

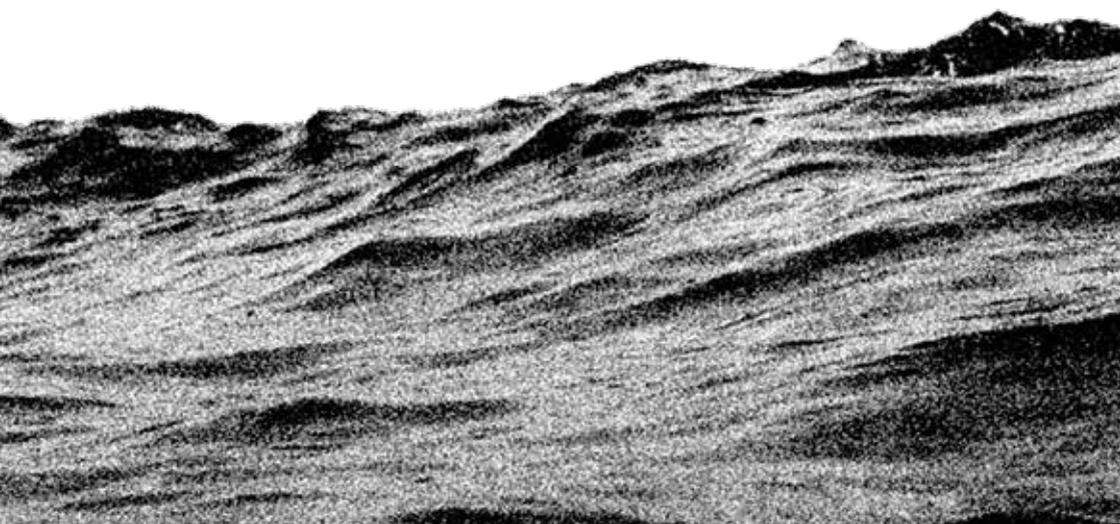
# THIS IS NOT A DRILL

CLIMATE  
EMERGENCY  
DECLARATION

15 JANUARY 2020  
BARCELONA

Ajuntament de  
Barcelona





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# WHY WE ARE DECLARING A CLIMATE EMERGENCY

## WE ARE NOT ON THE RIGHT TRACK

## FOR ACHIEVING OUR TARGETS

We are facing one of the most important and complex challenges that humanity has ever had to face. According to the latest studies of the Intergovernmental Panel on Climate Change (IPCC), if drastic changes do not take place and greenhouse gas (GHG) emissions are not reduced, it is “extremely unlikely” that the targets of not increasing the average global temperature of the Earth by 1.5°C set in Paris will be achieved.

In fact, this increase in temperature can already be seen in Catalonia, where the average annual temperature has gone up by almost 1.2°C in the last 65 years. If the current rate of emissions continues, it is probable that the average temperature of the planet could rise by over 3°C by the end of the century. The mitigation and adaptation challenges are huge. We need to rethink our model of production and consumption, our culture, our lifestyle. In fact, the national contributions agreed to in the Paris Agreement (2015) are not enough to achieve the targets set. We need to be more ambitious and establish the mechanisms and instruments that are necessary for decarbonising the economy and becoming carbon neutral by 2050.

## THERE'S STILL TIME

We have 10 years to reduce man-made GHGs by 45%, which would allow us to become carbon neutral by 2050, if we don't want to exceed those temperature increases and their effects to be irreversible. That gives us little margin of time to act. So we need urgent, drastic and effective measures. We have to act without delay and by involving the public.

## GLOBAL RESPONSIBILITY

Just 5 countries emit almost 60% of global greenhouse gas emissions. Furthermore, a mere 20 multinational companies emit 35% of them. Climate justice is to do with those people who have more responsibility, as the ones causing the climate crisis, being the ones making the most effort to tackle it. There is no way we can offload that responsibility onto those suffering the worst consequences and who have fewer options for adapting to it. It is related to the unfair distribution of negative impacts between countries and regions, between generations, genders and species.

In short, it has to do with inequalities and what determines our capacity for managing and adapting to the crisis.

## **TO REDUCE INEQUALITIES AND TAKE CARE**

### **OF PEOPLE WHO ARE VULNERABLE**

The climate emergency forces us to recognise that we are vulnerable and very eco-dependent. Given that it increases social inequalities, now more than ever we need to take care of those people who are most vulnerable to the threats. For example, women are disproportionately more vulnerable to the impacts of the climate crisis. In fact, 80% of people displaced by the climate crisis are women, yet they are the main caregivers. If we are to tackle the climate emergency, we have to transform an economic model that is unsustainable and unfair. We need to champion values and policies guided by shared care work and fraternal relations with other human beings and other living beings and ecosystems, in private, public and community spaces. Moreover, the measures that are taken must not call for more effort from the most vulnerable sectors but rather from the most privileged.

## **CITIES HAVE A LOT TO SAY AND A LOT TO DO**

The revolution is clearly an urban one. Cities are the big consumers of resources and energy (they generate 70% of global GHG emissions) but they also have a large part of the solution in their hands. In fact, cities have enormous potential and a strong will to change things.

