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Andorra's Climate action

Andorra's climate action are the actions carried out by the government through the Energy and Climate Change Agency (in Catalan, OECC) to respond to energy transition and climate change policies.

The main objectives of this climate action are to:



Ensure access to affordable, reliable, sustainable and modern energy.



Make cities and human settlements inclusive, safe, resilient and sustainable.



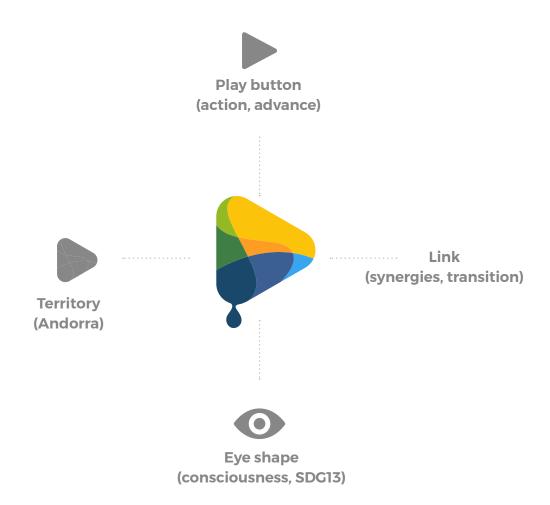
Take urgent action to combat climate change and its impact.



Revitalize global partnership for sustainable development.

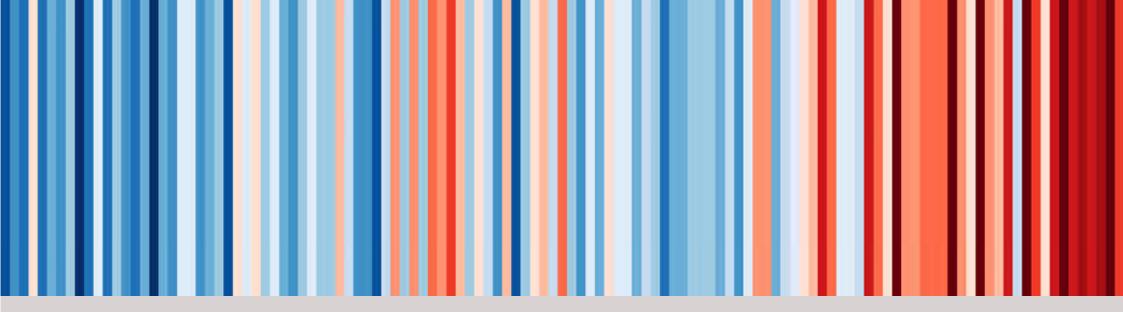


Andorra's climate action has its own image and social networks, in order to encourage divulgation and communication on this issue.



Energy and Climate Change Agency





Humanity is facing a climate crisis

"The IPCC Working Group 1 Report is a code red for humanity"

Quote from the UN General-Secretary, António Guterres, in the presentation of the sixth report of the Intergovernmental Panel on Climate Change (IPCC).

According to the IPCC, mountain territories are one of the most vulnerable regions to climate change, with serious consequences for populations, ecosystems as well as economies, given the large percentage of population that depends directly or indirectly on them.

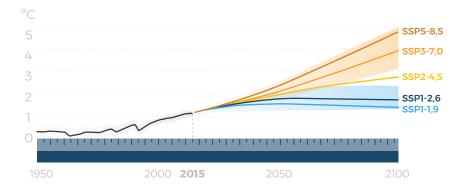
GLOBAL TEMPERATURES



Period of reference 1850-1900 Sixth report of the IPCC (2021) The impacts of climate change are real and costly, and will become much more so as global temperatures rise. Although **Andorra** is responsible for less than 0.001% of the world's global greenhouse gas (GHG) emissions, it is a high mountain territory particularly vulnerable to the effects of climate change, and as article 4.8 of the UNFCCC highlights and gathers the reports of the GIECC, the needs derived from the adverse effects of climate change on fragile ecosystems, especially mountainous ones, must be considered.

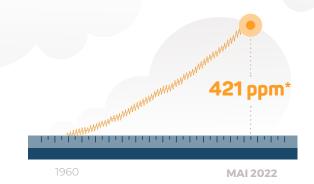
For this reason, the need to adapt mountain areas and improve systematic observation in these regions has been included in the international agenda

GLOBAL TEMPERATURE CHANGE



Human influence has caused the climate to warm at an unprecedented rhythm over the last two hundred years. The IPCC has defined a sum of augmentative projections of temperatures. The decisions made today will define the path to be followed.

