Climate Change and Energy Transition Plan

2021 - 2024

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Introduction 1

The Climate Change and Energy Transition Plan 2021-2024 (PTECC 2021-2024) is one of the main tools to fulfil the goals of the 2020 – 2024 Government Programme of the XII Parliamentary Term of the Basque Government. The Basque Country is committed to meeting the internationally agreed targets aimed at slowing down climate change and increasing the response capacity to its effects, which are already being felt in different areas. The south of Europe has been identified as one of the most vulnerable areas and the Basque Country has prioritised climate change policies as one of its focal points.

This plan establishes the framework for the coming four years to work on all aspects of climate change. The areas covered range from mitigation, i.e., reducing greenhouse gas (GHG) emissions and increasing carbon sinks, via reinforcing the energy strategy, to the application of adaptation measures for the territory and its population. This paves the way for the deployment of a large part of Focal Point III of the Government Programme 2020-2024, the planet, which focuses on a just climate and energy transition. Furthermore, the PTECC 2021-2024 is a comprehensive plan and impacts numerous sectors. That also enables the development of other areas, including industry, internationalisation, research and innovation, food and the coastal and rural development, infrastructures and sustainable transport, and urban regeneration, with job creation as one of its main priorities. Furthermore, protecting people's health is established as a priority of the plan. Climate change can lead to complicated situations and it is essential to have a health system ready for those contingencies.

One of the keys of this plan is the integration of energy, climate change mitigation and adaptation. The international arena has undertaken to work on climate change mitigation and the energy strategy together. The Basque Country is taking it a step further and is also integrating adaptation. The goal of decarbonisation and a just transition towards energy sovereignty based on renewable sources must go hand-in-hand with inclusive measures, supporting the most vulnerable groups. Making people less vulnerable is likewise essential to achieve a society that is able to deal with the changes and impacts that climate change may bring. Working on those three areas in a comprehensive manner allows their synergies to be harnessed, work to be carried out more efficiently and the co-benefits of the different policies to be boosted. Furthermore, it avoids maladaptation, in other words, measures in certain areas that end up going against the needs of our territory.

Thus, the plan is structured into three focal points: **1.** Path to neutrality, **2.** Increasing resilience and **3.** Mainstreaming climate action; and nine policy lines, which include flagship initiatives encompassed in specific work areas, including renewable energies, urban regeneration and the circular economy; in sectors such as industry, the primary sector, emergencies, and in necessary and cross-cutting areas, for example, innovation and the just transition. Thus, the plan mainly contributes to fulfilling the four goals of the Government Programme up to 2024, two of which directly and the other two indirectly. It adds the need to strive for the resilience of the territory as a further goal, by:

- Reducing greenhouse gas emissions by 30%.
- Making certain that the renewable energy shares accounts for 20% of the final energy consumption.
- Ensuring the resilience of Basque territory to climate change.

- Cutting unemployment to under 10%.
- Achieving R&D convergence with the European average.

Political-legislative context

2

The aim of this section is to provide a summary of the context relating to energy and climate change, from the broadest to the most detailed area, insofar as it may be relevant for the Climate Change and Energy Transition Plan 2021-2024.

2.1 INTERNATIONAL FRAMEWORK

Two main policy lines – mitigation and adaptation – are proposed to address the challenge of climate change.

According to the Intergovernmental Panel on Climate Change (IPCC), mitigation and adaption are defined as follows:

Mitigation: In the context of climate change, an anthropogenic intervention to reduce the sources or enhance the sinks of greenhouse gases (GHG).

Adaptation: The process of adjustment to actual or expected climate and its effects. In human systems, adaptation seeks to moderate or avoid harm or exploit beneficial opportunities. In natural systems, human intervention may facilitate adjustment to expected climate and its effects.

For years now, science evidence has been warning of the importance of minimising the effects of climate change. In this regard, climate change mitigation has historically been a recurring commitment. As regards adaptation, different sectors are increasingly introducing more measures and strategies to anticipate the effects of this phenomenon and prevent or minimise its impacts, along with harnessing the opportunities arising from it.

In 2015, the countries of the United Nations Organisation adopted the Sustainable Development Goals (SDGs) as part of the 2030 Agenda, by means of which they undertook to end poverty, protect the planet and ensure prosperity. SDG 13 shows their commitment to working on climate change and its effects, along with SDG 7 that aims to guarantee clean and affordable energy, directly linked to this plan. The international benchmark in this field is the Paris Agreement, which was reached in that same year. The agreement came into force in November 2016 and its fundamental goal is to limit global warming to under 2 °C compared to pre-industrial levels and drive additional efforts to limit that increase to 1.5 °C. Therefore, GHG emissions need to be limited. Countries must present their individual GHG emission reduction targets every five years and increase their ambition overtime.

As regards adaptation, the Paris Agreement encourages the development of strategies that increase resilience and lessen the effects of climate change (UNFCC, 2016), by linking the actions with the mitigation measures and increasing the degree of participation in their implementation. Those targets are in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, which provides Member States with a series of specific actions that may be taken to safeguard the benefits of development against disaster risk. Furthermore, the Biodiversity Convention seeks to curb the speed at which biodiversity is disappearing, as it is essential both with regards to adaptation and to mitigation. All these strategies are in keeping with the 2030 Agenda.

Under the Paris Agreement, 2023 will see the first major global stocktake of GHG emissions levels and their impact on the 2 °C target will be assessed. This exercise will be repeated every five years.

2.2 EUROPEAN FRAMEWORK

The European Union (EU) has been leading climate action from before the Paris Summit. In 2008, the EU approved the range of measures in its climate and energy package. They included a series of ambitious targets for renewable energies, energy efficiency and reducing GHG emissions to be met by 2020. In 2014, the European Commission unveiled its new 2021-2030 Climate Change and Energy Policy framework ("2030 Framework"), which would provide continuity to the earlier European Climate and Energy Package. The new framework proposed emission reduction and renewable energy targets for 2030.

Between 2015 and 2018, the renewable energy and energy efficiency targets were reviewed and raised in the framework of the agreement known as the Clean Energy for all Europeans package. Based on the Commission's proposals published in November 2016, the package consists of eight legislative acts, including: Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources; Directive (EU) 2018/844 of the European Parliament and of the Council of 30 May 2018 amending Directive 2010/31/EU on the

energy performance of buildings and Directive 2012/27/EU on energy efficiency. Those documents establish the following goals:

EUROPEAN GOALS TO 2030

- At least 40% reductions in GHG emissions (from 1990 levels)[1].
- At least 32% end consumption share for renewable energy.
- At least 32.5% improvement in energy efficiency[2].

According to the latest figures, the EU reduced its GHG emissions by 24% between 1990 and 2019, mainly thanks to the sectors covered by the EU Emissions Trading Scheme[3].

Despite these improvements, the scientific community has continued to insist on the need to act more ambitiously. The Special Report on Global Warming of 1.5 °C published by the IPCC in 2018 warned that the impacts of climate change for an increase of 2 °C would be much greater than for 1.5 °C. It was clear about the need for work to be done so as not to exceed that limit.

With that in mind, the European Green Deal was announced as the new strategy, whose goals include positioning Europe as the first climatically carbon-neutral continent by 2050 and creating a just energy transition fund. This Deal is accompanied by a roadmap with 50 actions grouped into 10 different policy areas and calls for interim emissions reduction targets (by 2030) to be increased. Thus, in December 2020, the European Council endorsed the new target to reduce net emissions of the European Union by at least 55% by 2030 compared to the 1990 values, which is 15% higher than the 2030 target agreed in 2014:

EUROPEAN GREEN DEAL

- At least **55%** reductions in GHG emissions by 2030, from 1990 levels.
- European Climate Law.
- Updating the community regulations as of 2021 focused on renewable energies, energy efficiency and emissions trading, or the Effort Sharing Regulation or the Land Use, Land-Use Changes and Forestry Directive (LULUCF).

1 As indicated below, the decision was made in December 2020 to increase this percentage up to 55%.

2 Energy saving target with respect to the EU PRIMES 2007 baseline scenario.

3 Progress in emission reduction, available at **https://ec.europa.eu/clima/policies/strategies/progress_en**

The European Green Deal also called for the European Climate Law to be enacted. In March 2020, the Proposal for a Regulation of the European Parliament and Council establishing the framework to achieve climate neutrality was unveiled and Regulation (EU) 2018/1999 ("European Climate Law") was amended in order to convert those commitments into a legal obligation. This and the other legislative texts on climate will be updated with the new reduction targets.

Furthermore, in 2015, the European Commission launched a new strategy known as the Energy Union, which is based on three goals of its energy policy: supply security, sustainability and competitiveness. The GHG emission reduction target is mainly applied by means of the EU Emissions Trading Scheme, the Effort Sharing Regulation and the emissions reduction targets of the Member States, along with the Land Use, Land-Use Changes and Forestry Regulation. Emissions trading (EU ETS, EU Emissions Trading Scheme) is a system introduced by the European Union in 2005. This system establishes a limit on the total amount of GHG emissions in the European Union reduced over time. Industrial facilities affected by this system receive or buy emissions rights that they can trade with one another.

The system has become more complex through its different implementation periods as it strives to reduce emissions in the European industrial sector, which includes electricity generation and aviation. In this regard, the New Industrial Strategy for Europe is also noted for its ambition to achieve neutrality and stresses the importance of digital development for an autonomous, sustainable industry that is capable of facing external impacts.

Those sectors have already, therefore, set their GHG emissions reduction targets. The EU has thus urged Member States to focus their efforts on those dubbed the "diffuse sectors", in other words, those not include in the EU ETS, such as transport, waste management, and agriculture and livestock farming. Special mention should here be made of the Farm to Fork Strategy, that seeks to achieve an environmentally-friendly, healthy and fair food system.

DISTRIBUTION OF 2030 EMISSIONS TARGETS (PENDING UPDATING AT 55%):

- 30% reductions in GHG emissions by 2030, from 1990 levels.
  - EU ETS: 43% reduction compared to 2005.
  - Diffuse (ESD): 30% reduction compared to 2005. Binding targets by countries.

An additional component underpinning the European energy policy is the Energy Security Strategy, launched by the European Commission in 2014. This Strategy seeks to reduce EU Member States' high dependency on natural gas and oil imports, and to guarantee a stable energy supply for all European citizens. Therefore, the Strategy supports the efforts to improve energy efficiency and achieve the 2030 targets, seeks to increase energy production in the EU, diversifies the energy resources supplier countries and improves the infrastructure in response to supply interruptions in the EU, inter alia.

As regards adaptation, in February 2021, the European Commission approved the new EU Climate Change Adaptation Strategy, which replaces the one adopted in 2013. The aim of the new Strategy is for smarter, faster and more systemic measures to be implemented, in order to streamline the EU

adaptation process to the now inevitable impacts of climate change and for the EU to be more climate resilient by 2050.

GOALS OF THE NEW EU CLIMATE CHANGE ADAPTATION STRATEGY (2021)

- Smarter adaptation: reinforcing the quality of the data and risk assessment tools, and expanding frontiers of knowledge. Enhancing Climate-ADAPT as the European platform for adaptation knowledge.
- Faster adaptation to the effects that are already being felt.
- More systematic adaptation, at all levels. Special emphasis on the macro-fiscal policy, nature-based solutions and local adaptation.
- Stepping up international action for climate resilience: scaling up of international finance and harnessing information sharing.

On the other hand, impetus has been given to the Covenant of Mayors for Climate and Energy initiative, which seeks to combine the endeavours of municipalities and local governments in the field of energy and climate change. Thus, local government signatories assume voluntary climate change mitigation and adaptation commitments. Those commitments are implemented by means of an Action Plan for the Climate and Sustainable Energy (PACES) up to 2030, which describes the key actions to be undertaken with the obligation to monitor and assess the progress made and targets achieved every two years.

2.3 STATE FRAMEWORK

At state level, the climate and energy policy is fundamentally influenced by the European Union. Thus, the GHG emissions reduction targets are focused on the diffuse sectors, which are not regulated by the European emissions trading scheme. In this case, the Spanish Climate Change Office (OECC), created in 2001, is entrusted with setting up a roadmap for the diffuse sectors to meet the targets, by means of different GHG reduction measures[4] .