Barcelona City Council is firmly committed to implementing locally the climate policies agreed on at a European and international level. It has signed all the important agreements, including the Covenant of Mayors for Climate and Energy, and is networking with other cities to march together towards the energy transformation.

## **WE NEED TO JOIN FORCES**

Irrefutable scientific evidence and the climate change effects we are already suffering have created a big social movement all around the globe which is calling for strong and urgent measures. This demand is an opportunity for us to make the necessary changes in the way we live. Tackling the change requires all of us to be involved. We need to join forces with all the players involved.

**NOW... OR NEVER**

# BARCELONA AND THE CLIMATE CRISIS

## WE ARE IN AN EMERGENCY SITUATION

The climate crisis affects our lives and will affect us a lot more. Based on the scenarios analysed, even if we reach the “committed” scenario (reduction in greenhouse gas emissions envisaged in the Paris Agreement), the following is forecast:

- Big increases in temperature, for example, 8 times more heat waves at the end of the century in the committed scenario or 16 times more in the passive one. All the heat-related indicators measured show an increase in the last 34 years.
- Reduction in accumulated rainfall in the city of between 14% and 26% by the end of the century for both scenarios. In the passive scenario, it is forecast that by 2050 there will be a need for an additional 18 hm<sup>3</sup>/year of potable water resources. Moreover, extreme rain events will be more frequent, which means that what used to happen every 50 years is forecast to happen every 35 years.
- Loss of between 30% and 46% of useful sand area on most beaches. In the worst-case scenario, Sant Sebastià beach could practically disappear.
- Increased fire risk in Collserola and loss of biodiversity.
- Worsening air quality.
- Affect on critical infrastructure.

**> Not acting is not an option. We have to achieve the emission reduction set by the Paris Agreement and go even further.**



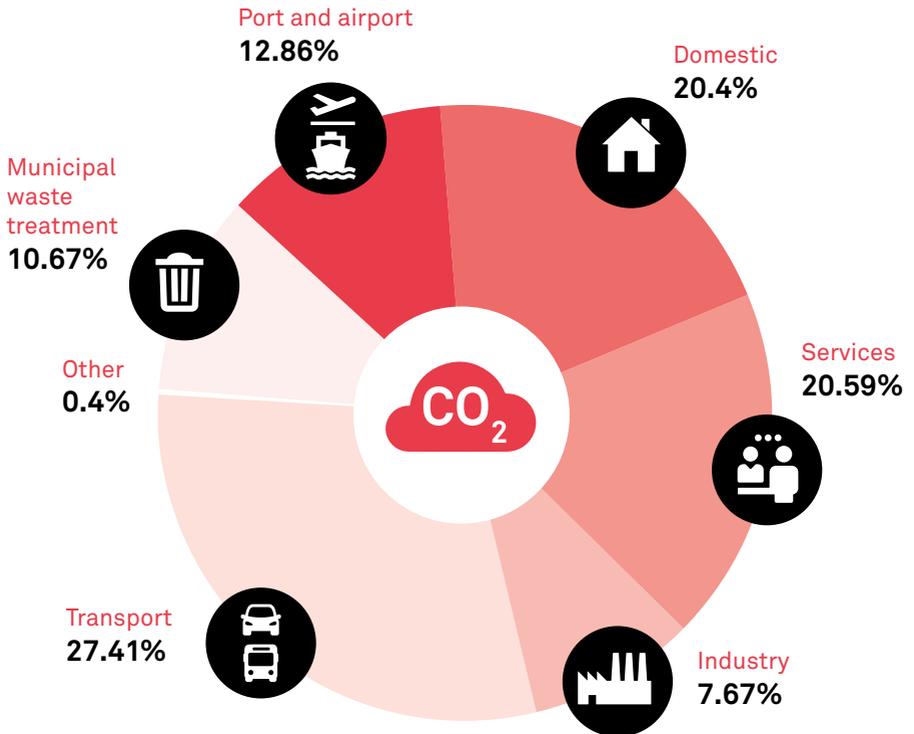
## CURRENT SITUATION

Cities are responsible for approximately 70% of global greenhouse gas emissions, derived from the energy consumption associated with their activity. As a dense, compact, Mediterranean city, Barcelona consumes little energy and generates few emissions compared to other cities but it has a very long way to go. That is due to the fact that most of the energy consumed in the city is generated outside Barcelona from fossil or nuclear sources (50%), while only 5% is from a renewable source.

The same is true of other products and consumer goods, which come from outside the city, meaning emissions from outside the city boundaries have an impact.

Barcelona consumed 14,995 GWh of final energy in 2017, the equivalent of 9,25 MWh on average per inhabitant. Taking the electric mix in Catalonia into account, greenhouse gas emissions in Barcelona were 3,413,260 tonnes of CO<sub>2</sub>-e, 2.11 t CO<sub>2</sub>-e/hab.