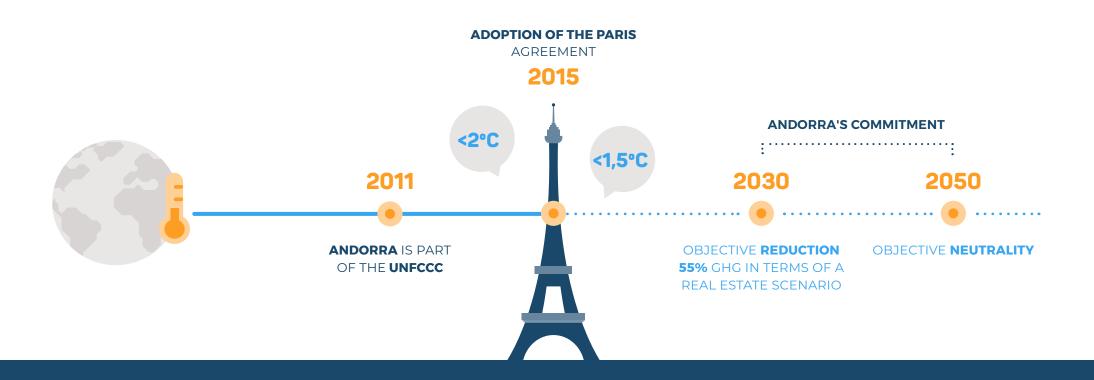
CO₂ ATMOSPHERIC GLOBAL CONCENTRATION



As an evolutive reference, in 2017 it was already over 410 ppm. This implies an increase of more than 10 ppm in just four years. If we do not act decisively and forcefully, the world as we know it is headed for an unprecedented disaster for humanity. If the current trend continues, long before 2050, concentrations will already exceed 480 ppm.

This would prevent the achievement of the set goal of limiting global temperature increase below $1.5\,^{\circ}\text{C}$ (see the Paris Agreement).

^{*} Source of information: NOAA Mauna Loa Atmospheric Baseline Observatory



: During COP21 (2015, Paris), the Parties to the United Nations Framework Convention on Climate Change (UNFCCC) adopted the Paris Agreement, which seeks, in the long term, to contain the rise in global temperature below 2 ° C considering pre-industrial levels, and pursue efforts to contain temperature rise to 1.5 ° C, which would greatly reduce the risks and consequences of climate change.

Article 7 of the Paris Agreement establishes in the fourth paragraph that the Parties to the Agreement recognize that the adaptation need is considerable, that an increase of the mitigation levels can reduce the need for additional adaptive efforts, and that an increase of the adaptive needs can lead to higher costs than the one necessary to implement effective mitigation measures.

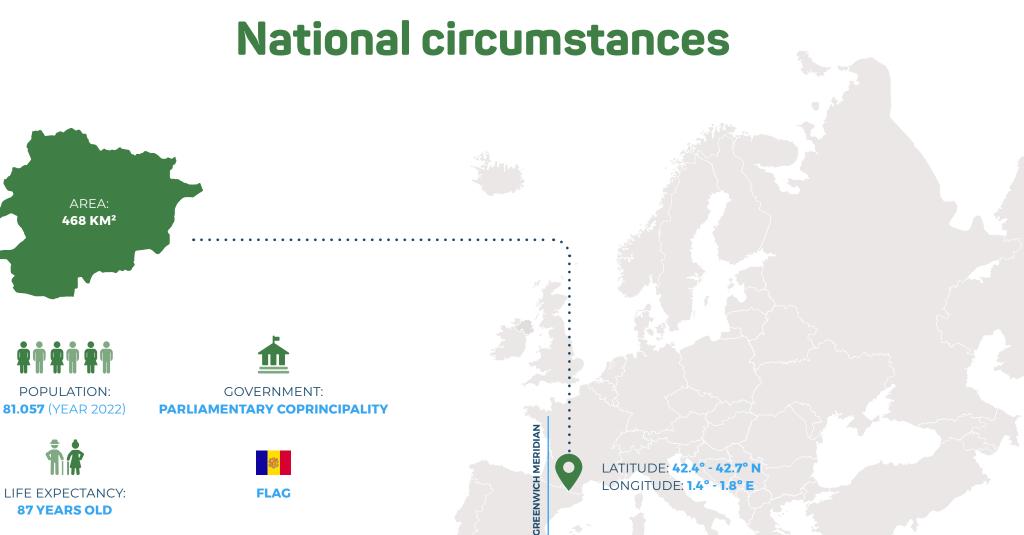
The ratification of the Paris Agreement was unanimously approved by the General Council (Andorran Parliament) on November 30, 2016. In addition, Andorra was one of the pioneer parties to the UNFCCC to communicate its national contribution (INDC) in the year 2015 and to update it to 2020 and 2022 with the aim of increasing medium-term ambition and achieving climate neutrality.

It is worth noting the high degree of maturity and sensitivity of Andorran society, represented by parliament. Never in the course of the votes for bills, agreements, or conventions in the matter of Climate action has there been opposition to the votes issued by the Legislature, which allows the creation of a solid frame of action, with a guaranteed continuity in the long-term."

Andorra

"The State has the task of ensuring the rational use of the land and of all natural resources, so as to guarantee a fitting quality of life for all and, for the sake of future generations, to restore and maintain a reasonable ecological balance in the atmosphere, water and land, as well as to protect the autochthonous flora and fauna."

Article 31 of the Constitution of Andorra, 1993.