SPANISH STATE SPECIFIC GHG EMISSIONS REDUCTION TARGET

- 10% cuts in GHG emissions by 2020, compared to 2005 levels.
- 26% cuts in GHG emissions by 2030, compared to 2005 levels.

4 https://www.miteco.gob.es/es/cambio-climatico/temas/mitigacion-politicas-y-medidas/definicion-difusos.aspx

Moreover, legislative tools exist, such as the 2021 Climate Change and Energy Transition Act (LCCTE) which steers the Spanish State to a carbon-neutral economy by 2050, thus meeting the commitment acquired in the Paris Agreement. In addition, Spain's Integrated National Energy and Climate Plan (INECP) defines the GHG emissions reduction, renewable energy implementation and energy efficiency targets in the Spanish State up to 2030. Policy lines have been set to help to achieve them.

2030 INECP TARGETS

- 23% reduction of GHG emissions, compared to 1990, and 39% cut in diffuse sectors, with respect to 2005.
- 42% renewable energy out of total final energy consumption.
- 39.5% improvement in energy efficiency
- 74% electricity generated using renewable sources.

Spain also has a 2050 Long-Term Carbon Neutral Strategy, which sets more ambitious targets in order to achieve climate neutrality by that year.

2050 TARGETS OF THE LONG-TERM CARBON NEUTRAL STRATEGY

- 90% cuts in GHG emissions (from 1990 levels).
- 100% electricity generated using renewable sources.

The Spanish Climate Change Adaptation Plan (PNACC) 2021-2030, which replaces PNACC 2006-2020, is the main national planning instrument to reduce the impacts arising from climate change. It is a strategic document that is in line with the new international commitments and which seeks to increase the resilience of society and the economy throughout the national territory. The new plan expands the areas and stakeholders involved and sets new criteria, targets and policy lines that are more effective and ambitious. It comprises 18 work areas and 81 lines of action, thus embracing practically the whole biogeographical and socio-economic spectrum.

The specific goals of the PNACC are as follows:

PNACC GOALS

- Greater climate observation and developing climate projections and services.

- Increase the generation of knowledge about impacts, risks and adaptation and facilitate the transfer of that knowledge.
- Identify Spain's main climate risks and implement the relevant adaptation measures.
- Integrate adaptation into public policies.
- Foster the engagement of all stakeholders.
- Ensure administrative coordination and reinforce adaptation governance.
- Ensure compliance of and implement in Spain the commitments acquired in Europe and internationally.
- Foster the monitoring and assessment of adaptation policies and measures.

On the other hand, in early 2020, Spain declared the environmental and climate emergency in response to the general consensus of the scientific community, which is demanding urgent action to safeguard the environment and the health and safety of the public. The Spanish government thus undertook to implement 30 lines of action, five of them in the first 100 days, to tackle the climate crisis and harness the economic and social benefits offered by the ecological transition. They included preparing the aforementioned Climate Change and Energy Transition Act.

On the other hand, Spain has a National Strategy Against Energy Poverty 2019-2024, which supports that part of the population who finds it hard to keep their homes at a comfortable temperature, among other aspects. This instrument could become even more important in the near future.

In the same way as in Europe, the Spanish State has a climate change adaptation platform (AdapteCCa). This OECC and the Biodiversidad Foundation initiative acts, along with the climate change adaptation units of the Autonomous Communities, as an information sharing tool for those people who want to have access to up-to-date information on climate change impacts, vulnerability and adaptation, and thus foster communication.

2.4 BASQUE COUNTRY FRAMEWORK

The Basque Country has a long record of developing active climate change policies. After the first Basque Plan to Combat Climate Change for the period 2008-2012, it published the Climate Change Strategy of the Basque Country to 2050 - KLIMA 2050, in 2015. This own tool addresses climate change by designing measures in line with the international commitments. By means of 9 goals and 24 policy lines, its first planning period has 70 multisectoral actions covering climate change mitigation and

adaptation aspects. The targets of the KLIMA 2050 Strategy were in keeping with the international climate agenda at that time, even though they are currently being reviewed.

TARGETS OF THE KLIMA 2050 STRATEGY

- Reduce GHG emissions in the Basque Country by at least 40% by 2030 and by at least 80% by 2050, compared to 2005.
- Achieve 40% renewable energy consumption out of the final consumption by 2050.
- Ensure the resilience of the Basque territory to climate change.

Furthermore, in parallel, in July 2016, the Ministry of Economic Development at the time passed the Basque Energy Strategy 2030 (3E2030). The strategy sets out in detail the energy targets:

BASQUE ENERGY STRATEGY TARGETS UP TO 2030

- 17% primary energy savings between 2016 and 2030.
- 21% renewable energy share by 2030 in final consumption.
- 25% reduction in energy consumption at the Basque Public Administration premises over 10 years.
- 25% of public buildings using renewable energy.
- Alternative vehicles added to the public sector's fleet and transport service.
- 25% of alternative energy share in road transport.
- 40% of the electricity supply from cogeneration and renewables.
- Driving 9 priority areas of research, industrial and technological development in the energy field.
- 3 Mt reduction of CO_2, as the result of the energy policy.

On the other hand, as one of the essential instruments in the field of mitigation, the Basque Country has produced the Greenhouse Gas Inventory every year since it was calculated for the first time in the year 2000. At this juncture, it is important to stress the importance of strengthening the actions aimed

at reducing the GHG emissions of the diffuse sectors in the Basque Country. As regards resources and waste management, the Basque Country has the Circular Economy Strategy and will shortly be publishing its Waste Prevention and Management Plan 2021-2030. Both plans agree on the need to optimise the use of materials and reduce the amount of waste generated. The rate of total waste generation per GDP unit is expected to be cut by 30% by 2030, compared to 2016 and, furthermore, material productivity and the rate of using circular material increased by 30%.

With respect to adaptation, and in the framework of the KLIMA 2050 Strategy, the Basque Public Administration has been the driving force behind different projects that have contributed to innovation and demonstration in climate change adaptation by means of the "KLIMATEK" call. These include the projects preparing regionalised climate scenarios for the Basque Country or specific thematic projects such as EGHILUR: Water vulnerability and OSATU: Heat Waves and Health, to name a few.

In this vein, since September 2019, the Basque Country has been working on LIFE IP URBAN KLIMA 2050. It is a far-reaching project designed to support the deployment of the KLIMA 2050 Strategy. It is hoped that as part of this project19.8 million will be invested directly in climate action, 51% of which will be financed by the EU.

As regards the Energy Transition and Climate Change Bill, which is currently in the pipeline, it aims to define the legal-regulatory framework to facilitate achievement of climate neutrality in the Basque Country by no later than 2040. That will involve embarking on a just climate and energy transition process and ensure the territory's resilience to climate change.

On the other hand, the Basque Energy Sustainability Act 4/2019 establishes the basic legal framework for energy sustainability, both in the area of Basque public administrations and in the private sector. The aim is to steer the Basque Country to a new energy model driving efficiency and savings measures, and which fosters the use of renewable energies and sustainable mobility. In that regard, DECREE 254/2020 was issued on the Energy Sustainability of the Basque Autonomous Community, given the need to cover possible regulatory gaps and to specify procedures and concepts of Act 4/2019. The Decree seeks to clarify the scope of the obligations envisaged in the legislation and facilitate its compliance by specifying the timelines, procedures and legal concepts.

It should finally be noted that the administrative processing of the Renewable Energy Production Tracking System (PTS) is underway. The PTS has to be the territorial planning tool to enable an organised development of renewable energies in the Basque Country in this decade.

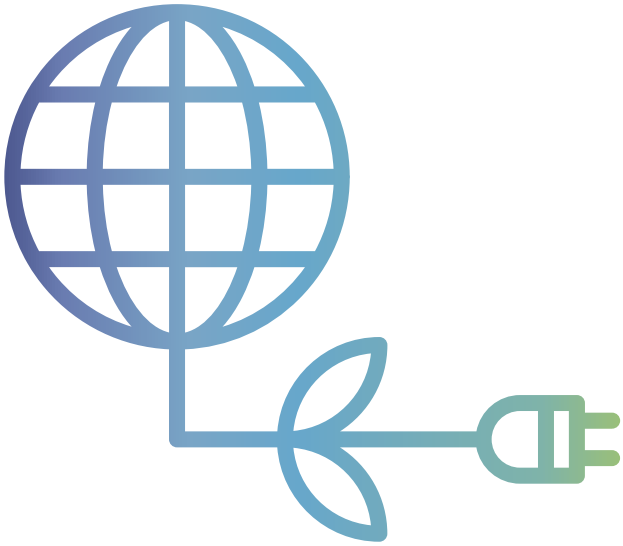
Status assessment

3

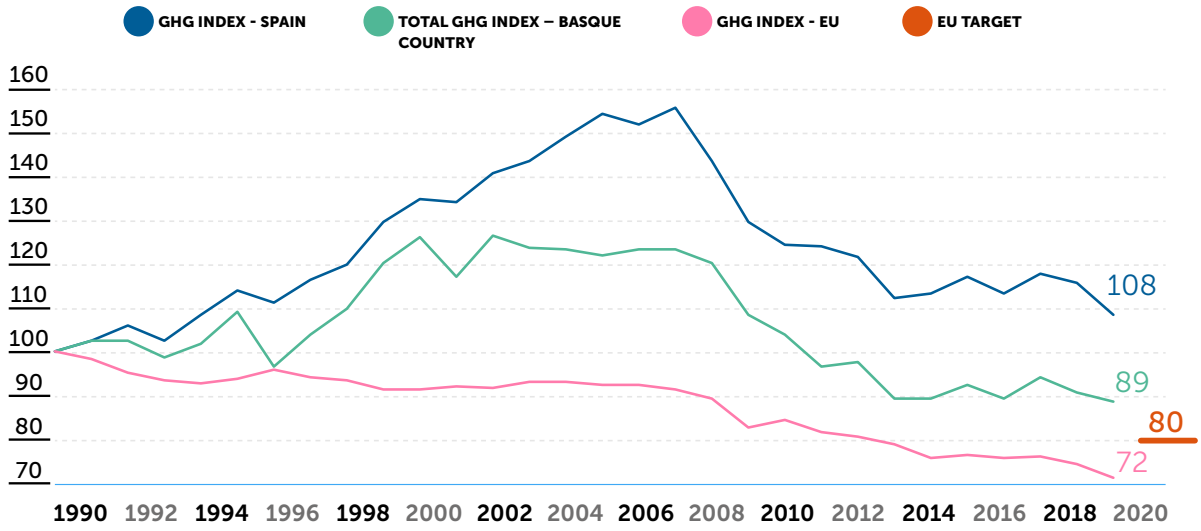
In recent years, and cocooned by the climate emergency declaration, the Basque Country has ensured it is in line with the international scientific community as regards climate change. Climate change and the energy transition are being approached from different angles: mitigation, energy and the resilience of the territory. A small summary is set out below of the current situation of the Basque Country in those three areas.

As regards the reduction of GHG emissions in the Basque Country, the last report, from May 2020, indicates that emissions in 2019 (last available figure) were down by 2% on the previous year and by 27% compared to those for 2005. The absolute emissions in 2019 stood at 18.6 million tons. In 2019, there was a general downturn in all sectors, except for a slight increase in the farming sector. The Land Use, Land-Use Changes and Forestry (LULUCF) sector absorbed 1.7 million tons.

Since 2005, there has been a general decrease in all sectors except the transport sector and, to a lesser extent, in services. Even so, the transport sector has shown a change in trend with two consecutive years of GHG emissions dropping.



GREENHOUSE GAS EMISSIONS EVOLUTION INDEX IN THE BASQUE AUTONOMOUS COMMUNITY, IN THE EUROPEAN UNION-28 AND IN SPAIN (2019) (1990=100)



Source: Prepared by the authors using Eurostat data: All sectors and indirect CO2 (excluding LULUCF and memo items, including international aviation) and EEA: Approximate greenhouse gas emissions estimates (2019).