## CO<sub>2</sub>-E EMISSIONS BY SECTOR



CO<sub>2</sub>-e emissions by sector (2017)

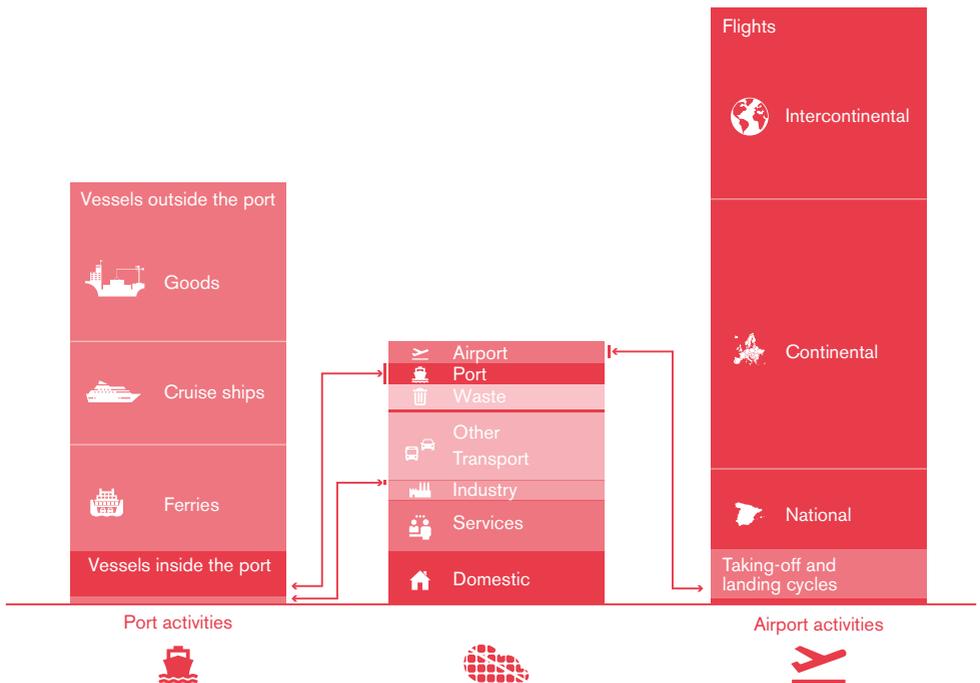
Source: Barcelona Energy Report, 2017. Barcelona Energy Agency (Barcelona City Council).

Reducing emissions has to be tackled from every sector but especially transport (responsible for nearly 30% of emissions), the domestic sector (20.40%) and services (20.59%).

These are emissions counted on a city level, but the activity of some infrastructures such as the port and airport also has a big impact.

An approximate calculation of port and airport emissions – the big transport infrastructures – has been made that goes beyond those currently assigned to the city for those infrastructures in the Climate Plan, in order to make them co-responsible. The following figures therefore include the emissions from their activity, counting flights from Barcelona Airport and the emissions from shipping routes linked to port activity encompassing the routes, which could be four times the city's GHG emissions.

## MAIN GHG EMITTERS IN BARCELONA:



### ACTIVITY LINKED TO THE PORT OF BARCELONA

**PORT ACTIVITIES.** Includes emissions derived from the gas and electricity consumption of complementary activities inside the port as well as other energy consumption associated with land-based machinery, auxiliary vessels and road traffic in the port.

#### VESSELS INSIDE THE PORT.

Includes emissions derived from moving vessels within the port: dropping anchor, manoeuvres, stays and dry dock.

373,499 t of CO<sub>2</sub>

#### VESSELS OUTSIDE THE PORT.

Includes the whole voyage of ferries and cruise ships and the part proportional to the goods loaded and unloaded in the port by origin and destination.

5,332,522 t of CO<sub>2</sub>

### PORT AND AIRPORT EMISSIONS ASSIGNED TO THE CITY

As regards the port, 100% of vessel emissions inside the port are included. The emissions derived from gas and electricity consumed by activities are counted in the industrial sector.

The emissions from auxiliary vessels, land-based machinery and internal road traffic are not included in the city total.

As regards the airport, only the part proportional to the emissions from airport activity and the take-off and landing cycles in this airport are assignable to Barcelona.

### ACTIVITY LINKED TO BARCELONA AIRPORT

#### AIRPORT ACTIVITIES.

Includes emissions derived from energy consumption for airport infrastructure maintenance, as well as those derived from land activities such as handling (land services) or auxiliary power units for planes (APUs). Emissions from transport to the airport are not included.

#### TAKE-OFF AND LANDING CYCLES

of all airport operations (approximation based on the values for all the airports in the Spanish State and approximated according to the number of operations from Barcelona Airport).

385,467 t of CO<sub>2</sub>

**FLIGHTS.** Includes 100% of the flights from or to Barcelona, apart from the take-off or landing cycle at this airport.

7,914,663 t of CO<sub>2</sub>

## THE FIRST STEPS: THE CLIMATE PLAN

On 26 October 2018, the City Council approved the Barcelona 2018-2030 Climate Plan, the city's climate strategy. The Climate Plan establishes a package of over 240 measures for achieving a target of reducing greenhouse gas emissions by 45% by 2030, compared to 2005, and carbon neutrality by 2050, as well as other adaptation and resilience, climate justice and citizen action targets for 2030.