CURRENCY: **EURO**



4 EDUCATION SYSTEM



1st COUNTRY WITH **100% FIBER OPTIC COVERAGE**



GDP PER CAPITA: AND 36,346€ EU 34,990€ **WORLDS 27th** (2021)

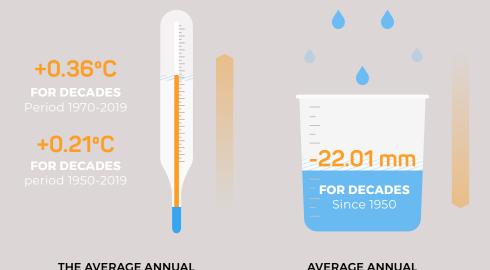


FOREST AREA: 40% PROTECTED NATURAL AREA: 14%

AVERAGE ALTITUDE: 2,044 MLS

National context

The effects of climate change are already perceivable in Andorra and it is expected that these climatic variations will have consequences on the different ecosystems, but also on their inhabitants and the economic activities that are developed there. We cannot lose sight of the economic and social importance of snow tourism in our country.



RAINFALL HAS DECREASED

TEMPERATURE HAS RISEN

Andorra shares the guiding principles of these international agreements. Moreover, not only does Andorra share them, but it also needs this change of model and firm and determined international action. For these reasons, the Consell General unanimously approved Law 21/2018, on the 13th September, on the promotion of the energy transition and climate change (Litecc), based on four fundamental pillars: economic growth, user protection and information, environmental sustainability and energy sovereignty and diversification.

This law, which represents the backbone of Andorra's energy and climate change policy, was drafted in a participatory manner between different ministries, which provided their strategic visions and considerations, in accordance with international commitments. The powers provided in this law are developed through the OECC, which is responsible for ensuring the progressive implementation of energy and climate change policy in Andorra.

Andorra has made a commitment to the international community to achieve carbon neutrality by 2050, which requires determined policies. This milestone starts from the agreement recognizing the climate crisis and declaring a state of climate and ecological emergency, approved on January 23rd, 2020 by the General Council, which considerably increases the ambition of climate action 'Andorra, a fact that has been reflected in the first update of the NDC presented by Andorra. This commitment has subsequently been reinforced by defining the National Energy Strategy and the fight against climate change as a roadmap to achieve it and in the mid-term, with the increase in ambition declared through the country's 2nd update of the NDC presented.

In addition, faced with the current economic and social situation marked by the global energy crisis, the General Council has approved a Law on measures to respond to an energy crisis situation, and to provide the Government, along with the other actors involved, with the tools needed to apply savings measures that help establish solid foundations for a sober energy model.

The country's energy planning, as well as the promotion of a legal framework that allows energy policy to be implemented, is the responsibility of the Government through, on the one hand, the <u>Energy and Climate Change Agency</u>, as established by the Decree created by the same Office, on April 29th 2015; and on the other, the public entity Forces Elèctriques d'Andorra (FEDA), as established in article 7 of <u>Law 5/2016</u>, of <u>March 10th</u>.

Implementation mechanisms to develop the set of actions in the field of climate change:



Ensure that climate action integrates climate change into national policies in the broadest sense, such as an environmental assessment of plans in the energy transition framework.

SUSTAINABILITY

In order to apply the best available technique, it is necessary to promote pilot tests in the energy field, as well as the training of the professional sector and value education to promote the empowerment of citizens. Andorra's environmental education strategy for sustainability includes adaptation to climate change and the mitigation of its effects as a specific strategic line.

BEST TECHNIQUE AVAILABLE

They highlight the importance of putting the <u>National Energy and Climate Change Commission</u> into operation, as well as the various cooperation and collaboration agreements with other countries or the union of these countries.

PUBLIC PARTICIPATION

In any measure, action or project carried out within the framework the development of climate action must take into account the exemplary role of the public administration. The first mandatory measures in the context of the current energy crisis have been in the field of public administration.

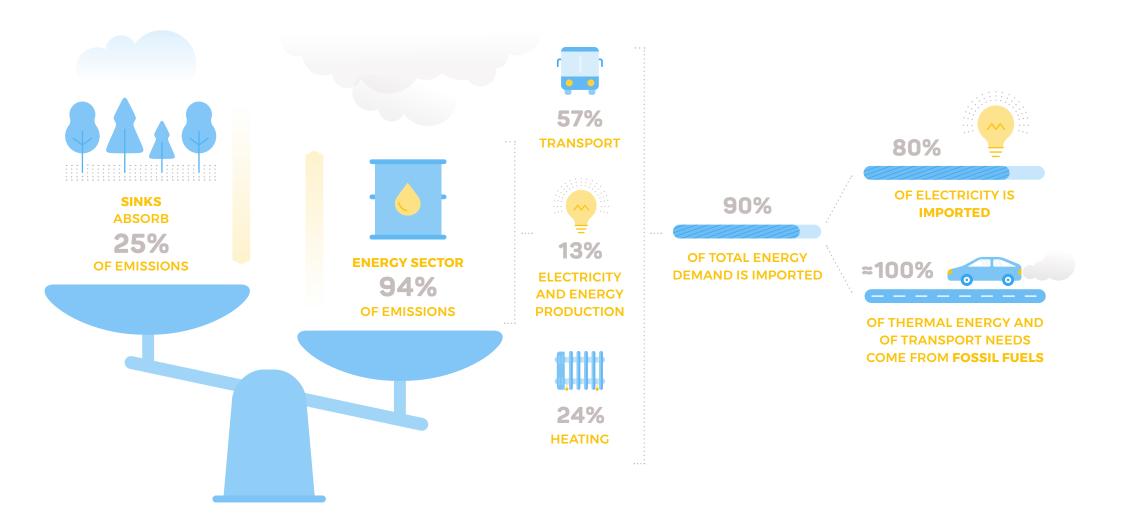
EXEMPLARY ROLE OF THE ADMINISTRATION

This climate action, in the national context, materializes around **five axes of action**