The emissions of regulated sectors, i.e., those coming under the European Union Emissions Trading Scheme - "EU-ETS" regulations (mainly energy sector and energy-intensive industrial sectors) slightly increased between 2018 and 2019, due to the rise of electricity production in the gas combined cycles, given the drop in coal production in Spain overall. Compared to 2005, the first year that the scheme was up and running, GHG emissions have fallen by 38%. In turn, diffuse emissions, in other words, those from sectors not regulated by the "EU-ETS" (sectors such as waste, residential, services, transport or non-regulated industry), have dropped by 11% since 2005. They have already exceeded the European effort sharing target of 10% (average binding target for Member States).

However, progress has been modest since 2015 in terms of total GHG emissions. Between 2015 and 2019, they only fell by 4%, which highlights the need for greater effort in this regard.

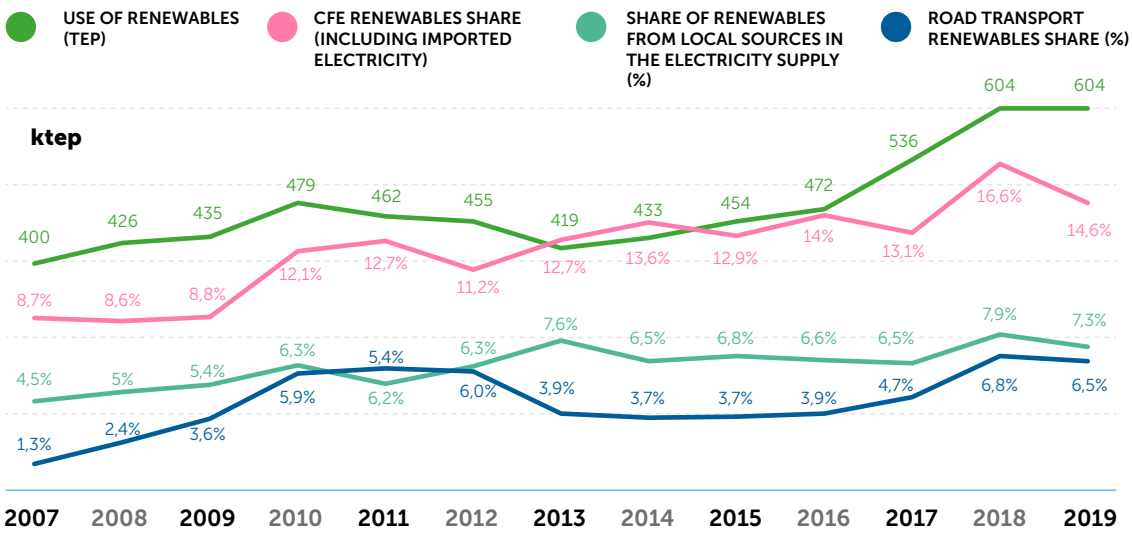
As regards energy, the total primary demand or gross domestic consumption of the Basque Country increased by nearly 3.8% between 2015 and 2019. In that period, there were drops in coal (-49%) and in electricity (-4%), while increases were posted by renewable energies (34%), natural gas (12%), and a slight one by petroleum products (4%). When broken down by types of energy, natural gas is mainly used by the energy sector particularly for cogeneration and combined cycles (57%), petroleum derivatives mainly by transport (70%), while industry relies on electricity (51%).

Final energy consumption dropped by 0.9% during the same period 2015-2019. The use of coal as an energy source continues to fall. Its use is associated to steelmaking and with an additional component as a raw material in the production process. Even though oil consumption was higher in 2019 than in 2015, a slight drop in final consumption could be seen in 2019. The slow progress of the use of alternative fuels in transport (electric and NG) contrasts with the gradual but patchy increase in the percentage of biofuels in the final mix. By sectors, consumption by industry is divided between natural

gas (39%) and electricity (40%), and the building sector between natural gas (34%) and electricity (49%). Transport, in turn, is based on petroleum products (93%).

As regards renewable energies, their use has increased significantly since 2105. In 2019, it had reached 604 ktep, where biomass accounted for 62%, biofuels 22%, hydroelectricity 5.7% and wind power 4.7%. The renewables share of the final energy consumption in the Basque Country stood at 14.6% in 2019, compared to 16.6% in 2018, despite the level of harnessing renewables and the drop in final consumption. That was down to a net lower import of renewable electricity.

EVOLUTION OF RENEWABLE ENERGY USE AND INDICATORS IN THE BASQUE COUNTRY - ENERGY DATA 2019

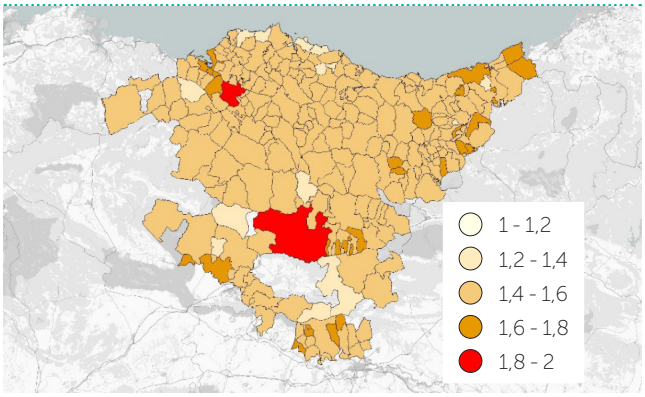


In tandem, the Basque Country has been advancing in the search for a climate-change resilient territory. The scientific community believes that weather events and their impacts will be increasingly more frequent and severe in many parts of the Earth. Therefore, as part of the KLIMA 2050 Strategy, the Basque Government has been driving different projects that have helped to increase knowledge about the territory's climate risk and have fostered different adaptation actions. Regionalised climate change scenarios for the Basque Country have been prepared as part of the KLIMATEK initiative. Those climate models show the possible future behaviour of variables such as temperature, precipitation and indicators such as dry days. According to those projects, the territory is expected to experience a gradual increase in average temperatures up to 40 °C by the end of the century (RCP8.5 projections). The estimates regarding the evolution of precipitation are more uncertain. However, on average, a slight drop of around 15% of annual precipitation is expected by the end of the century and the seasonal pattern may also change.

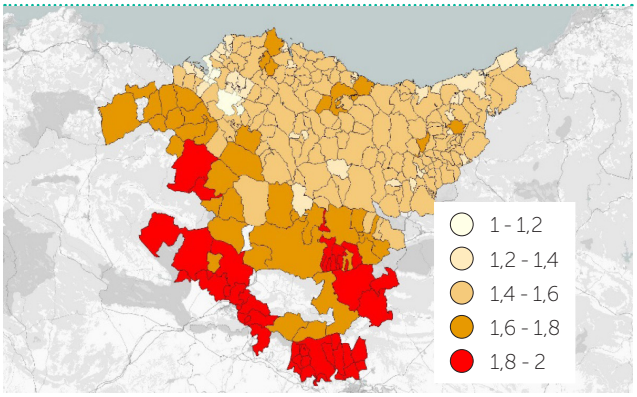
Those data are the base used in climate risk studies. The study of the assessment of the vulnerability and risks of Basque municipalities regarding climate change reveals which municipalities will have the greatest climate risk regarding heat waves, river floodability, rising sea level or drought. The municipalities at greatest risk are shown below in red, for each of the above threats.

CLIMATE RISK INDEXES FOR FOUR DIFFERENT THREATS 1971-2100 USING THE CLIMATE PROJECTIONS OF THE RCP 8.5 SCENARIO - ASSESSMENT OF THE VULNERABILITY AND RISK OF THE BASQUE MUNICIPALITIES TO CLIMATE CHANGE

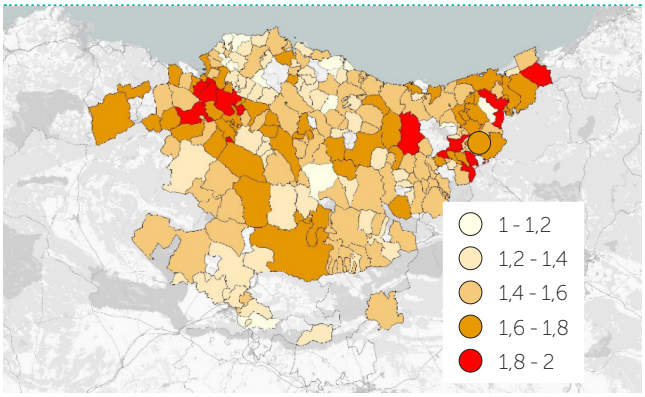
IMPACT OF HEAT WAVES ON HUMAN HEALTH



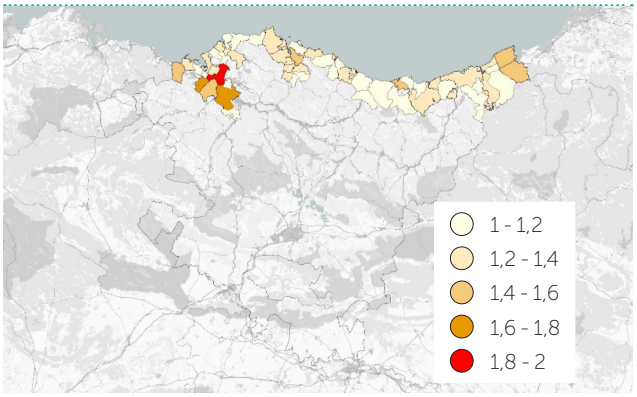
EFFECT OF DROUGHT ON THE AGRICULTURAL SECTOR



EFFECT OF RIVER FLOODING ON THE URBAN ENVIRONMENT



IMPACT OF FLOODING DUE TO RISING SEA LEVELS ON THE URBAN ENVIRONMENT



Furthermore, the study of the Basque Country's sectoral climate risk has shown that productive sectors such as fishing or transport are particularly vulnerable to climate change. In contrast, sectors such as tourism or industry and energy must get ready to face this phenomenon, while harnessing the opportunities that it may generate. Furthermore, spatial and urban planning and the hydric resources of the Basque Country must be considered as critical elements in order to achieve a resilient territory. In that regard, special mention must also be made of the KOSTAEGOKI project, which is analysing the Basque coast in detail in order to establish the impacts of climate change on the coastal environment.

In the case of adaptation, certain progress has been made. However, there are no quantifiable targets available or indicators with specific targets that allow quantification to be conducted. It is therefore complicated to establish the degree of progress regarding the goal of ensuring the resilience of the Basque territory to climate change. Nevertheless, the Basque Country can be said to be advancing in the integration of territorial adaptation policies. However, the municipal and provincial commitments need to be aligned with the targets and goals of the Strategy.

From the point of view of municipal planning, the importance of approving specific adaptation plans that include necessary interinstitutional coordination and citizen participation for the effective implementation of those plans is significant, in addition to adaptation being integrated in other public policies such as urban planning or emergencies.

At local level, Basque municipalities already have a long track record regarding climate change commitments. Internationally, the integration of different municipal initiatives in the Covenant of Mayors for Climate & Energy has allowed the mitigation and adaptation commitments of Basque municipalities to be included. Furthermore, an increasing number of municipalities have decided to prioritise adaptation in their agendas by approving the necessary local plans in this regard. In 2019, 11 municipalities already had a specific Adaptation Plan, which meant around 4% of municipalities that were home to 41% of the Basque population.

The Basque Country is a trail-blazing region in driving the integration of climate change in its spatial and urban planning. One example is the Climate Change and Urban Planning Manual published by Udalsera 2030 and the Basque Government in 2012.

In this way, the integration of climate change in the DOTs (Regional Planning Guidelines), based on the technical and scientific knowledge developed over recent years, should be mentioned in the field of spatial planning.

In the field of local innovation, over 50 local authorities have implemented many projects that directly impact climate action since 2008.

With respect to citizen awareness of climate change and the energy transition, according to the 2021 Climate Change and Energy Barometer, the Basque population rates climate change as 8.1 on a scale of 1 to 10 in terms of gravity; in other words, it is considered to be very important. Moreover, 89% of the population believes that the relationship between climate change energy is between "considerable" and "very close". While 73% of the population believe that we are already suffering the consequences of climate change, 10% believe that we will not be suffering the real problem for at least 10 years. Heatwaves and the rising sea level are the two issues that more people identify as the result of climate change. It can therefore be argued that the concern of the population is high in this regard.