### Mitigation



45% of GHG emissions compared to 2005

Be carbon neutral by 2050



### Adaptation and Resilience



1m<sup>2</sup> of green per inhabitant 100 l/inhab./day



### Climate Justice



0 energy poverty 100% clean funding



### Promoting citizen action



1.2 Me awarded to citizen projects

## THERE'S STILL A LOT TO DO

Faced with this emergency situation, we need to boost and step up the actions envisaged in the Climate Plan. This is the framework in which the following declaration is presented.

# WE HAVE TO WORK TOGETHER

This declaration is the result of a process of co-responsibility and joint reflection carried out by the Climate Emergency Committee.

That committee was set up in July 2019 as a working group of the Sustainability Council in accordance with the City Council Regulation on Citizen Participation, to define specific measures to be developed for tackling the climate emergency effectively. It is also the forum where the City Council will be held to account for any progress made and fulfilment of the commitments it has taken on.

The process for drawing up this declaration has included four working sessions, attended by over 300 people representing over 200 organisations. The Decidim digital platform was also made available, resulting in 130 examples of support for proposals that came out of the discussion sessions and around 60 comments

The citizens are committed and driving change with the City Council. But it is not enough. All the stakeholders need to be involved, each one from their own area of responsibility. The other authorities that act in our sphere need to be involved, as does the economic sector, other cities, other states, who must be more ambitious with their emission reduction targets and reach agreement on the instruments and tools necessary for achieving them. Alliances are needed that will enable greenhouse gas emissions to be drastically reduced and to be more resilient.

We need to pave the way so everyone, from their own area of intervention, can advance in the fight against climate change and do what they have to. New regulations are required, along with taxation that includes environmental costs, more investment to reverse the current energy model and replacing fossil fuels and nuclear power plants with locally-based renewable energies. We need political coherence.

## WE NEED TO STEP UP THE ACTION



# WE ARE STEPPING UP THE ACTION

## MORE AMBITION

In the current context of a climate emergency, Barcelona has to respond firmly, heed scientists' warnings and public demands. For that reason, Barcelona intends to become carbon neutral by 2050 and has begun to move in that direction. But to achieve that goal we need to do more, better, differently and more quickly.

With the will to step up the action and the city's contribution to reducing global emissions, we are being more ambitious and are setting a target of reducing greenhouse gas emissions by 50% by 2030 compared to the levels in 1990. [1] That means a reduction of around 1,950,000 tonnes of greenhouse gases.

Those ambitious targets, which require a great deal of effort on the part of the authorities as well as the city's economic and productive sectors and its citizens, are necessary if we are to be able to tackle the current climate crisis. We are talking about a profound transition in every aspect of the city: its productive system, its people, how we work, how we move around, etc. The challenge is enormous, but not acting is too risky.

If the European and international commitments are becoming more ambitious, Barcelona is committed to intensifying its actions to achieve them even more.

Accordingly, the city is proposing seven major model changes and two adaptations in accordance with the challenges posed at the Climate Emergency Committee participation sessions:

[1] The benchmark value taken is that of 1992, which corresponds to the first full inventory of greenhouse gas emissions the city has.

4 working sessions  
15 climate committees

1st Session, 3 October 2019

-  Water cycle
-  Many more green areas
-  Renewables
-  Food sovereignty

2nd Session, 17 October 2019

-  People first
-  Mobility
-  Zero waste
-  Culture and climate justice

3rd Session, 7 November 2019

-  Emissions and health
-  Sustainable urban planning
-  Renovation
-  Circular economy

4th Session, 28 November 2019

-  Port and airport
-  Interurban mobility
-  Climate taxation

7 big changes  
2 adaptations

Big changes

-  Change of urban model
-  Change of mobility and infrastructure model
-  Change of energy model
-  Change of economic model
-  Change of consumption and waste model
-  Change of food model
-  Change of cultural and educational model

Adaptations

-  Taking care of health, well-being and environmental quality
-  Taking care of water

# CHANGE OF URBAN MODEL



The metropolitan city of Barcelona is compact, with high residential density, an old housing stock, with a shortage of green spaces and a mobility system that is over-dependent on motor vehicles. They are all factors that have a negative effect

on its environmental conditions.

To reverse those factors, improve the city's environmental conditions and move towards a new urban model, it is essential that the climate variable is included in all urban management and transformation processes, whether they involve public spaces or urban fabrics.

By 2050 we want to be a metropolis with balanced neighbourhoods that foster habits of short distances and healthy mobility, with a much more efficient and sustainable building stock. We want a comfortable, traffic-calmed city with lots of green spaces that contribute to people's good health and well-being, and biodiversity.