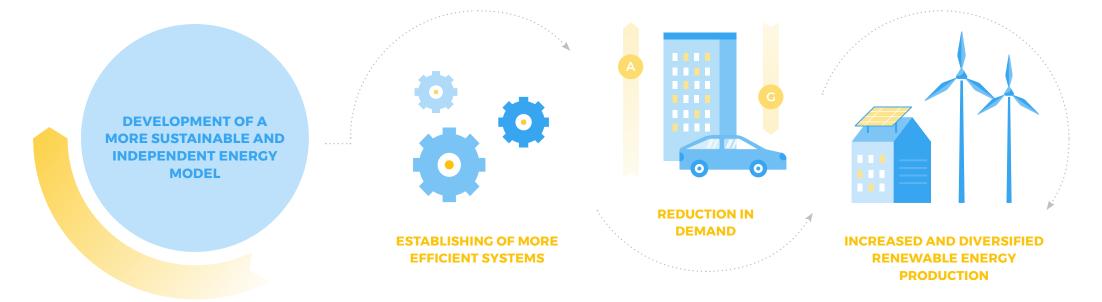
Decarbonization towards carbon neutrality:

mitigating greenhouse gas emissions



In the framework of policies aimed at the sustainable development of Andorra, the ultimate goal being a model of future society in which **economic growth**, **social cohesion and environmental protection** will be treated as three aspects of a single unique strategic challenge; energy becomes a key element, as it is an essential engine of human development.

MITIGATION - Energy transition



This axis of action is based on the reduction of demand, the establishing of more efficient systems and the increase in production of renewable energies, which contribute to reducing emissions.

- 1. Urban planning instruments necessary for the development of a new energy model that is more sovereign and based on renewable energies, such as sectoral energy infrastructure plans. They must make it possible to reach 33% of national electricity production by 2030 and 50% by 2050, while ensuring at least 80% comes from renewable energy.
- 2. The promotion of renewable energies and high energy efficiency technologies, the promotion of distributed production and self-consumption of both electricity and heat, making available a free digital tool to citizens with information on the potential for production of photovoltaic energy on the rooves of the real estate park.

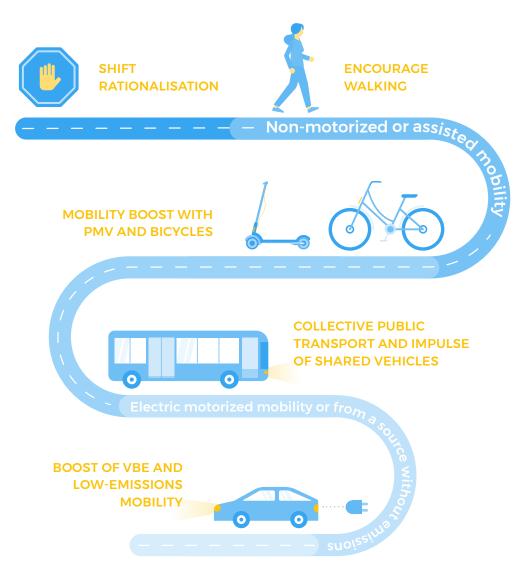
- **3.** The import of electrical energy, which currently represents 80% of consumption, must be completely decarbonized from 2030.
- 4. Information on the energy performance of buildings and vehicles. Such as tools for the intelligent metering of electrical energy, network load management and demand response, as well as information on the energy qualification of buildings and the mobile fleet.
- 5. The exemplary role of the Public Administration, both with regard to the renovation of the property park and the replacement of vehicles. Within the framework of the exemplary role, current regulations establish a series of energy saving measures to be applied immediately and others in the longer term, such as action plans for energy improvement in all public buildings, to achieve a sober energy model. The figure of energy managers and responsible management are key elements for its implementation.

MITIGATION - Sustainable mobility

Current mobility situation in Andorra



How will we do it



Buildings are a key point of energy consumption to promote the energy transition given that they are one of the biggest consumers of electricity and fossil fuels and responsible for almost a third of Andorra's emissions.

The reduction of emissions from this sector has three main axes of action:







Newly constructed buildings

All new construction from the year 2020 is designed and executed to achieve a **building with** almost zero energy consumption and to incorporate a minimum percentage of **energy production** on site from renewable sources.

Rehabilitation of existing buildings

It is carried out through aid programs such as the Renova program which is intended for the energy improvement of the real estate park since 2011 and which represents a rehabilitation rate of 2.7% of the housing stock per year. This program. This program has had an excellent degree of acceptance and has boosted the interest of citizens and companies in energy saving and efficiency, thus becoming one of the fundamental pillars of climate action in the context of energy saving and efficiency and the promotion of renewable energies in the building

Exemplary role of the administration

In the creation of a new model of energy consumption with public buildings to meet energy efficiency criteria and have high efficiency production systems or renewable energy sources, especially produced on site.

