate change adaptation in the agricultural sector.	++	+++	++
Production	Increasing resilience of the industrial complexes and areas vis-à-vis extreme climate events.	+++	+++	+++
	Modeling and implementing impact scenarios for the industrial sector	+++	+++	+++
Tourism	Increasing resilience of tourist destinations that are highly vulnerable to climate change, including glaciers, important ecosystems and coastal areas.	+++	++	+++
Health	Implementing prevention measures to protect human health vis-à-vis climate change impacts.	+++	+	+++
	Strengthening the response of the health system and communities to extreme climate events, including heat waves, cold waves and floods.	+++	+	+++
	Strengthening the response of the health system and the communities to an increase in the spread of climate-sensitive diseases transmitted by vectors and rodents.	+++	+	+++
	Strengthening the design and maintenance of climate-resilient transport infrastructure	+++	+++	+++

Transport & infrastructure	including railways, highways (bridges and tunnels), rural roads, ports and airports.			
	Developing sustainable and climate-resilient river and maritime transport infrastructure.	+++	+	+++
	Assessing the short, medium and long-term impacts of climate change on transport systems.	+++	+	+++
Energy	Assessing the impacts of climate change on the energy system, energy demand and on the economic activities and fiscal balance.	++	++	+++
	Developing measures to ensure supply and access to energy by adopting sustainable and resilient infrastructure (for instance, for fuel production, power transmission, distribution and generation, with special emphasis on the evaluation of water resources and hydroelectricity generation).	+++	+++	+++
	Developing measures to ensure supply through technological and territorial diversification, whilst deepening access to energy, particularly using sustainable energy sources.	+++	+++	+++
Biodiversity & ecosystems	Strengthening applied research to adaptive ecosystem management and biodiversity protection.	+++	+	+++
	Strengthening and expanding the System of National Protected Areas in coordination with the subnational jurisdictions, through the Federal Protected Areas System.	++	+	+++
	Managing water resources from a comprehensive approach to ensure water availability, sustainable use and quality of this resource for different human and natural use vis-à-vis the impacts of climate change.	+++	+	+++

	Mapping the areas that will be more vulnerable to desertification due to climate factors in future scenarios.	+++	+	+++
	Implementing a coastal management programme to protect ecosystems and populations in the most vulnerable areas.	+++	+	+++
	Assessing changes in the glacial and periglacial systems, to develop protection mechanisms.	+++	+	++
	Strengthening adaptive management of natural resources from an ecosystem-based approach, to ensure the conservation and sustainable use of biodiversity, including land and water ecosystems.	+++	+++	++

Monitoring and update

Introduction

Domestic monitoring and follow-up of progress regarding the Second NDC are essential to achieve the effective implementation of climate action at the national and global levels. In this regard, ongoing reporting of information by the Parties allows an evaluation of progress in relation to compliance with the global objectives of the UNFCCC and the Paris Agreement.
Along these lines, the monitoring and update of the Second NDC is framed within the guidelines of the Climate Change Act and the PNAyMCC, set up by its Article 16, which will be the main instrument for the implementation of the Second NDC's mitigation and adaptation actions.
As established in Article 4.9 of the Paris Agreement and in accordance with the Climate Change Act, Argentina's NDC will be updated every five years, taking into consideration the process of continuous improvement of the accuracy, transparency and soundness of information related to climate change policy.

Monitoring and update of mitigation

As mentioned above, progress monitoring in the implementation of the mitigation goal of the Second NDC will be carried out through INGEI, reported in subsequent BURs, NCs and in future BTRs, as established in paragraph 17, Decision 4/CMA.1.

Considering the relevance of climate change reports in the UNFCCC transparency system, and so as to ensure methodological consistency between the communication and implementation of the Second NDC, its monitoring will take place within the

framework of the SNI-GEI-AR, which is a part of the National Information System on Climate Change. The SNI-GEI-AR is an information support system based on inter-institutional interactions and standardized procedures for the exchange of data, and the validation and regular compilation of transparent inventories. Furthermore, this system allows an evaluation of INGEI's consistency with the mitigation actions of the PNAyMCC for implementing the Second NDC at the domestic level, providing the technical inputs necessary for the planning of policies in the medium and long term.

Another fundamental piece of the National Information System on Climate Change is the National System for Monitoring Mitigation Measures, created in 2018, with the aim of efficiently and regularly monitoring the implementation of the actions included in the sectoral plans developed within the framework of the GNCC -subject to regular reviews- and in compliance with international reporting commitments, either in the form of NCs, BURs, or future BTRs. This system is based on a set of appropriate indicators to monitor the degree of progress of each action, based on the availability of information sources.