## Most important challenges

- Increasing the urban green space and ensuring it is distributed evenly throughout the city.
- Transforming the public space to improve its environmental and health conditions, reclaiming space allocated to private vehicles for social use and an increase in urban green, fostering sustainable and collective modes of mobility.
- Equipping urban planning instruments – planning regulations, indicators, speed and funding mechanisms – with climate tools.
- Avoiding the loss of biodiversity in the current context of global change.

Key actions and actors	Agents involved
<b>Transforming the public space</b>	
Take a leap in scale and speed up the Superblock programme. Turn 15 km of streets into green spaces by 2024.	BCN CC
Protect schools with environmental and road safety measures. Action at 200 schools up to 2024.	BCN CC
Introduce the climate emergency vector into strategic metropolitan transformations such as Parc de les Glòries, Avinguda Meridiana, Parc de la Sagrera or the seafront.	BCN CC
Intervene in 10 sunbathed spaces (e.g. Passeig Maritim de la Barceloneta, Passeig de l'Exposició del Fòrum, etc.) to provide shade and thermal comfort by means of various solutions: vegetation, fabrics, photovoltaic pergolas or mixed solutions.	BCN CC
Increase 40 hectares of public green space in Barcelona so they provide high socio-environmental services, prioritising those places with the biggest deficit (e.g. Av Meridiana, the La Sagrera linear park, La Marina, etc.) and approve an instrument that will enable effective protection of private green spaces.	BCN CC

## Naturalising the city

Develop 10 green roofs and façades on municipal buildings to serve as an example and, by means of agreements with the private sector, promote the development of 50 productive roofs on other buildings, including green roofs, energetic roofs, aljubs or reflectors by means of a call for grants.	BCN CC
Create 10 biodiversity nodes and nature reserves as an essential part of the urban green infrastructure.	BCN CC
Develop the necessary programmes for protecting the species that are most vulnerable to climate change.	BCN CC
Promote urban green corridors, paying special attention to the Ciutadella-Collserola corridor with the intervention on Carrer de Pi i Margall.	BCN CC
Permeate (unpave) 3 ha and reclaim the organic soil.	BCN CC

# CHANGE OF MOBILITY AND INFRASTRUCTURE MODEL



Mobility is responsible for 40% of greenhouse gas emissions imputed to the city. The current mobility model is still highly dependent on fossil fuels, particularly linked to the use of private motor vehicles but also air and sea transport.



This not only actively contributes to climate change but also entails a high level of pollutant emissions on a local scale that affect public health (NOX and PM). A radical change in the mobility model is required on a local and regional scale, and, at the same time, a more rational use of the major infrastructures, such as the port and airport.

We want a city with a more sustainable mobility model and a smaller carbon footprint, and for this change to bring with it a transformation of the public space where people are the protagonists.

### Most important challenges

- Managing the urban layout in order to encourage a change in the mobility model that leads to more and better spaces for pedestrians and active mobility, which do not contribute to GHG emissions
- Reducing the GHG emissions of motor transport.
- Improving traffic conditions for on-street public transport. Promoting metropolitan public transport infrastructures.

- Reducing the use of private motor vehicles in the city to achieve the environmental targets that have been set in such a way that this does not worsen existing inequalities.
- Involving, in terms of commitments, agreements and investment, the competent public authorities in transport infrastructures, such as the port and airport.

Key actions and actors	Agents involved
<b>Improving the spaces for pedestrians and active mobility</b>	
Improve pavement accessibility and comfort, increase the pedestrian zones, improve vertical mobility (escalators and lifts), increase the number of traffic-calmed streets, where maximum priority is given to pedestrians.	BCN CC
Calm traffic in the city generally, to increase road safety and foster a friendly environment with lower energy consumption and fewer emissions. Hierarchisation of the road network, so on most streets traffic speed is less than 30 km/h.	BCN CC
Consolidate the cycling infrastructure and improve the quality, connectivity and safety of the existing network, while prioritising the axes that give the network its structure. Increase the number of anchoring points and create high-capacity bike parks at strategic points and the main public transport interchanges.	BCN CC, AMB
<b>Improving and promoting a bigger offer of collective public transport</b>	
Improve the viability, competitiveness and capacity of the city's bus network. Increase the frequency and reduce the journey times of services on the basic local network.	BCN CC, AMB
Complete the tram network and manage it better.	BCN CC, AMB
Substantially increase the interurban bus services with a dedicated infrastructure of interurban bus lanes on the city's main access roads: B-23, C-31 Nord and C-33.	AMB, Government of Catalonia and Spanish State
Improve the on-street interchange areas of public transport, the intermodal stations and the regional and metropolitan bus terminals.	Government of Catalonia and Spanish State
Put into service the metro initiatives in the Infrastructure Master Plan that would bring higher profitability more quickly: the central stretch of L9, the L4 link at La Sagrera and the L3 link at Trinitat Vella.	BCN CC, Government of Catalonia.
Increase investment in commuter and regional trains to improve regional public rail transport, prioritising those actions that would mean a greater reduction in GHG emissions. Speed up completion of the La Sagrera station.	Government of Catalonia and Spanish State
<b>Reducing the use of motor vehicles</b>	