In addition, the international energy context makes it essential to promote and adopt patterns of austerity and energy saving. Thus, energy audits of all the heated buildings owned by the Administration have been prepared, which must serve as a starting point for the preparation of the **Action Plan** foreseen by the Savings Measures Decree.

MITIGATION - Circular economy

Considering that a circular economy can be an important part of the solution to the current serious environmental problems and generate both economic and environmental advantages, the <u>Circular Economy Law of Andorra</u> is configured as a pioneering law and stands out in the banning of single-use plastics and the reducing of food waste, among others.

The Law creates synergies between climate action and a circular economy through the improvement of modeling tools, as well as forcing telecommunications companies to reduce GHG emissions. These companies must annually publish the data and actions taken in this regard, and so that consumers are aware of the impact of digital consumption, they must provide customers with information on the amount of data consumed and the equivalent in GHG emissions. The Strategy that develops it sets the goals for 2035.

Structure of the circular economy law (LEC)







INCREASE THE PERCENTAGE OF COMPANIES BASED ON CIRCULAR ECONOMY SCHEMES BY 25% A YEAR



INCREASE WASTE
RECYCLING PERCENTAGE
UP TO 65%



REDUCE THE
GENERATION OF
URBAN WASTE BY 20%



REDUCE FOOD WASTE BY 50%

REDUCE SINGLE-USE



CONSUME RESPONSIBLY



COMMERCIAL



CONSTRUCTION



TOURIST AND CATERING



PLASTIC



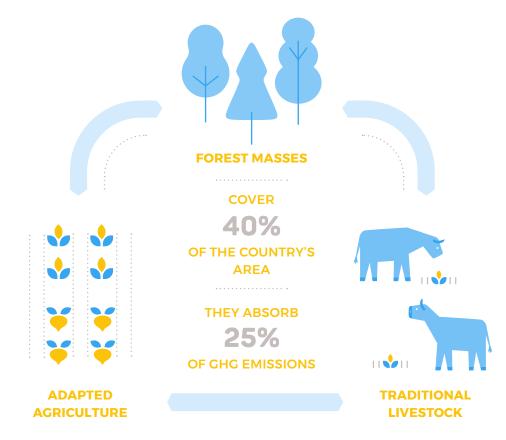
RATHER THAN THROW AWAY, REPAIR

MOVE SUSTAINABLY





ABSORPTION - Agriculture and forest management



Forests cover over 40% of the country's surface, and are responsible for the absorption of more than 25% of the country's GHG emissions (according to the national forest inventory. The Law 7/2019, of 7th February 2019, on the conservation of the natural environment, biodiversity and the landscape, recognizes the forest masses as the main greenhouse gas sink in Andorra and recommends managing them as such, in response to the global obligations arising from the UNFCCC and the Paris Agreement, to which Andorra has adhered.

Carbon sink: A natural or artificial reservoir that accumulates and stores carbon absorbed from the air, thus helping to reduce the amount of atmospheric carbon dioxide.

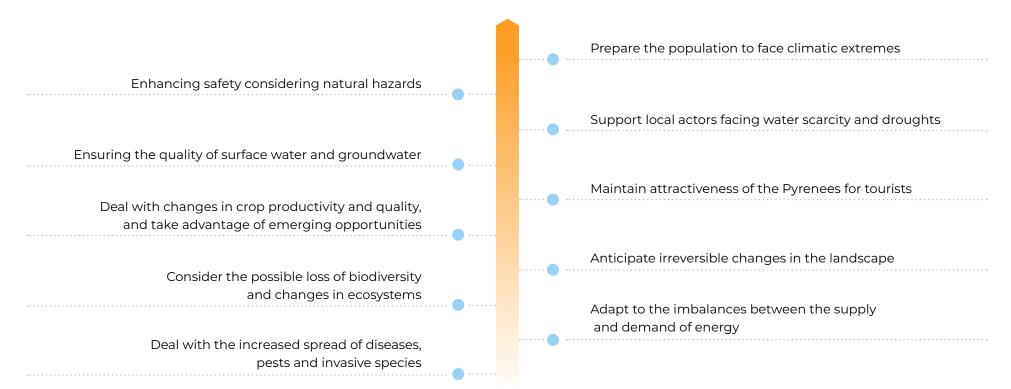
- 1. Principle of non-decline in sink capacity: Law 7/2019 integrates the principle of non-reduction and strengthening of the absorption capacity of carbon sinks as part of the fight against climate change and the sustainable use of biomass, especially in forested areas.
- 2. Multifunctionality of the forest masses: they are granted multifunctionality both in the environmental and economic fields due to their productive and regulatory function of the biological cycle, the function of biodiversity reservoir, the protective function (of soil, of people) in terms of erosion, as well as a social function in aspects such as leisure, recreation and landscape.
- **3. Sustainable use of biomass:** according to the forest inventory, the Forest Management Plan includes, as a minimum, the determination of its objectives and the planning of different uses and planned actions.
- 4. Promotion of traditional extensive livestock: promotion of the genotypes which are best adapted to the geographical conditions and the country's abrupt relief, with positive impacts on the territory as it contributes to the cleaning of forests and mountains, minimizing the risks of fires and promoting biodiversity. At the same time, it has a function of natural soil fertilization. Fodder mowing at the bottom of the valley has both a landscape function and a positive impact on biodiversity.
- 5. Adapted agriculture: promotion of the best agricultural practices for the national climate context and research for new species and varieties with the capacity to adapt to current and future conditions, as well as promoting the diversification of agricultural production and consumption of proximity products.
- 6. Principle of conservation of emissions from the agro-livestock sector: traditional mountain agriculture and livestock is not only able to adapt to climate change but does also help to mitigate it thanks to its relationship with the environment, and for the ecosystem services provided by grazing, in the form of maintenance of the country's main greenhouse gas sinks, the forests.