In recent years, the KLIMA 2050 Strategy has been the main framework for addressing climate change in the Basque Country. Since it was approved in 2015, the international context and the situation of the Basque Country have changed considerably. In recent years, the EU has tended towards integrating climate and energy planning, and has grasped the need to provide that planning with a proper legislative framework. This PTECC 2021-2024 and the Basque Climate Change and Energy Transition Bill are essential tools in this context.

Principles, targets and strategic focal points

4

The Climate Change and Energy Transition Plan 2021-2024 paves the way in the field of energy and climate change in the Basque Country over the coming four years. In recent years, the international arena has increased its commitment, both with respect to its targets and to the available resources. Thus, the currently available provisions are aimed at projects directly related to sustainability and climate change, or include conditions in that regard. The Basque Country has recently been steadily striving in that regard. This plan allows progress to be make in the same direction as the European Union and in line with other sectoral plans, while harnessing the opportunities that may arise. Additionally, the aim is to achieve a fair technological and social transition that is environmentally friendly, and which prioritises people's health and rights.

The plan identifies the priority policy areas, on the one hand, in the energy transition and the mitigation of climate change by searching for energy efficiency, the circular economy or urban renewal and driving a new energy model. On the other hand, as regards climate change adaptation, by involving the primary sector or natural environment, the coast, or water resources, inter alia. Furthermore, it focuses on the importance of some sectors, including spatial and urban planning, in order to make population resilient, and on the status and management of essential infrastructures. Mention should also be made of the importance of risk forecast and anticipation in this plan. In the face of extreme situations, it is essential to have a good warning system and sufficient resources to deal with them. Therefore, strengthening the emergency response, civil protection and the health system is considered to be fundamental.

4.1 PRINCIPLES

The basic principles underpinning this plan are as follows:

- **Protecting the environmental and environmental sustainability:** avoid altering the environment and consider the sustainability limits.
- **Protecting and promoting public health:** prioritise the protection of public health.
- **Zero-emission culture:** foster the transition to a carbon-neutral socio-economic model.
- **Caution and resilience:** act in a preventive way to reduce the climate risk for people, property, resources and natural heritage, and increase the ability to recover.
- **Social cohesion:** climate change action to promote substantial fairness that guarantees conditions of justice for everybody.
- **Optimization, circularity and efficiency:** improve the sustainability of buildings and processes by incorporating the optimisation of resources and energy efficiency, and circularity of the materials.
- **Self-sufficiency, proximity and universality:** be committed to our resources and producers and pursue their international importance.
- **Knowledge, innovation and opportunities:** support research, innovation and technological development as key aspects to address the Climate Change and Energy Transition effectively and efficiently.
- **Transparency, mainstreaming and participation:** integrate the Climate Change and Energy Transition mitigation and adaptation in all the territorial and sectoral policies, guaranteeing that it is open in order for society to be involved.
- **Exemplary Public Administration:** drive the coordinated and exemplary action of the Administration to transform the Basque Country in a carbon-neutral society that is resilient to climate change.
- **Cooperation, commitment and co-responsibility:** encourage stakeholders in and outside the Basque Country to work together and guarantee the monitoring and compliance of the targets.

4.2 TARGETS

The Climate Change and Energy Transition Plan 2021-2024 is in keeping with the Government Programme 2020-2024, and seeks to help meet its targets regarding reducing emissions and consolidating renewable energies. In addition, a target linked to adaptation is included. From a mainstreaming perspective, it also helps to generate employment and develop innovation. The specific targets of the plan are to:

1. Reduce greenhouse gas emissions by 30%.
2. Ensure that renewable energy share accounts for 20% of the final energy consumption.
3. Guarantee the resilience of the Basque territory to climate change.

Furthermore, the implementation of the plan is also going to contribute to a further two goals:

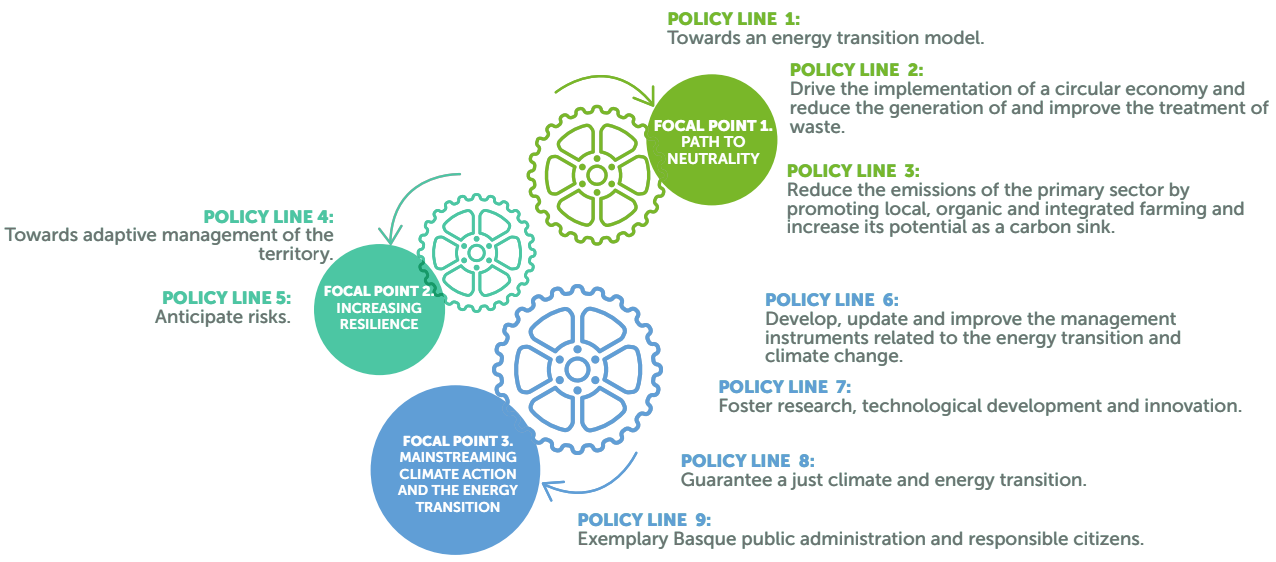
i. Cutting unemployment to under 10%.

ii. ii. Achieving convergence in R&D with the European average.

4.3 STRATEGIC FOCAL POINTS, POLICY LINES AND WORK AREAS

The Climate Change and Energy Transition Plan 2021-2024 is based on 3 strategic focal points and 9 policy lines, which are broken down into 27 work areas. The following figure shows the structure of the plan described below.

OUTLINE OF THE CLIMATE CHANGE AND ENERGY TRANSITION PLAN 2021-2024: FOCAL POINTS AND POLICY LINES



The 9 policy lines of the Climate Change and Energy Transition Plan 2021-2024 are described below.

FOCAL POINT 1. PATH TO NEUTRALITY

Policy line 1: Towards an energy transition model

Apart from improving energy efficiency, Policy Line 1 - Towards an Energy Transition Model seeks to improve energy efficiency, manage energy demand and anticipate changes to energy generation potential due to climate change, foster development and harness renewable energies, along with the use of new fuel. Emission-free transport and the renewal of the vehicle fleet will be a further two challenges that must be addressed to achieve sustainable mobility. Finally, energy efficiency criteria and renewable energies will be fostered in the urban environment, by focusing on retrofitting and moving towards "zero-emissions building".

Policy line 2: Drive the implementation of a circular economy and reduce the generation of and improve the treatment of waste

Policy line 2 will particularly focus on comprehensively bolstering the circular economy by means of the deployment of the ecodesign, developing roadmaps for different sectors or recovering and reusing certain materials. Work will also be carried out on reducing the generation of urban waste and its proper management, in order to achieve zero dumping of untreated waste.

Policy line 3: Reduce the emissions of the primary sector by promoting local, organic and integrated farming and increase its potential as a carbon sink

Local, organic and integrated farming will be essential to drive the reduction of GHG emissions that is the goal of Policy Line 3. In addition to reducing GHG emissions in the agricultural sector, giving impetus to increasing the potential of the carbon sinks in the Basque Country is essential to steer the Territory towards being climate neutral.

FOCAL POINT 2. INCREASING RESILIENCE

Policy line 4: Towards adaptive management of the territory

Policy line 4 seeks to increase the resilience of the Territory by means of integrating the climate change variable in the management of the natural environment and driving the multifunctionality of the natural ecosystems such as geological and biological process regulators. Furthermore, due to the importance of the critical infrastructures, particularly in the case of extreme events, adaptation and vulnerability criteria will be integrated in their management. On the other hand, a mixed use and resilient urban and territorial structure that integrates the climate risk in its strategy and planning will be driven and the climate change variable integrated in the management of coastal areas. Furthermore, the management of water resources and flood risks will be conducted from a comprehensive approach and in a climate change context and the focus will be on nature-based solutions. Finally, work will be carried out adapting the practices and managing the primary sector (farming and fishing) to the new climate conditions.

Policy line 5: Anticipate risks

Policy Line 5, linked to risk anticipation, is expected to strengthen the early warning systems, improve management of the emergencies and increase the available resources. Furthermore, the emphasis will be on increasing civil protection resources and improving coordination with the other emergency stakeholders. Finally, the aim is to better prevent climate change impacting human health and to ensure a rapid and effective response.

FOCAL POINT 3. MAINSTREAMING CLIMATE ACTION AND THE ENERGY TRANSITION

Policy line 6: Develop, update and improve the management instruments related to the energy transition and climate change

Policy line 6 will help to advance in defining a climate governance to allow the Basque Country to address the challenges it is facing. Therefore, climate change and energy transition legislation will be developed and policies and planning will be prepared to allow that legislation to be deployed. In addition, instruments and tools will be designed to facilitate the deployment of the climate change and energy transition policies, along with planning at the different levels of governance.

Policy line 7: Foster research, technological development and innovation

The development of effective climate governance must be based on the knowledge arising from research, technological development and innovation. Therefore, Policy Line 7 seeks to harness the climate change opportunities and stimulate an industry aimed at generating new products, new productive processes and services linked to adaptation, along with driving the generation and transfer of scientific knowledge.

Policy line 8: Guarantee a just climate and energy transition

The climate and energy transition must reach all Basque citizens, including the different parts of the Territory. Therefore, Policy Line 8 aims to provide financial and technical support to avoid energy poverty and support the energy transition and social cohesion, along with fostering the development of new job opportunities and the economic competitiveness of the territory.

Policy Line 9: Exemplary Basque public administration and responsible citizens

The Basque Public Administration must be a first-rate example for all citizens and the private sector. Therefore, Policy Line 9 will work on guaranteeing an energy efficient public administration, with first-rate expertise regarding climate change and an international benchmark. The focus will likewise be on increasing awareness, training and informing the public regarding climate change.