Extend the strategy of car parks and regulated parking to the whole city. Review the criteria applied to all areas of the city and all motor vehicles, including motor bikes and goods traffic, and agree on applying consistent policies with the metropolitan municipalities and the AMB.	BCN CC, AMB
Make progress on applying formulas that reduce the need for obligatory mobility, by applying work mobility strategies that tend to reduce the need for journeys to/for work (conferences calls, home working, etc.).	BCN CC, AMB, BCN PC, Government of Catalonia
Promote dedicated spaces for goods distribution to increase its efficiency and reduce its impact on GHG emissions. Promote the use of commercial vehicles with low emissions.	BCN CC
Introduce green taxation measures in order to tax the goods distribution of big tech platforms.	BCN, ATM, AMB, Government of Catalonia.
<b>Reducing the impact of the port and airport on the effects of climate change</b>	
Draw up plans for reducing the emissions of those infrastructures and incorporate them in the new master plans for Barcelona Airport, considering the aviation sector, and the Port of Barcelona.	Barcelona Airport, Spanish State, Port of Barcelona
Study the withdrawal of short flights with an alternative by train (under seven hours) and distances under 1,000 km, while boosting the high-speed and long-distance rail network and encouraging the creation of night trains, ensuring affordable prices.	Barcelona Airport, AENA
Continue with the gradual electrification of land fleets and auxiliary units to minimise the consumption of fossil fuels and, at the same time, reduce the impact of local pollution. A process accompanied by contracting 100% renewable energy.	Barcelona Airport
Encourage the use of rail transport over the airport and fewer car parks. Promote a fleet of electric buses and taxis to provide a service from the airport and to the cruise ship wharf.	Barcelona Airport, Port of Barcelona
Install the necessary infrastructure so the Port of Barcelona wharfs, land-based machinery and captive fleets can be electrified.	Port of Barcelona
Work for a taxation system with a markedly environmental character for vessels in the Port of Barcelona and the aviation sector.	Port of Barcelona, Spanish State, Barcelona Airport
Speed up the construction of rail accesses to the port, including the Mediterranean corridor, to double the transport of goods by train and reduce lorry traffic.	Spanish State, Port of Barcelona
Begin a process of electrifying the Port of Barcelona (vessels as well as businesses and their activity) accompanied by contracting 100% renewable energy.	Port of Barcelona and operators
Install renewable generation systems in the Port of Barcelona (42 MWp in 2030) and Barcelona Airport, on building roofs and with pergolas in the car parks (40 MWp in 2030).	Port of Barcelona, Barcelona Airport
Speed up implementation of emission controls in the Mediterranean area (MedECA) and work to get it declared a sulphur (SECA) and nitrogen (NECA) control area.	Spanish State

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Push for the Port of Barcelona to be a base port for cruise ship lines.

Port of Barcelona

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Withdraw the exemptions on kerosene in the EU for internal flights in member states and in the common air space.

Spanish State

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# CHANGE OF ENERGY MODEL



The model of power generation and electricity consumption we have at the moment, mainly based on fossil fuels, is one of the main causes of climate change. Reversing this model of consumption and moving towards a rational use of energy, based on energy saving and efficiency and local, renewable energy, where priority is given to self-consumption and self-generation, is fundamental for achieving the targets and fulfilling the city's commitments with regard to the climate emergency.

We need to make a firm commitment to renewable power generation in the city, making the most of any opportunity to generate energy from existing resources, both renewable and waste, and, at the same time, improve the state of buildings and infrastructures and also the way we use energy, by being more aware of the environmental impact our consumption habits have. Our citizens must play a key role in this and take the lead.

We want a city where self-generation and self-consumption are the norm, with a fair, democratic and renewable energy model that will enable us to be renewable and carbon neutral by 2050.

## Most important challenges

- Ensuring the levels of comfort and quality of life in buildings are maintained without increasing energy demand or consumption, by promoting improvements in and the renovation of city buildings (public and private) with energy efficiency criteria, and also ensuring new buildings that are built have almost zero consumption.
- Making the presence of power generation facilities a normal feature of the city and increasing demand for solar self-consumption facilities on buildings, by facilitating investment and installing new facilities in both the public and private spheres.
- Making shared self-consumption a reality by developing physical and virtual energy communities.
- Taking advantage of the city's big spaces and setting for power generation, establishing that as a criterion to be incorporated in new plans and developments, and include generation equipment in the existing public space: pergolas, paving, etc.
- Giving social prominence to the energy generation and consumption model.