National action to adapt to climate change and increase resilience In Andorra, in 2014, the <u>Process of Adaptation to Climate Change</u> (PAACC) was carried out with the aim of identifying the possible impacts of climate change on the socio-economic and environmental sectors, assessing the vulnerabilities of each, as well as identifying adaptation measures to address them, in order to reduce their vulnerability.

In parallel to this process, our country works in a network within the framework of the Pyrenees Working Community (CTP) in order to study the impacts of climate change in this particular bioregion, as well as establishing adaptation strategies that allow an effective increase in the resilience of our territory. Considering the work of the CTP and the information presented in the recent report it can be stated that there is a scientific consensus regarding the main challenges: this consensus has made it possible to approve the Pyrenean Climate Change Strategy, which focuses actions on cooperation and adaptation to climate change.

CHALLENGES FACED WITH CLIMATE CHANGE





STUDIES IN THE SECTORS OF **HEALTH**, **AGRICULTURE**, **ENERGY** AND **TOURISM**

In order to plan actions, the Litecc prioritizes **studies in the sectors of health, agriculture, energy and tourism**. To carry out these studies, the government has the country's research and investigation centers and cross-border territorial cooperation initiatives aimed at climate change. Mountain ecosystems like ours have been identified as some of the most vulnerable to these changes, both in terms of the impacts on the populations that live there, as well as the ecosystem services they provide.

Therefore, as part of adapting and increasing resilience, they are pillars in the search for such resilience:

1. The integration of climate change adaptation through:

- The promotion of research, systematic observation and information.
- The integration of climate change into various national policies.
- The study of impact and vulnerability of the territory in the field of climate change, particularly and prioritizing health, agriculture, energy and tourism.

The study of the touristic, commercial and industrial sectors (which also includes construction) that analyses both the environmental impact (greenhouse gases generated, amount of waste generated, etc.), as well as the consumption and production needs of these sectors (point 20 of the Agreement on the Recognition of the Climate Crisis and the Declaration of the State of Climate and Ecological Emergencies).

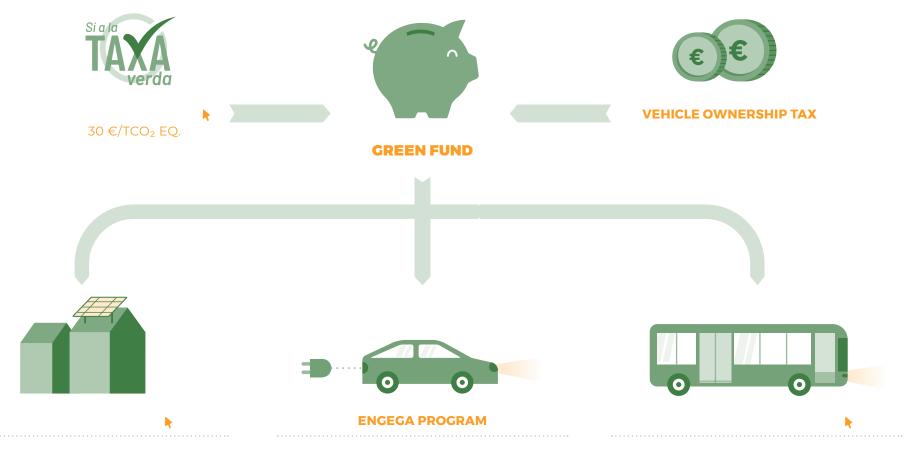


NATIONAL METEOROLOGICAL SERVICE

2. The National Meteorological Service: responsible for providing information on weather forecasts, warnings and on the state of the snow cover in a context of climate change, in which extreme weather events are, and will be, increasingly frequent. At the same time, the government is firmly convinced that if they are protected and managed sustainably, biodiversity and ecosystems can offer a wide range of services, and can become the best alternatives as nature-based solutions. Sustainable management and restoration of ecosystems can generate social, economic and environmental benefits (for example, the use of forest biomass), both for the improvement of the use of natural resources and for the protection of the ecosystem services that they derive.

3.

Taxation tools towards carbon neutrality



It is the main instrument that promotes energy saving and efficiency and for the implementation of renewable energies in buildings.