Monitoring and evaluation of adaptation

The PNAyMCC will be used to monitor the adaptation process in Argentina through its own monitoring and evaluation (M&E) system. The purpose of the system is to monitor progress in the implementation and outcomes of the PNAyMCC, and to identify improvements in managing the adaptation process, in order to learn and improve continuously.

The scope of application of the PNAyMCC M&E system will be nation-wide. However, general indicators will be developed together with COFEMA for the subnational jurisdictions. This system will, additionally, help to monitor the effectiveness of the adaptation process, provide appropriate information for decision-making —thus improving governance—, specify information on new or greater resource needs for adaptation, and identify points for improvement, among others. Likewise, this system will allow information disaggregation by gender.

Finally, the system will provide relevant information regarding climate change impacts and adaptation, according to the provisions of the Enhanced Transparency Framework for Action and Support (Article 13 of the Paris Agreement), whose guidelines on adaptation were included in Chapter IV of the Annex to Decision 18/CMA1, and particularly in its sections E and F.

Abbreviations and Acronyms

Acronyms and abbreviations	Definition
AC	Adaptation Communication
AFOLU	Agriculture, Forestry and Other Land Use
AMBA	Buenos Aires Metropolitan Area (Área Metropolitana de Buenos Aires)
BTR	Biennial Transparency Report
BUR	Biennial Update Report
CbA	Community-based Adaptation
CBD	Convention on Biological Diversity
CELADE	Latin American and the Caribbean Demographic Centre (*Centro Latinoamericano y Caribeño de Demografia*)
CH_4	Methane
CMA	Conference of the Parties serving as the meeting of the Parties to the Paris Agreement
CO_2	Carbon dioxide
COFEMA	Federal Environment Council (Consejo Federal de Medio Ambiente)
COP	Conference of the Parties
EbA	Ecosystem-based Adaptation
ECLAC	Economic Commission for Latin America and the Caribbean
ENSO	El Niño-South Oscillation
EWS	Deforestation Early Warning System
FNC	First National Communication
GDP	Gross Domestic Product
GHG	Greenhouse Gases

GNCC	National Climate Change Cabinet (Gabinete Nacional de Cambio Climático)
GWP	Global Warming Power
HFC	Hydrofluorocarbons
ICTU	Information for Clarity, Transparency and Understanding
IGN	National Geographic Institute (*Instituto Geográfico Nacional*)
INDC	Intended Nationally Determined Contributions
INDEC	National Institute of Statistics and Censuses (*Instituto Nacional de Estadística y Censos*)
INGEI	National Greenhouse Gas Inventory (Inventario Nacional de Gases de Efecto Invernadero)
INI	National Inventory Report (Informe Nacional de Inventario)
IPCC	Inter-governmental Panel on Climate Change
IPPU	Industrial Processes and Product Use
M&E	Monitoring and Evaluation
MAyDS	Ministry for the Environment and Sustainable Development (*Ministerio de Ambiente y Desarrollo Sostenible*)
$MtCO_2e$	Millions of tons of carbon dioxide equivalent
N_2O	Nitrous Oxide
NC	National Communication
NDC	Nationally Determined Contribution
NGO	Non-governmental Organization
ODA	Official Development Assistance
PFC	Perfluorocarbons
PNA	National Adaptation Plan (Plan Nacional de Adaptación)
PNAyM	National Adaptation and Mitigation Plan (*Plan Nacional de Adaptación y Mitigación*)
PNAyMCC	National Plan for Adaptation and Mitigation to Climate Change (*Plan Nacional de Adaptación y Mitigación al Cambio Climático*)

R&D+i	Research, Development and Innovation
REDD+	Reducing emissions from deforestation and forest degradation
SDG	Sustainable Development Goals
SGAyDS	Government Secretariat for the Environment and Sustainable Development (*Secretaría de Gobierno de Ambiente y Desarrollo Sustentable*)
SIFAP	Federal Protected Area System (Sistema Federal de Áreas Protegidas)
SNC	Second National Communication
SNI-GEI-AR	Argentina's National Greenhouse Gas Inventory System
tCO_2e	Tons of carbon dioxide equivalent
UNCCD	United Nations Convention to Combat Desertification
UNDP	United Nations Development Program
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
USD	United States Dollars