**Local renewable generation and a boost to green electricity**

Fill the city's roof terraces with solar facilities, by making it easier to install them (reinterpreting the regulations and simplifying procedures) and boosting the financial incentives, such as grants, subsidies, tax breaks (IBI, ICIO, IAE) and other funding mechanisms, to incorporate 10 MWp of photovoltaic energy and 7 MW of thermal solar energy in residential and private tertiary buildings by 2025.	BCN CC, citizens and private
Speed up the installation of renewable generation in municipal buildings (nursery schools, cultural and sports facilities, etc.) as well as public spaces by incorporating a further 6 MWp of photovoltaic generation in the municipal stock by 2025.	BCN CC
Start a process whereby up to 25 MWp of photovoltaic energy is installed in big urban spaces (industrial roofs, big tertiary buildings and pergolas or structures in industrial and logistics environments) by 2025.	BCN CC, Bon Pastor Industrial Estate, industries and operators
Speed up the installation of renewables across Catalonia so that by 2030, 50% of electricity consumption in Catalonia comes from a renewable source, as set out in Decree Law 16/2019, of 26 November, on emergency measures for the climate emergency and promoting renewable energy, and Act 16/2017, of 1 August, on climate change.	Government of Catalonia
<b>Renovation</b>	
Set in motion the necessary mechanisms for increasing the weight of public subsidies with an energy and environmental focus, as part of public policy for encouraging renovations, so we can achieve a figure of 10,000 dwellings a year receiving financial help (subsidies or loans) for energy renovation.	BCN CC, financial entities and owners
Create support figures that can advise on the renovations that need to be carried out, depending on the type of action and characteristics of the building where it is being carried out (local renovators).	BCN CC
<b>Energy efficiency</b>	
Draw up a building energy byelaw that ensures new buildings or those undergoing wholesale renovation in the city are minimum-demand and maximum-generation.	BCN CC
Develop a regulatory framework for using heating/air conditioning in the commercial and services sector, in order to avoid energy being wasted thanks to a social conscience, regulating, among other things, the uses of outdoor heaters and the closure or automatic actions of exterior doors.	BCN CC
Ensure efficient energy management of municipal services associated with the water cycle, as well as waste management and collection, and also optimise the energy management and supplies of public lighting and municipal buildings and offices (including infant and primary schools), in order to cut electricity consumption in the buildings intervened in by 10% by 2024.	BCN CC
Develop and consolidate the existing heating and cooling grids in the city, and define and promote a new one in La Sagrera.	BCN CC, private administrators

# CHANGE OF ECONOMIC MODEL



The current economic model is based on continuous growth and a never-ending race for profits, with an ever-increasing consumption of natural resources.

The same economic system that is putting our planet's ecological balance in danger has significantly increased its inequalities. Without a doubt, the global ecological crisis and the climate crisis in particular are largely due to excessive

consumption on the part of the rich countries and, above all, the wealthiest social groups.

The climate emergency must spur us on to make changes in order to achieve a development model that respects the Earth's ecological limits and ensures a decent life for all. Inaction involves much bigger risks than having the courage to make the changes that would put us on the road to achieving a more sustainable, fairer system.

We want a city with a fairer, more social, more environmental economy that leaves no one behind.

## Most important challenges

- Driving a change in the economic model, for a fairer, more sustainable one that reduces inequalities and generates better quality employment.
- Evaluating the city's tourism carrying capacity and promoting sustainable tourism.
- Accounting and complementing social and climate taxation.
- Generating economic incentives for more sustainable behaviour and activities by means of climate taxes.

## Key actions and actors

## Agents involved

### Green economy

Define a strategy for a green, blue and circular, or sustainable economy, promote business clusters in the renewable energy sector and circular economy in the city, as in the Besòs axis, for example.

BCN CC

Draw up guidelines for public procurement with social and solidarity economy criteria, and low-carbon criteria; explore green, social procurement with City Council 2030 Agenda sustainability certification.

BCN CC

Implement the carbon budget.

BCN CC

Encourage voluntary agreements by big companies to reduce greenhouse gas emissions.

Government of Catalonia

Study Barcelona's tourism carrying capacity in sustainability, climate and social terms. Reduce tourist activity emissions.	BCN CC
<b>Climate taxation</b>	
Call for implementation of the Climate Change Act, including fiscal measures (tax on Co2-e, climate fund, etc.).	Government of Catalonia
Call for the Catalan Social and Solidarity Economy Act to be finalised and rolled out, along with the necessary resources for that.	Government of Catalonia
Establish a charge on the tax on stays in tourist accommodation	Government of Catalonia
Amend Spanish legislation to enable new municipal taxes to be created in the area of tourism.	Spanish State
<b>Social and solidarity economy</b>	
Promote green employment, self-employment and eco-entrepreneurship in economic sectors linked to climate change (energy renovation, solar panel installation and maintenance, sustainable urban drainage system (SUDS) maintenance, sustainable foods and electric mobility, among others).	BCN CC, Government of Catalonia, Spanish State
Promote a framework and legal instruments for increasing social and sustainable public procurement in Catalonia and Spain.	Government of Catalonia, Spanish State

# CHANGE OF CONSUMPTION AND WASTE MODEL



The pace of resource consumption continues to grow and exceeds the speed with which the planet provides those resources. Moreover, much of what we consume in Barcelona comes from very long international supply chains. What we consume, above all commodities, very often comes from the other side of the world and is a crucial factor in global climate justice.