+2.700 AID DEMANDS

14,3 M INDIRECT SUBVENTIONS

13,4 M IN GUARANTEED LOANS

Engega Program: It is one of the tools that, since 2014, has served to increase the percentage of electric vehicles within the national car fleet.

+1,700 VEHICLES

SHARE OF THE ELECTRICAL VEHICLES PARK

6,5 M€ BUDGET

From 2021, the rates will be reduced in order to offer a free system for part of the public, in a framework of more environmentally sustainable, healthy and socially equitable mobility.

free PUBLIC TRANSPORT (2022)

Other funding tools for climate action

Tools to facilitate civil society, organizations, entities and companies that, within the framework of corporate social responsibility, adopt climate action policies:

National gas emission compensation market with greenhouse effects



- Voluntary compensation market
- Projects developed in Andorran territory
- Andorran carbon standard
- Carbon credits include co-benefits in accordance with the ODS

Objective: creation of innovative projects in the field of the fight against climate change on a local scale and, at the same time, reinforces environmental mitigation policies to achieve emission reduction targets set by Andorra.



Energy efficiency and implementation of renewable energies.



Mobility and urban transport.



Agriculture, forestry, forest management and livestock management.



Circular economy.



Any other area related to the protection of ecosystems or the fight against climate change.

Market of guarantees of origin of electric energy (GOE)



A guarantee of origin of electrical energy certifies that a certain amount of electrical energy has been produced domestically or imported, and certifies its origin according to whether it has been generated in:

Objectives: promote the use of renewable energies for the generation of electrical energy.



Electricity production facilities from renewable energy sources.



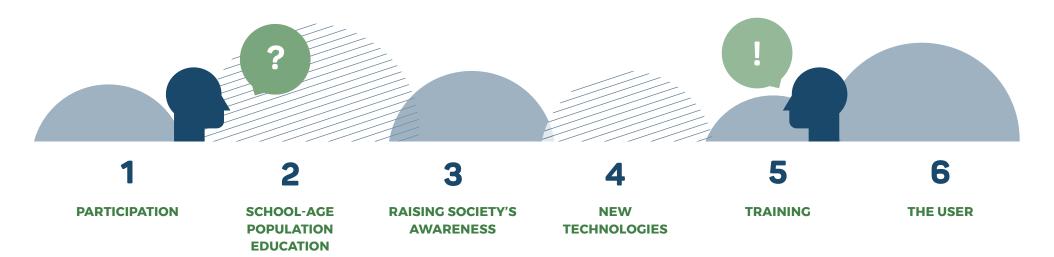
High efficiency cogeneration facilities.



Installations that generate energy from the biodegradable fraction when they use waste as their main fuel



The social transition



- 1. Participation becomes a key element in this new model where the decisions taken are coherent, in particular within the National Energy and Climate Change Strategy, which is the instrument for strategic planning and coordination in this matter, through the National Commission for Energy and Climate Change, as an advisory body, in the fields of action foreseen by law. This commission has a wide representation from both the public and private sectors, as well as the academic and associative world. It also counts with the participation of the National Youth Forum, which represents young people in the country.
- 2. Education of the school-aged population includes promoting educational campaigns in schools and encouraging all of the country's schools to become green schools; as well as incorporating workshops in the Andorran School -open to the participation of other educational systems- in order to raise awareness on climate change and to promote a better use of natural resources.
- 3. Raising society's awareness of climate change complements this national action. If we compare the perception of citizens in 2020 regarding climate change with the results of 2014, we see that the percentage of respondents who consider climate change to be a very serious problem

has increased from 63% to 85%, above EU levels, where 79% consider climate change to be a very serious problem.

- **4.** The promotion of new technologies and high value-added activities: offers new opportunities for business and economic growth. The technological and social changes needed to ensure the sustainable development of our energy system must be carried out making sure that the whole society is involved in this change. An example is the MOU-T-B application, a sustainable mobility aggregator.
- **5.** The <u>necessary training</u> so that professionals can work in the context of the energy transition, ensuring the recycling of jobs and "know-how" (agreements with trade unions and professional associations in the sector).
- **6. The user** comes to play an active role in the system and its transformation; by improving the information they receive, as they have at their disposal the tools to control their consumption and act accordingly, while being given a key role in the generation of distributed energy and self-consumption. The law protects consumers and provides, in particular, protection for the most disadvantaged users, those within a potential risk of fuel poverty.

Innovation, research and systematic observation

In order to improve and anticipate mitigation and adaptation actions being faced with this phenomenon, it is essential to monitor the main indicators, variables or phenomena that provide more information and better represent the effects of climate change.

Systematic observation



The Government has identified by decree the information necessary to prepare the GHG Inventory in accordance with the methodology established by the IPCC and responding to Article 7 of the Litecc. This legislative tool makes it possible to institutionally strengthen the management of the systematic observation needed to feed the Inventory, a basic tool to guide the mitigation actions that need to be developed.

<u>The National Energy Register</u> (REN) is the tool for centralized monitoring and control of the country's energy flows, which aims to determine the country energy balance, thus providing objective and transparent information.