The following tables connects the focal points, policy lines and areas of the plan to the commitments and initiatives of the Government Programme 2020-2024 of the XII Parliamentary Term:

Climate Change and Energy Transition Plan 2021-2024			Government Programme
Strategic Focal Points	Policy lines	Work areas	Commitments, initiatives
FOCAL POINT 1. Path to neutrality	Policy line 1: Towards an energy transition model.	1. Improving energy efficiency, managing energy demand and foreseeing changes regarding energy generation potential due to climate change.	C97, I3; C125, I4, I8
		2. Fostering the development and use of renewable energies.	C125, I1, I2, I3; C126, I1, I2, I3, I5
		3. Driving the development and use of new fuels.	C126, I4
		4. Encouraging emission-free transport and renewing the vehicle fleet.	C32, I3, I5, I6, I7; C126, I7, I8; C129, I1, I2, I3
		5. Fostering energy efficiency criteria and renewable energies in the urban environment, by focusing on retrofitting and moving towards "zero-emissions building".	C37, I11; C39, I1, I4, I5, I8, I9, I10 C125, I5
	Policy line 2: Drive the implementation of a circular economy and reduce the generation of and improve the treatment of waste.	6. Boosting the circular economy from a comprehensive approach.	C131, I1, I2, I5, I6, I7, I8, I9
		7. Reducing the generation of municipal solid waste and achieving zero landfilling of untreated waste.	C132, I1, I3 I4, I5, I7, I8, I9, I10, I12
	Policy Line 3: Reduce the emissions of the primary sector by promoting local, organic and integrated farming and increase the potential as a carbon sink.	8. Driving the reduction of GHG emissions in the primary sector.	C27, I6; C30, I4; C31, I2
		9. Driving the surge in potential of carbon sinks.	C129, I7

Climate Change and Energy Transition Plan 2021-2024			Government Programme
Strategic Focal Points	Policy lines	Work areas	Compromisos, iniciativas
FOCAL POINT 2. Increasing resilience	Policy line 4: Towards adaptive management of the territory.	**10.** Integrating the climate change variable in the management of the natural environment and fostering the multifunctionality of the natural ecosystems as regulators of geological and biological processes.	C29, I3; C134, I7
		11. Integrating vulnerability criteria and adaptation criteria in critical infrastructures (energy, water, health, education, ICTs, transport, industry) in the case of extreme events.	
		12. Driving a mixed-use and resilient urban and territorial structure that includes the climate risk in its strategy and planning.	C129, I4; C134, I10
		13. Integrating the climate change variable in the management of coastal areas.	
		14. Managing water resources and the flood risk from a comprehensive approach and in a climate change context and promoting nature-based solutions.	C133, I1, I2, I3, I4, I5, I6, I7, I8
		15. Adapting the practices and managing the primary sector (farming and fishing) to the new climate conditions.	C27, I6; C28, I7
	Policy line 5: Anticipate risks.	**16.** Reinforcing the early warning systems, improving the management of emergencies and increasing the available resources.	C111, I3
		17. Increasing civil protection resources and improving coordination with the other emergency stakeholders.	
		18. Better preventing climate change impacting human health and to ensure a rapid and effective response.	C13, I3; C71, I3; C74, I3, I4

Climate Change and Energy Transition Plan 2021-2024			Government Programme
Strategic Focal Points	Policy lines	Work areas	Compromisos, iniciativas
FOCAL POINT 3. Mainstreaming Climate Action	**Policy line 6:** Develop, update and improve climate-change related management instruments.	**22.** Harnessing the opportunities of climate change and stimulating an industry oriented at generating new products, new productive processes and adaptation-oriented services.	**C130**, I1, I2; **C134**, I3
		23. Driving the generation and transfer of scientific knowledge.	**C128**, I1; **C134**, I1
		24. Providing financial and technical support to avoid energy poverty and supporting the energy transition and social cohesion.	**C134**, I6
	Policy line 7: Foster research, technological development and innovation.	**25.** Fostering the development of new job opportunities and the economic competitiveness of the territory.	**C3**, I3; **C5**, I2; **C13**, I1; **C18**, I4; **C19**, I3; **C24**, I1; **C31**, I3; **C127**, I2
		26. Guaranteeing energy efficient public administrations, with first-rate expertise regarding climate change and an international benchmark.	**C19** I5; **C36**, I5; **C39**, I6; **C59**, I1; **C129**, I5; **C131**, I4; **C132**, I2
	Policy line 8: Guarantee a just climate and energy transition.	**27.** Awareness-raising, training and informing the general public about climate change.	**C81**, I10; **C128**, I2; **C129**, I6; **C77**
		25. Fomentar el desarrollo de nuevas oportunidades de empleo y la competitividad económica del territorio.	**C2**, I1; **C14**, I1, I6; **C19**, I2, I4; **C127**, I3; **C30**, I1; **C31**, I1; **C134**, I9
	Policy line 9: Exemplary Basque public administration and responsible citizen .	**26.** Garantizar una Administraciones Pública eficiente energéticamente, con altas competencias en cambio climático y referente internacionalmente.	**C4**, I2; **C14**, I9; **C32**, I1, I2; **C125**, I6; **C126**, I6; **C130**, I3; I4, I5; **C132**, I11; **C134**, I6; **C150**, I1, I5
		27. Awareness-raising, training and informing the general public about climate change.	**C32**, I8; **C49**, I4; **C63**, I1; **C125**, I7; **C131**, I3

The Plan is also in line with other schemes in force, such as the Berpiztu Programme to reactive the economy and jobs in the Basque Country 2020-2024; the Euskadi Next Programme 2021-2026, and the Basque Circular Economy Strategy 2030.

Furthermore, it is in line with the following strategic plans of the parliamentary term:

- Basque Science, Technology and Innovation Plan 2030.
- Strategic Industrial Development and Internationalisation Plan
- Strategic Housing and Urban Regeneration Plan.
- Strategic Health Plan.
- Strategic Circular Economy and Bioeconomics Plan, among others.

Flagship initiatives to be developed

5

The energy transition and climate change are the two challenges that Basque society as a whole has to address to anticipate the possible negative impacts and harness the emerging opportunities in order to become a carbon-neutral and resilient society supported by a competitive economy.

The Climate Change and Energy Transition Plan 2021-2024 is an opportunity to advance in enhancing the synergies between energy and climate change on a longer-term approach that allows the territory to become carbon neutral and resilient.

Based on the goals set, a series of flagship initiatives has been defined that, without being exhaustive, are considered the most relevant to be implement while this plan is in force. In general, they include measures linked to:

- **Focal Point 1. Path to neutrality,** focused on renewable energies, green hydrogen, sustainable mobility, building energy retrofitting, the circular economy and absorptions;
- **Focal Point 2. Increasing resilience,** referring to climate change in the Natura 2000 Network, the resilience of the Basque coast or the nature-based solutions linked to urban areas, and
- **Focal Point 3. Mainstreaming Climate Action and the energy transition** describing local climate and energy planning, energy and climate legislation, along with exemplary performance by the public administration.

Those flagship initiatives are described below:

		FOCAL POINT 1. Path to neutrality			FOCAL POINT 2. Increasing resilience		FOCAL POINT 3. Mainstreaming Climate Action			
		LINE 1	LINE 2	LINE 3	LINE 4	LINE 5	LINE 6	LINE 7	LINE 8	LINE 9
Initiative 1	Exemplary spatial planning in order to develop renewable energies.	■								
Initiative 2	The Basque Country as an international benchmark in marine energy.	■								
Initiative 3	Basque industry at the cutting edge of wind power.	■								
Initiative 4	Photovoltaic solar energy for a renewable and electric future.	■								
Initiative 5	Hydrogen production, distribution and consumption ecosystem in the Basque Country.	■								
Initiative 6	Sustainability mobility, a short-term need .	■								
Initiative 7	Impetus for building energy retrofitting.	■								
Initiative 8	The circular economy and climate change, two sides of the same coin.		■							
Initiative 9	Carbon sinks, a cornerstone of climate neutrality.			■	■					
Initiative 10	A resilient Basque Natura 2000 Network fostering climate neutrality.			■	■					
Initiative 11	Coastal towns and infrastructures ready for the climate change challenge.				■	■	■	■		
Initiative 12	Nature-based solutions, source of innovation for the resilience of the municipalities.				■	■	■	■		
Initiative 13	Population ready for climate change adaptation and a just energy transition .				■		■		■	
Initiative 14	Energy transition and climate change pairing, new planning and legislative framework.						■		■	
Initiative 15	Public administration, a model for the energy transition and the resilience of Basque society.								■	■

INITIATIVE 1	Exemplary spatial planning in order to develop renewable energies
Objective	Plan the territorial implementation of the future renewable energy projects in the Basque Country.
Context	The future development envisaged, as set out in all the climate change and energy transition, and renewable energies strategies, points towards establishing an environmental, territorial and energy plan that allows those energies to be implemented in the Basque Country in the future.
Main actions	o Management and monitoring of the administrative process, in general o Management and monitoring the citizen participation process o Management and monitoring of the allegations made o Environmental, territorial and energy technical support,...
Milestones and key aspects	o We have the potential to harness renewable energies. o The future development of renewable energies will be based on technological improvements, to comply with the energy targets and fitting the projects in the environmental and territorial framework. o The RE PTS seeks to be a further instrument to help with the implementation RE projects in an organised and sustainable way.
Timeline	**2021-2023**
2021-2024 Budget	**Associated expenditure:** €150,000
Leader(s)	**DESMA-EVE**
Strategic alignment	**Focal point(s):** Climate neutrality. **Policy line(s):** **1.** Towards an energy transition model.

INITIATIVE 2	The Basque Country as an international benchmark in marine energy

Objective

Position the Basque Country as an international benchmark in the field of marine power.

Context

The need to accelerate the technological developments to harness marine power, the integration of the Basque industrial sector in that development and the galvanisation of the marine power infrastructures in the Basque Country are the main reasons driving future development in this field.

Main actions

- Enlargement of the BiMEP test area.
- Testing wave power collectors at BiMEP and Mutriku (Wello, ...)
- Promoting marine energy projects through the EVE annual grant programme.
- Pre-commercial Public Procurement of 2 wave power collectors (Europewave project) and 2 OWC turbine prototypes.
- Attracting the main international marine power events to the Basque Country.
- Chairing the Atlantic Corridor and coordination of the marine power task force.

Milestones and key aspects

- We have testing infrastructures.
- We are involved, at European level, in many of the key projects underway.
- Regardless of already being an international benchmark, we have to continue to strive to always be at the cutting edge.
- Our industrial sector's ability to develop what is going to be needed.

Timeline

2021-2024

2021-2024 Budget

Total budget: €12,700,000

The EVE will continue to support investments to be made in existing Basque testing infrastructures or new ones to be developed, through BiMEP, S.A.

Leader(s)

EVE-BiMEP

Strategic alignment

Focal point(s): Climate neutrality.

Policy line(s): **1.** Towards an energy transition model.

INITIATIVE 3	Basque industry at the cutting edge of wind power
Objective	Position Basque industry at the cutting edge of the technological development of offshore and onshore wind power infrastructures.
Context	Taking into account the Basque Country's potential to harness offshore and onshore wind power, along with what Basque industry has to offer in this field, it is fundamental to work on the technological development of wind turbines and of floating platforms. At the same time, the focus has to be on the increasing the introduction of technology in our territory to produce, in an environmentally way, more electricity from renewable sources in order to bring the share of renewable energy closer to the requirements and commitments set.
Main actions	○ Enlargement of the BiMEP testing area. ○ Testing wind turbines and floating platforms at BiMEP (Saitec, ...) ○ Promoting offshore wind power projects through the EVE annual grant programme. ○ Promoting an offshore wind farm project close to the Basque coast. ○ Promoting onshore wind farms by means of the stake in a wind power project promoter. ○ Attracting the main international wind power events to the Basque Country.
Milestones and key aspects	○ We have testing infrastructures. ○ Regardless of already being an international benchmark, we have to continue to strive to always be at the cutting edge. ○ Our industrial sector's ability to develop what is going to be needed. ○ The new installed wind power will produce over 530,000 MWh a year, which would be equivalent to the electricity consumption of over 21% of Basque homes.
Timeline	**2021-2024**
	Total budget: €1,000,000
	The EVE will participate in the investment projects through investee companies such as Aixeindar and Geroa, and will support the Basque testing infrastructures through BiMEP.
Leader(s)	**EVE-BiMEP**
Strategic alignment	**Focal point(s):** Climate neutrality. **Policy line(s):** **1.** Towards an energy transition model.

INITIATIVE 4	Photovoltaic solar energy for a renewable and electric future
Objective	Facilitate the introduction of photovoltaic solar facilities in the Basque Country.
Context	• Decarbonization of the economy. The progressive decarbonization of the economy involves increasing the generation of renewable electricity. Specifically, the National Energy and Climate Plan (PNIEC) sets the target of 74% of electricity consumed in Spain in 2030 being generated using renewable energy sources. A target of 36.9 GW is set for PV energy. The 3E2030 Strategy likewise establishes a target of 293 MW for photovoltaic solar energy. • Lowering the costs of PV facilities. The current development of the facilities has led to better performances and significantly cheaper facilities. Which will facilitate its implementation. • Empowerment of the consumer. EU policies give an increasingly more important role to the end consumer, where self-consumption facilities and energy communities are key tools in their implementation. Photovoltaic solar energy is the technology fundamentally used in individual or collective self-consumption facilities and in the Energy Communities. • Favourable legislative framework. Benefit from the specific legislative development regarding self-consumption, which significantly streamlines the implementation of self-consumption facilities, both technically and administratively.
Main actions	• Self-consumption facilities. Foster the implementation of individual and collective self-consumption projects through the annual EVE grant programme for renewable electricity production. • Energy communities. Lead the creation of energy generation citizen cooperatives to meet own consumption in Basque municipalities through the EKIOLA initiative. • Generation facilities. Participate as partners in the implementation of large photovoltaic solar energy parks by means of public-private partnerships. EVE currently has a stake in EKIAN with 24 MW installed and works with EKIENEA.
Milestones and key aspects	• Self-consumption facilities. The implementation of 400 self-consumption facilities a year is expected, thanks to the EVE grant programmes for renewable electricity production. • Energy communities. By 2023, between 12,000 and 20,000 people are expected to be members of an Energy Community in the Basque Country, thanks to the EKIOLA initiative. • Generation facilities. The EKIENEA 100MW photovoltaic solar energy park is expected to be commissioned by 2023.
Timeline	**2021-2024**
2021-2024 Budget	**Total budget:** €33,100,000
Leader(s)	**EVE (Basque Energy Board)**
Strategic alignment	**Focal point(s):** Climate neutrality. **Policy line(s):** **1.** Towards an energy transition model.

INITIATIVE 5	Hydrogen production, distribution and consumption ecosystem in the Basque Country
Objective	Create a renewable hydrogen consumption, distribution and production system and position the Basque Country and its industrial fabric in the best position to harness the technological and industrial development, environmental and energy opportunities.
Context	Hydrogen has been identified in Europe and globally as an essential element for the energy transition to an economy that is neutral in greenhouse gas emissions. Hydrogen allows the massive integration of renewable energies in the energy system, and paves the way to a society without greenhouse gas emissions. Furthermore, hydrogen provides the opportunity to decarbonise sectors such as air, maritime or heavy transport, or specific industrial applications. Development prospects are anticipated for a global and European hydrogen market, which will provide opportunities throughout the hydrogen value chain, including production, integration with renewable generation plants, storage, transport, distribution and consumption.
Main actions	• Driving initial green H_2 production projects. • Impetus to first H_2 transport infrastructures. • Fostering a basic mobility infrastructure using H_2 • Organisation of a leading event nationwide on H_2 and associated technologies. • Monitoring and driving the Basque Hydrogen Strategy. • Participation in forums European Clean Hydrogen Alliance, S_3 H_2 Valleys Partnership, Sectoral Forum, Spanish H_2 association, Gasnam, ...
Milestones and key aspects	• The Basque Country has all the characteristics to develop an ecosystem and an international hydrogen export centre. • We have an industry with great hydrogen production and consumption (refinery). • We have trailblazing companies leading important hydrogen projects. • Strategic located on the Atlantic Corridor of the TransEuropean Transport Network TEN-T. • We have suitable infrastructures: Port of Bilbao, included in the basic TEN-T. • Important industrial fabric throughout the value chain (CAF, Irizar, Talgo, Tubacex, Orkli, ...). • Well-positioned knowledge centres.
Timeline	**2021-2024**
2021-2024 Budget	**Total budget:** €3,300,000
Leader(s)	**EVE-VG-Business fabric**
Strategic alignment	**Focal point(s):** Climate neutrality. **Policy line(s):** **1.** Towards an energy transition model.

INITIATIVE 6	Sustainability mobility, a short-term need
Objective	Establish a transport model that responds to the environmental and energy commitments for the coming years.
Context	The transport sector has been greatly affected by the Covid-19 pandemic in recent months. Freight, particularly last mile transport, is increasing. However, the use of public transport, however, has fallen and further effort is needed to restore citizen trust. The digitalisation of this sector and changing to alternative fuels are increasingly more necessary.
Main actions	• Fostering sustainable mobility and the use of more efficient means of transport. • Promoting the use of vehicles using alternative fuels. • Encouraging the use of more efficient vehicles. • Driving the introduction of mobility plans to activity centres. • Giving impetus to the setting up of charging/alternative refuelling facilities that cover the whole of the Basque Country. • Encouraging the use of natural gas and other alternative fuels in the maritime sector.
Milestones and key aspects	• The Energy Sustainability Act offers an opportunity for the Basque administration to be a benchmark. • Significant evolution of the electric vehicle market. • Ability of the automotive and power electronic sectors to harness the opportunities offered by electric mobility. • Freight transport has a great margin for improvement as regards energy.
Timeline	**2021-2024**
2021-2024 Budget	**Total budget:** €24,000,000
Leader(s)	**EVE (Basque Energy Board)**
Strategic alignment	**Focal point(s):** Climate neutrality. **Policy line(s):** **1.** Towards an energy transition model.

INITIATIVE 7	Impetus for building retrofitting
Objective	Drive the energy retrofitting of the building stock in the Basque Country.
Context	Energy consumption of buildings accounts for around 20% of the total consumption of the Basque Country and the few measures taken in this building sector that is so varied and scattered make it one of the sectors with the greatest room to improve and help to reduce energy consumption and GHG emissions. Specifically, Article 38 of Decree 254/2020 and Article 42 of Act 4/2019 contains the requirement for the existing Housing Community buildings to conduct audits on significant refurbishments, as well as to carry out studies into alternative and/or centralised systems.
Main actions	o Incentivisation, by means of grant programmes for investments to refurbish the thermal envelope and of the facilities in existing buildings. o Awareness-raising campaigns. o Tax deductions for sustainable technologies (efficiency and renewables). o Driving the installation, in residential buildings with centralised systems, of individual consumption metering of centralised facilities . o Impetus to the conducting of energy audits in existing residential buildings with important reforms. o Driving the implementation of alternative and/or centralised system studies in existing buildings with housing communities.
Milestones and key aspects	o Based on the data from the Register of Energy Efficiency Certificates, 89% of the housing and buildings of the Basque Country have an energy rating of E or lower (28.5% G). o We are involved, at European level, in many key projects underway, specifically related to energy retrofitting: EUROPACE (funding mechanism), OPENGELA, one-stop scheme (coordination, advice, financing) and AGREE (impetus to investment in efficient modernisation of the energy of private residential buildings in the Basque Country).
Timeline	**2021-2024**
2021-2024 Budget	**Total budget:** €172,000,000
Leader(s)	**DESMA-EVE**
Strategic alignment	**Focal point(s):** Climate neutrality. **Policy line(s):** **1.** Towards an energy transition model.

INITIATIVE 8	The circular economy and climate change, two sides of the same coin
Objective	Facilitate the reduction of GHG emissions by means of the circular economy.
Context	The Basque Country mainly has two planning tools to reduce GHG emissions through the circular economy: The Basque Circular Economy Strategy 2030 and the future Basque Waste Prevention and Management Plan 2030[5]. Between 45% and 65% of global GHG emissions are estimated to be associated to the production of goods and to land management[6]. A more circular management would allow action to be taken in regard to this GHG emissions package. Additionally, the life cycle approach required by the circular economy allows action to taken with regard to additional emissions to the production ones, such as transport, the use phase of the products or the end-of-life stage.
Main actions	o Deployment of the ecodesign of products or building through programmes such as the Basque Ecodesign Center, the Basque Circular HUB, PYME Circular Euskadi or the Industrial Ecodesign Programme 2024. o Development of circular economy roadmaps for i) sustainable construction, ii) remanufacturing and advanced repair and iii) plastics. o Impetus to secondary materials consumption through the Basque List of Clean Technologies. o Tax on the landfilling and incineration of waste and extracting virgin aggregates. o Specific decrees to open up new uses and banning industrial waste going to landfill if there are recovery options technically available. o Development of initiatives against food waste, encouraging the recovery and reuse of food.
Milestones and key aspects	o The circular economy allows greenhouse gas emissions to be reduced throughout the life cycle of the products and services. o 80% of the environmental impact of a product is determined at the design phase. Therefore, prioritising ecodesign is therefore fundamental. o The Green Procurement Programme will allow environmental criteria (including GHG emissions) to be included in the acquisition of goods and services both in the public and private sectors. o Managing waste in landfill accounts for the main emission of GHG in the waste sector in the Basque Country. The public administration is in a strong position to act and there is therefore great potential to reduce GHG emissions in this sector. Instruments such as the orders to ban landfilling or taxes on landfilling will make options such as composting or recycling more attractive. o Part of the emissions reduced through the circular economy will be throughout the value chain of the products, which may occur outside the Basque Country and not be reflected in the Basque GHG emissions inventory.
Timeline	**2021-2024**
2021-2024 Budget	**Total budget:** €6,000,000
Leader(s)	**IHOBE, Basque Government (VISA), Provincial Councils**
Strategic alignment	**Focal point(s):** Climate neutrality. **Policy line(s):** **2.** Drive the implementation of a circular economy and reduce the generation and improve the treatment of waste.

5 In public scrutingy stage
6 Ellen MacArthur Foundation, 2019 - Completing the Picture: How the Circular Economy Tackles Climate Change

INITIATIVE 9	Carbon sinks, a cornerstone of climate neutrality	
Objective	Increase the carbon sink potential of the territory.	
Context	The Basque Country's carbon absorption capacity needs to be increased to advance towards the global climate neutral target in 2050. The challenge is to increase the capacity of the carbon sinks by integration adaptation, biodiversity, soil protection and water resources (water retention capability and protection of the aquifers) criteria, while guaranteeing the health of people and the territory. In this regard, the agriculture and forestry sector play a fundamental role in increasing carbon sinks and encouraging efficient management of natural resources and the bioeconomy.	
Main actions	o Quantification of the carbon absorption potential of the territory. o Pinpointing priority sites and projects. o Defining the criteria for implementing and managing the measures. o Developing a mechanism to record the absorption projects that allow organisations to be compensated for emissions. o Promoting absorption projects, developing and channelling grant programmes, and fostering agreement with the stakeholders and sectors involved (local authorities, primary sector, associations, etc.). o Impetus to reforestation projects to increase the wooded surface.	
Milestones and key aspects	o The Basque Country has potential to increase carbon absorption by means of restoring the territory and the application of sectoral best practices. o There are tools to record the absorptions of specific farming and forestry projects for the Basque Country. o There is significant engagement and interest at business and municipal level. o New niches to foster climate neutrality (blue carbon sinks, sink in land and in non-forestry ecosystems) are being analysed. o Climate neutrality needs to be compatible with adaptation. o The EU is committed to innovation in the agriculture and forestry sector to achieve the climate-neutral target (Post2020 CAP, "From farm to fork" strategy, Bioeconomy Strategy).	
Timeline	**2021-2024**	
2021-2024 Budget	**Total budget:** €3,400,000	
Leader(s)	**Ihobe, Neiker, Hazi**	
Strategic alignment	**Focal point(s):**	Climate neutrality. Resilience.
	Policy line(s):	**3.** Reduce the emissions of the primary sector by promoting local, organic and integrated farming and increase the potential as a carbon sink. **4.** Increase the resilience of the territory.

INITIATIVE 10	Basque Natura 2000 network adapted to climate change and fostering climate neutrality
Objective	Build a Natura 2000 Network in the Basque Country that is resilient to climate change by fostering its role as a carbon sink. Be a benchmark in climate action within the Natura 2000 Network.
Context	The ecosystems present in the protected areas, as in the rest of the territory, are vulnerable to climate change and its impacts are negative and clear at present. On the other hand, given that the protected areas are home to the territory's most important values, the climate impact could be considered to be qualitatively more significant for society. Furthermore, the Intergovernmental Panel on Climate Change (IPCC) and other international bodies, such as the Convention on Biological Diversity (CBD), have highlighted protected species as essential mechanisms to address climate change mitigation and adaptation. The Natura 2000 Network plays an essential role within the protected areas, as it includes an extensive territory in Europe, protecting both forest and traditional farming areas. It is fundamental to guarantee the conservation of biodiversity and habitats. In the case of the Basque Country, the 55 areas that are in the Natura 2000 Network include 23.3% of the territory and are home to 14% of the priority habits of European interest. The vulnerability factors, such as the conservation status of the habitats and species, and the fragmentation, need to be addressed to ensure the climate resilience of the Natura 2000 Network. The inclusion of the climate perspective in the planning and the management of the Natura 2000 Network is currently a need, as established in the recently approved European Adaptation Strategy (European Commission, 2021).
Main actions	- Comprehensive incorporation of the climate perspective in the management plans of the Natura 2000 areas of the Basque Country, and updating the current documents. - Assessing the climate risk of habitat and species of community and regional interests, inter alia. . - Identifying and proposing climate action measures. - Identifying priority areas within and outside the Natura 2000 Network for climate action, by promoting adaptation and/or mitigation measures in order to foster biodiversity. - Developing tools to encourage climate action. - Establishing a monitoring network of the climate change effects. - Setting up common projects to develop lasting and positive synergies between the different stakeholders and sectors. - Fostering the climate regulation services and the resilience of the Natura 2000 Network as a core aspect of the Basque green infrastructure. - Preparing the master plan to restore and improve the connectivity of the natural areas around the Bay of Txingudi and preparing the plan for the recuperation, transformation and resilience of the Urdaibai Biosphere Reserve.