The <u>National Meteorological Service</u> will soon adopt a historical data management system that allows its management in an orderly and efficient manner. The use of this system will favor the automatization of the import of data, its quality control and the design of the results, improving the decision-making in this matter.

Research and innovation



The Government of Andorra has been a member of the <u>Pyrenees Climate Change Observatory</u> (OPCC) of the Pyrenees Working Community (CTP) since 2010 together with the neighboring French and Spanish regions and communities. The OPCC is the reference platform for the transfer of knowledge and the dissemination of information on impacts, vulnerability and adaptation initiatives in the Pyrenees.

In October 2016, Andorra joined the <u>Ibero-American Network of Climate Change Agencies</u> (RIOCC), a space for the technical exchange of experiences that offers the opportunity to identify synergies, strengths and priorities, in terms of regional cooperation and support between countries.

The OECC has established collaboration agreements with various research organizations, both national and international, with the aim of optimizing efforts and seeking synergies in the thematic areas of energy, meteorology, climatology, the impacts of climate change, vulnerability and adaptation, as well as GHG emissions, among others. Some of these agreements have been established with entities such as <u>Andorra Recerca + Innovació</u>, <u>Météo France</u> or the <u>Agencia Estatal de Meteorología</u> (AEMET), among others.



For more information on the monitoring indicators collected by the OECC, see the QR code.

International cooperation

"The Parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities."

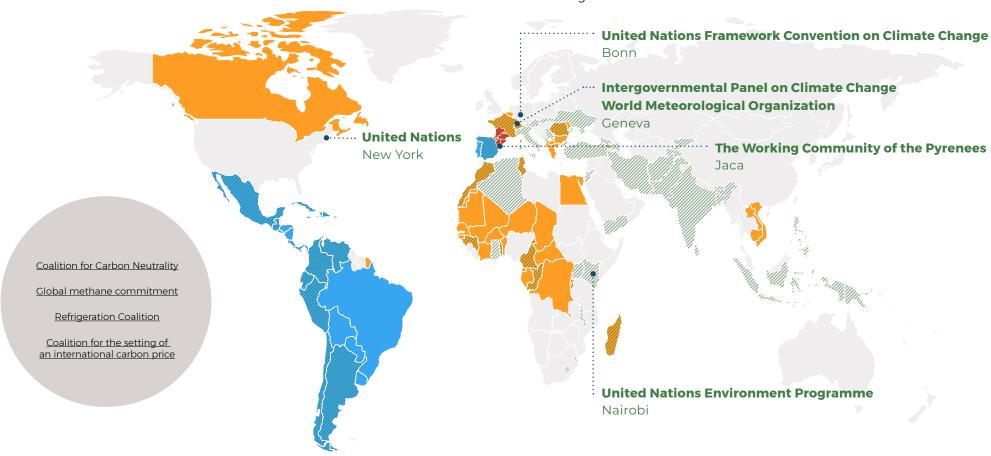
United Nations Framework Convention on Climate Change, Article 3.1.

Andorra is part of different organizations, both international and regional, whether they be geographically, culturally or economically. The country understands multilateralism as a fundamental space for dialogue and cooperation between all countries, which allows it to be at the highest level, giving it visibility beyond its small territory.

Proof of this are the Andorran presidency of the Ibero-American Summit of Heads of State and Government (2019-2021), and the Andorran presidency of the Council of Europe (2012), among others.

As well as participation in the Mountain Partnership alliance, a network dedicated to improving the lives of mountain regions in the world that works on the challenges these territories face, such as climate change.

The main organizations and lines of work related to the environment are:





UNFCCC AND PARIS AGREEMENT (198 SIGNATORY OR RATIFYING COUNTRIES) IBERO-AMERICAN SUMMIT OF HEADS OF STATE AND GOVERNMENT REGION FRANCOPHONE INTERNATIONAL ORGANIZATION REGION **PYRENEES CLIMATE CHANGE OBSERVATORY**

MOUNTAIN PARTNERSHIP





Acronyms index

AEMET	Meteorology Statal Agency
AR	Assessment report
CCNUCC	United Nations Framework Convention on Climate Change
CO ₂	Carbon dioxide
CPDN	Intended Nationally Determined Contributions
СТР	Pyrenees Working Community
ENGEGA	Aid program for the promotion of the electric vehicle
EQ	Equivalent
FEDA	Electric forces of Andorra (manager of the electrical system)
Gg	Gigagram (1,000 tons)
GHG	Greenhouse gases
INDC	Intended Nationally Determined Contributions
IPCC	Intergovernmental panel on climate change
LEC	Law of circular economy
LITECC	Law for the promotion of the energy transition and climate change
MOU_T_B	Intermodal mobility platform
NDC	Nationally Determined Contribution
OECC	Energy and climate change agency
OPCC	Pyrenean Climate Change Observatory
PAACC	Andorra's adaptation process to climate change
РРМ	Parts per million
QR	Quick Response
REN	National energy register
RENOVA	Aid program to promote the improvement of the national real estate park, the improvement of the energy efficiency of buildings and the use of renewable energies
RIOCC	Ibero-American Network of Climate Change Offices
SSP	Shared socio-economic pathway
Т	Tons
UE	European union
WG	Working group