INITIATIVE 10	Basque Natura 2000 network adapted to climate change and fostering climate neutrality

Milestones and key aspects

- Climate action and biodiversity conservation are compatible.
- The Natura 2000 Network has potential to support climate action in the Basque Country, by fostering the resilience of the territory while helping to reduce emissions.
- The Natura 2000 Network can be a support instrument in compliance of the Paris Agreement.
- The good conservation state of the Natura 2000 Network areas needs to be guaranteed so that they fulfil their role in climate change mitigation and adaptation.
- The origins of the climate crisis and the biodiversity crisis are different, but many of their solutions overlap.
- The Basque Country's Natura 2000 areas retain 1.3 times the annual GHG emissions of the Basque Country, a capacity that can be increased with the appropriate management measures.
- The Basque Country stakeholders work in coordination to adapt the protected areas.

Timeline	**2021-2024**
2021-2024 Budget	**Total budget:** €1,500,000
Leader(s)	**Basque Country, Hazi, URA, Provincial Councils**
Strategic alignment	**Focal point(s):** Climate neutrality. Resilience.
	Policy line(s): **3.** Reduce the emissions of the primary sector by promoting local, organic and integrated farming and increase the potential as a carbon sink. **4.** Increase the resilience of the territory.

INITIATIVE 11	Coastal municipalities and infrastructures ready for the climate challenge
Objective	Foster the resilience of the coastal territory.
Context	60% of the Basque population live less than 5 km from the coast. The population currently affected by the risk of flooding due to the sea level rising, for a return period of 100 years, is approx. 7,000 people. The sea level has risen approximately 20 cm and is expected to rise between 26 cm and a metre, depending on the year (2050/2100) and the scenario studied.
Main actions	○ Assessing the risk of flooding due to a rising sea level and waves under climate change scenarios. ○ Publication of risk and hazard cartography. ○ Preparing an adaptation measures guide. ○ Updating the Coastal Sectoral Territorial Plan (PTS) to include climate change scenarios. ○ Preparing climate change adaptation plans for the ports managed by the Autonomous Community of the Basque Country. ○ Improving flood resilience. ○ Improving the early warning, telemetry and videometry systems for coastal flooding events: Pilot schemes in Zarautz, Bermeo and Donostia/San Sebastián. ○ Increasing the resilience of dune habitats against climate change: comprehensive restoration of Laga Beach.
Milestones and key aspects	○ Line 10 of the Kilma 2050 Strategy establishes the need to integrate the climate change variable in the management of coastal zones. ○ The Regional Planning Guidelines include climate change as a superimposed constraint and establish the need to update the Coastal PTS. ○ The Basque Country has experience and expertise in climate change and the marine environment, along with cooperation with authorities and research institutes from other autonomous communities. ○ A collaborative technical group has been set up between the Basque Government and the Provincial Council to conduct the risk assessment. ○ The Life IP Urban Klima 2050 project is a partnership framework involving the different governance levels of the Basque Country, along with the main technology centres and which can drive progress regarding climate change at urban and periurban level over the coming years.
Timeline	**2021-2024**
2021-2024 Budget	**Total budget:** €8,100,000
Leader(s)	**Ihobe, Ports and Maritime Affairs Division, Emergency Response and Meteorology Division**
Strategic alignment	**Focal point(s):** Resilience. Mainstreaming. **Policy line(s):** **4.** Increase the resilience of the territory. **5.** Anticipate risks. **6.** Develop, update and improve the management instruments related to the energy transition and climate change. **7.** Foster research, technological development and innovation.

INITIATIVE 12	Nature-based solutions for the resilience of the municipalities
Objective	Deploy nature-based solutions at municipal level to meet climate change adaptation needs in the Basque Country.

Context

Nature-based solutions (NbS) are solutions for the challenges society is facing that are inspired and backed by nature. They also provide economic, social and environmental benefits. In the framework of climate action, they help to efficiently enhance resilience, by cutting the implementation costs with respect to other solutions not based on nature, while contributing to the Sustainable Development Goals. It is an approach that covers different areas and which can be applied to different work scales, from a building to the territory. Locally, they can be included in the development of blue and green infrastructures, sustainable urban drainage systems, or restoration and sustainable managed based on ecosystems in urban and periurban areas, among other examples.

The local application of the NbSs will help to facilitate the climate change adaptation of periurban and urban areas, systematically and at all levels (municipal, neighbourhood, community space, building), while fostering at the same time an urban greening process and the integration of society in the transition towards an urban model that is resilient to climate change, that fosters biodiversity and is sustainable in terms of resource consumption.

Main actions

- Preparing an NbS catalogue at all levels/scales aimed at providing a response to the main climate threats of the Basque Country, while also integrating biodiversity, green procurement and circular economy criteria.
- Establishing methodologies to assess the effectiveness and quantify the improvements obtained by NbSs.
- Driving municipal action in periurban and urban blue-green infrastructure, which includes social participation and urban greening criteria.
- Developing criteria to integrate NbS and the blue-green infrastructure in municipal urban planning and urban renewal plans and driving partnerships with companies and organisations of the sector.
- Preparing appraisals and guidelines to integrate NbSs and the blue-green infrastructure at local level in the green infrastructure strategy of the Basque Country.

Milestones and key aspects

- Municipalities play a key role in climate change adaptation and the NbSs and green infrastructure need to be integrated in urban planning and local adaptation plans.
- There is municipal interest and engagement in applying the NbSs.
- There is an important track record in successfully analysis and application of NbSs at municipal level in the Basque Country. Boosting and deploying NbSs generally in urban planning and urban renewal is therefore timely.
- The advantages of applying NbSs compared to other types of solutions needs to be assessed and disseminated.
- The EU is committed to applying NbSs for adaptation at different scales (EU Climate Change Adaptation Strategy) and for urban greening plans (EU Biodiversity Strategy).

INITIATIVE 12	Nature-based solutions for the resilience of the municipalities	
Timeline	**2021-2024**	
2021-2024 Budget	**Total budget:** €4,700,000	
Leader(s)	**Ihobe, municipalities, Udalsarea 2030, companies**	
Strategic alignment	**Focal point(s):**	Resilience. Mainstreaming.
	Policy line(s):	**4.** Increase the resilience of the territory. **5.** Anticipate risks. **6.** Develop, update and improve the management instruments related to the energy transition and climate change. **7.** Foster research, technological development and innovation.

INITIATIVE 13	Population ready for climate change adaptation and a just energy transition
Objective	Ensure a just energy transition in a climate neutral and resilient territory.
Context	Climate change is a current challenge and the public therefore needs to be mobilised to reduce GHG emissions and adapt to climate change. The local level is going to be most affected by climate change. Additionally, an energy transition is required that allows more sustainable sources to be exploited. This change must not lead to imbalances between people or territories, but it must be an opportunity to allow balanced development of the population. Therefore, a pre-emptive approach is therefore needed in municipal energy and climate change planning to bring it into line with supramunicipal policies, taking into account that the local authorities are closer to the population and are therefore a better driving force to get people to act.
Main actions	o Development of tools and methods that allow the municipalities to integrate the energy transition and climate change in municipal planning. o Support in the monitoring and assessment of local energy and climate plans by means of calculating indicators as part of Udalsarea 2030. o Giving impetus to working groups to progress in municipal action and expertise in the field of climate change and energy through Udalsarea 2030. o Encouraging Basque municipalities to sign up to international initiatives (Covenant of Mayors for Climate and Energy). o Grant call for the development of climate innovation projects and mitigation and adaptation projects at municipal and regional level. o Running pilot schemes as part of Life IP Urban Klima 2050 that could be transferred to the rest of the territory. o Deployment of the Energy Sustainability Act of the Public Administrations.
Milestones and key aspects	o Some municipalities are highly developed as regards climate change in the Basque Country. Knowledge transfer should therefore be encouraged. o Udalsarea 2030 is a support and meeting point for the municipalities and regions and fosters their technical and planning development, along with the integration of different governance levels. o There are different Basque technology centres that have the expertise to be implemented at municipal level in the field of climate change. o The LIFE IP Urban Klima 2050 project is a partnership framework involving the different governance levels of the Basque Country, along with the main technology centres and which can drive progress regarding climate change at urban and periurban level over the coming years.
Timeline	**2021-2024**
2021-2024 Budget	**Total budget:** €8,900,000

INITIATIVE 13	Population ready for climate change adaptation and a just energy transition	
Leader(s)	**Life IP Urban Klima 2050, Udalsarea 2030, Ihobe, EVE**	
Strategic alignment	**Focal point(s):**	Climate neutrality. Resilience. Mainstreaming.
	Policy line(s):	**1.** Towards an energy transition model. **4.** Increase the resilience of the territory. **6.** Develop, update and improve the management instruments related to the energy transition and climate change. **8.** Guarantee a just climate and energy transition.

INITIATIVE 14	Energy transition and climate change pairing, new planning and legislative framework

Objective

Develop a Climate Change and Energy Transition Act (LTECC) that positions the Basque Country among the first regions to be adapted to the current regulatory context that allows it to be a climate neutral territory and resilient to climate change by achieving a just transition.

Context

- The scale and significance of the change justifies the need to pass an LTECC that introduces the climate change variable in the Basque legal systems and lays the appropriate foundations for the energy transition. On the other hand, even if this transition is completed successfully and the proposed reduction of GHG emissions achieved, scientific evidence indicates that climate change is a fact that will have inevitable consequences for decades, which requires an adaptation effort by the whole of society.
- Local authorities and regions adopt over 70% of the climate change mitigation measures and up to 90% of the adaptation measures, and apply 70% of EU legislation, which accounts for a third of public spending and two thirds of public investment.

Main actions

- Approval of the Basque Climate Change and Energy Transition Act.
- Preparing and deploying the climate neutrality and resilience roadmap 2050.
- Preparing and deploying the Climate Change and Energy Transition Strategy 2030.
- Strengthening the climate governance models in the Basque Country.
- Support instruments for the deployment of the Climate Change and Energy Transition Act.

INITIATIVE 14	Energy transition and climate change pairing, new planning and legislative framework

Milestones and key aspects

- The Basque Country anticipated and passed the long-term climate route map in 2015. The current context requires a new commitment to address the climate emergency and harness the opportunities that we have as a society and territory.
- This legislative framework is going to impact the response to the global challenge of the energy-climate transition underpinned by the technological-digital transition and driving the social and health transition needed.
- The energy transition in terms of sustainability, economic development and social progress is the main challenge on the path to climate neutrality.
- The Basque Country is a benchmark territory in Europe for the development of new technological and industrial initiatives in specific energy areas, thus contributing to the generation of wealth, employment and quality of life.
- We are working on projects to transform the country, such as the URBAN KLIMA 2050 project.
- The expansion of the EU budget as part of the EU economic recovery plans offers new avenues to fund structural changes in the coming years.
- We have world-renowned members of the Basque Science and Technology Network in the field of climate action.

Timeline	**2021/2024**
2021-2024 Budget	**Total budget:** €1,700,000
Leader(s)	**Basque Government's Ministry of Economic Development, Sustainability and the Environment, Ihobe, EVE, SPRI**

Strategic alignment

Focal point(s):	Climate neutrality. Resilience. Mainstreaming.
Policy line(s):	**6.** Develop, update and improve the management instruments related to the energy transition and climate change. **8.** Guarantee a just climate and energy transition.

INITIATIVE 15	Public administration, a model for the energy transition and the resilience of Basque society
Objective	Achieve a public administration that is a model for the energy transition and the resilience of Basque society.
Context	The Energy Sustainability Act sets demanding targets for public administrations in terms of energy savings and renewable generation in their buildings on a timeline up to 2030. It must be considered as a useful work tool to attain the energy transition and tackle the climate change challenge. The new vehicles of Basque public administrations must use alternative energies to diesel and petrol from 2020 onwards.
Main actions	• Support for sustainability measures in public buildings, public lighting and the vehicle fleet of local authorities. Gauzatu Energia. • Support for conducting studies in the framework of the Energy Sustainability Act in the local administration. • Preparing and implementing energy sustainability plans by areas of the Basque Government, provided with the necessary resources. • Prioritising the electric vehicle in the renewal of the public fleet. • Impetus for the Green Public Procurement Programme 2030.
Milestones and key aspects	• The energy transition is underway and driven by the European policies to which the Basque Country wishes to contribute, and progressing towards a carbon-free social model. • The public representations account for a small part of the emissions, but must lead the implementation from the conviction that advancing in energy efficiency and renewable energies is a great benefit for society. • The Basque Government is committed to climate change mitigation, with a target of achieving a "zero emissions" public administration by 2050.
Timeline	**2021-2024**
2021-2024 Budget	**Total budget:** €13,2200,000
Leader(s)	**EVE, Ihobe**
Strategic alignment	**Focal point(s):** Mainstreaming. **Policy line(s):** **8.** Guarantee a just climate and energy transition. **9.** Exemplary Basque public administration and responsible citizens.

The distribution of the 2021-2024 budget of the "Climate Change and Energy Transition Plan" by flagship initiatives is as follows:

FLAGSHIP INITIATIVES OF THE CLIMATE CHANGE AND ENERGY TRANSITION PLAN	2021 Budget	2022 Budget	2023 Budget	2024 Budget	Total Budget
1. Exemplary spatial planning in order to develop renewable energies	€50,000	€100,000			**€150,000**
2. The Basque Country as an international benchmark in marine energy	€1,500,000	€3,150,000	€3,800,000	€4,250,000	**€12,700,000**
3. Basque industry at the cutting edge of wind power		€250,000	€500,000	€250,000	**€1,000,000**
4. Photovoltaic solar energy for a renewable and electric future	€5,000,000	€10,100,000	€9,000,000	€9,000,000	**€33,100,000**
5. Hydrogen production, distribution and consumption ecosystem in the Basque Country		€1,100,000	€1,100,000	€1,100,000	**€3,300,000**
6. Sustainability mobility, a short-term need	€6,000,000	€6,000,000	€6,000,000	€6,000,000	**€24,000,000**
7. Impetus for building retrofitting	€22,000,000	€30,000,000	€60,000,000	€60,000,000	**€172,000,000**
8. The circular economy and climate change, two sides of the same coin	€4,500,000	€4,500,000	€4,500,000	€4,500,000	**€18,000,000**
9. Carbon sinks, a cornerstone of climate neutrality	€550,000	€950,000	€950,000	€950,000	**€3,400,000**
10. Basque Natura 2000 network adapted to climate change and fostering climate neutrality	€300,000	€400,000	€400,000	€400,000	**€1,500,000**
11. Coastal municipalities and infrastructures ready for the climate challenge	€3,300,000	€3,100,000	€850,000	€850,000	**€8,100,000**
12. Nature-based solutions for the resilience of the municipalities	€1,100,000	€1,200,000	€1,200,000	€1,200,000	**€4,700,000**
13. Population ready for climate change adaptation and a just energy transition	€2,150,000	€2,250,000	€2,250,000	€2,250,000	**€8,900,000**
14. Energy transition and climate change pairing, new planning and legislative framework	€425,000	€425,000	€425,000	€425,000	**€1,700,000**
15. Public administration, a model for the energy transition and the resilience of Basque society	€3,730,000	€3,830,000	€4,830,000	€830,000	**€13,220,000**
TOTAL	**€50,605,000**	**€67,355,000**	**€95,805,000**	**€92,005,000**	**€305,770,000**

The forementioned budgetary resources are distributed in the framework of the Basque Government's Ministry of Economic Development, Sustainability and the Environment between its different areas and entities, and, to a lesser extent, between external entities linked to the General Administration of the Basque Autonomous Community.

Additionally, nearly a further €100 million will be managed during that time period form the Next Generation EU funds to these initiatives.

Governance model

6

The coordination of the design and of the implementation of energy transition and climate change policies is a key aspect. In this context, due to the cross-cutting nature of the theme, coordination is a complex task that has to be addressed in a well-structured way. As it would be very complicated to achieve the targets set in this plan in the absence of effective coordination tools, the Governance structure is established below.

The Climate Change and Energy Transition Plan 2021-2024 is led by the Basque Government's Ministry of Economic Development, Sustainability and the Environment. However, given that the just transition to a new energy model and a resilient territory involves many other stakeholders, of different types and origin, the plan must work to include them and optimise the resources through joint actions.

Within the Ministry, the Deputy Minister's Office for Environmental Sustainability will process, monitor and assess the Climate Change and Energy Transition Plan 2021-2024. That Office will be tasked with preparing the project working closely with the Deputy Minister's Office for Industry. A political-technical committee will be set up and its members will be staff from the Ministry assigned to both Deputy Minister's Office and staff from the Basque Energy Board (EVE) and Ihobe, which will be responsible for conducting the relevant monitoring and assessments, as indicated in the following section.

The aforementioned committee will be charged with gathering information and coordinate with other departments of the Basque Government and Basque administrations involved in the deployment of this plan.

Monitoring and assessment system 7

One of the keys to attain the PTECC goals and, therefore, the targets of the Government Programme 2020 – 2024 of the XII Parliamentary Term, is to have an appropriate Monitoring and Assessment System (MAS). This mechanism allows the implementation status of the flagship initiatives included in the plan to be known, along with their effects. The comparison of the targets established in the plan with those results really obtained over time allows any deviations to be detected and propose the necessary corrective measures.

As it is a multidisciplinary 4-year plan that is integrated in the framework of longer-term strategic policies, it must have a straightforward monitoring and assessment system that allows new initiatives to be proposed for longer timelines. Therefore, the monitoring and assessment system has been designed that is set out below.

The PTECC MAS comprises the following elements:

- Annual monitoring report.
- Monitoring indicators.
- Final assessment report.

Annual monitoring report: the annual monitoring report will summarise the degree of progress and implementation of the initiatives envisaged in the plan. Therefore, on the one hand, the programme of the flagship initiatives defined in the framework of the plan will be reviewed and, on the other hand, the evolution of the monitoring indicators of the plan will be analysed and assessed. If any deviations or wrong formulations are identified, the report will include the necessary corrective measures.

Monitoring indicators: each of the strategic lines of the plan contains one or several indicators in the framework of this system. Those indicators have been defined taking into account the information existing at present. They are all based on first-rate, consistent information, that is easy to handle and reflects the reality of the climate and energy situation in the Basque Country.

Table 1 shows the indicators selected to monitor each of the policy lines.

Table 2 considers the strategic indicators of the balanced scorecard.

TABLE 1 MONITORING INDICATORS

FOCAL POINT 1. PATH TO NEUTRALITY			
POLICY LINE	**INDICATOR**	**UNITS**	**CONTACT**
Policy line 1. Towards an energy transition model	Energy savings on trend.	ktep/a	**EVE (Basque Energy Board)**
	Final energy intensity improvement compared to 2015.	%	**EVE (Basque Energy Board)**
	Road transport energy alternatives.	%	**EVE (Basque Energy Board)**
	Number of buildings with A/B energy certification.	%	**EVE (Basque Energy Board)**
Policy line 2. Drive the implementation of a circular economy and reduce the generation of and improve the treatment of waste	Municipal waste generated per inhabitant and year.	kg/(inhab. year)	**Waste competent authority; Eustat**
	Recycling municipal waste rate.	%	**Waste competent authority; Eustat**
	Circular material use rate (recycled material / (recycled material + DMC) ratio).	%	**Waste competent authority; Eustat**
Policy line 3. Reduce the emissions of the primary sector by promoting local, organic and integrated farming and increase the potential as a carbon sink	Greenhouse gas emissions of the agricultural sector.	$MtCO_2e$	**Ihobe**
	Sink absorptions.	$MtCO_2e$	**Ihobe**

FOCAL POINT 2. INCREASING RESILIENCE			
POLICY LINE	**INDICATOR**	**UNITS**	**CONTACT**
Policy line 4. Increase the resilience of the territory	Forest surface area occupied by native tree species.	%	**Statistics Office of the Basque Government's Ministry of Economic Development, Sustainability and the Environment**
	Damage to critical infrastructures attributed to adverse weather phenomena.	Thousands of euros/year	**Emergency Response and Meteorology Division** **Insurance Compensation Consortium**
	Municipalities with plans, and/or strategies that have CC adaptation as one of their specific objectives.	Number of municipalities	**Udalsarea 2030**
	Municipalities that have extreme weather phenomena prediction systems on the coast (Euskoos).	Number of municipalities	**Euskalmet;** **Azti**
	Supply and ecological potential status of the reservoirs.	Very Good, Good, Moderate, Poor, Bad	**URA**
	Transition and coastal water status.	Very Good, Good, Moderate, Poor, Bad	**URA**
Policy line 5. Anticipate risks	Civil protection/alert systems.	Existence of early warning systems	**Civil Protection**
	Prevalence of people who are satisfied with the health services.	%	**Health Ministry**
FOCAL POINT 3. MAINSTREAMING CLIMATE ACTION			
Policy line 6. Develop, update and improve the management instruments related to the energy transition and climate change	Plans/instruments prepared or updated related to the energy transition and climate change.	Number/year	**Ihobe**
Policy line 7. Foster research, technological development and innovation	Investment in science and innovation related to climate change.	Thousands of euros	**Ihobe**

FOCAL POINT 3. MAINSTREAMING CLIMATE ACTION			
POLICY LINE	**INDICATOR**	**UNITS**	**CONTACT**
Policy line 8. Guarantee a just climate and energy transition	Budget aimed at grants for the energy retrofitting of buildings.	Thousands of euros	**EVE (Basque Energy Board)**
	Budget aimed at scrappage initiatives.	Thousands of euros	**EVE (Basque Energy Board)**
	Budget aimed at grants for the installation of renewable energies.	Thousands of euros	**EVE (Basque Energy Board)**
Policy line 9. Exemplary Basque public administration and responsible citizens	GHG emissions inventory of the Basque Government.	$MtCO_2e$	**Ihobe**

All the information gathered will be used to produce a balance scorecard specifying the degree of compliance of the general goals of the plan using five main indicators.

TABLE 2 STRATEGIC INDICATORS - BALANCED SCORECARD

BALANCED SCORECARD OF THE CLIMATE CHANGE AND ENERGY TRANSITION PLAN				
TARGET BY 2024	**INDICATOR**	**UNITS**	**CURRENT VALUE**	**CONTACT**
Reduce greenhouse gas emissions by 30%.	Total GHG emissions.	$MtCO_2e$	27% (2019 compared to 2005)	**Ihobe**
Make certain that the renewable energy shares accounts for 20% of the final energy consumption.	Renewable energy share.	%	14.6% (2019)	**EVE (Basque Energy Board)**
Ensure the resilience of the Basque territory to climate change.	Level of implementation of the envisaged initiatives >80% (40% A 2022).	Yes/No	Not applicable	**Ihobe**

Final assessment report: the final assessment report will review the progress of the flagship initiatives and will assess the evolution of the indicators. This information will be used to assess the results of the plan indicating the degree of achievement of the goals. Additionally, a section of conclusions will be included summarising the lines to be followed in future plans and identify the obstacles found and the lessons learnt.

EUSKO JAURLARITZA GOBIERNO VASCO

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