The current consumption model is inefficient and generates many climatic, environmental and social externalities. The linear economic model of using and throwing away takes no account of the planet's finite limits. Thus, someone in Barcelona generates a total of 483 kg of waste a year (1.32 kg/inhab./day), while selective waste collection has been stagnant at around 38% for years. Plastics, especially the single-use kind, are a clear example of a linear economy model, as only 10% ends up being recycled. Not to mention the impact they have on the environment, health and well-being of the population and the rest of the natural world. So we have to accept the EU targets for selective collection and recycling.

We want a city with a critical and responsible attitude towards consumption and which is shifting to a social and solidarity economy with a circular model, where there is no place for waste.

### Most important challenges

- Promoting a change in the production matrix and the consumption model.
- Highlighting and being responsible for all the waste that stems from our consumption with a vision of global climate justice.
- Shifting from a linear to a circular economy.
- Moving forward from a consumer society to consumption based on needs.
- Changing to a model with a zero waste target.
- Promoting a new consumption culture.

Key actions and actors	Agents involved
<b>Making progress on responsible consumption and preventing waste</b>	
Roll out the Zero Waste Strategy by greening festivals and events, using reusable cups/glasses, cutlery and plates, organising repair workshops and spaces, exchange forums, a library of things, low-waste trade fairs and conferences, etc.	BCN CC
Promote responsible consumption through exchange marts, with local products, shops and organisations that reuse and distribute second-hand products, shops that sell in bulk, responsible consumption fairs, etc. Encourage green energy procurement.	BCN CC
Study the carbon footprint of the different types of consumption in Barcelona, considering whether to introduce global emission indicators.	BCN CC
Introduce climate emergency criteria in the terms and conditions for advertising goods and services in spaces under public control.	BCN CC
<b>Individualising municipal waste collection to improve selective collection</b>	
Roll out individualised collection systems for domestic and commercial waste throughout the city, increasing selective collection to 65% in order to reduce the need for incineration.	BCN CC, AMB
Reach voluntary agreements with the private sector in order to establish best practices in reducing packaging, waste, single-use plastics, etc.	BCN CC, AMB

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### **Implementing instruments for environmental taxation applied to waste**

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Create a domestic waste collection tax that acts as an incentive for participating in selective waste collection

BCN CC

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### **Introducing legislative and regulatory changes**

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Eliminate single-use plastics.

Government of Catalonia,  
Spanish State

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Apply regulatory changes to allow new, collective increased producer responsibility systems (SCRAP in Catalan) to be introduced and promote the introduction of deposit, return and refund systems (SDDR).

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# **CHANGE OF FOOD MODEL**



Food production accounts for between a quarter and a third of greenhouse gas emissions. But Barcelona is not only a producer, it is also a consumer. We consume 650 kg of food per inhabitant a year, yet only 10% to 15% is produced locally. Experts agree that a healthy diet (500 g of fruit and greens, 500 g of greens and other vegetables per day) play a vital role in reducing obesity rates and risks of serious illnesses in adulthood. Yet 10% of children aged 3 to 4 in Barcelona are obese. It is therefore essential to have access to a sustainable, sufficient and suitable diet with healthy habits.

To reduce the contribution of the city's food system and promote healthier diets low in carbon, we need to opt for local, agro-ecological production, increase the supply of and access to local, ecological fresh produce, reduce the consumption of animal protein and highly processed foods, and offer everyone the tools to facilitate the transition to a healthier and more sustainable way of eating.

We want to move towards a city that is well integrated in the region and which promotes the agro-ecological value of its setting, that is less externally dependent for its food supply and has a populace that is aware of the importance of its food model.

## Most important challenges

- Promoting local ecological food produce, thus facilitating the economic and social viability of the farmers and the city's local trade, while generating a better territorial balance and a more sustainable agro-food model.
- Improving the accessibility (physical and economic) of healthy, fair-trade and sustainable food produce, especially for people in vulnerable situations.
- Promoting healthier diets low in emissions: more local, fresh and seasonal produce, more fruit and vegetables, more ecological produce, less packaging, fewer highly processed foods, reducing the consumption of animal protein (above all red meat) and prioritising meat that comes from extensive and ecological stockbreeding.
- Promoting urban and suburban agriculture as a tool for raising awareness of a sustainable food model and community cohesion.
- Developing a sustainable local agro-food model to bring about a structural reduction in food waste.

## Key actions and actors

## Agents involved

### Promoting a more sustainable, healthier way of eating

Implement and promote healthier diets that are low in carbon in 2021, in schools and all municipal dining rooms: seasonal, ecological, local produce, reducing the consumption of animal protein (especially red meat) and highly processed foods.

BCN CC

Restrict the opening of establishments selling highly processed fast food that is high in protein near schools.

BCN CC

Promote and define the sustainable, healthy dining-room model. This is a place for boosting and activating agricultural production. For example: ensure the vegetables, fruit or veal consumed comes from extensive, ecological, local production sources.

Government of Catalonia

Organise the 2021 Milan Pact meeting of mayors (from 200 cities) where a city food and climate change commitment could be promoted. Make Barcelona the Sustainable Food Capital in 2021 to press for a change in the food model, locally and internationally.

BCN CC

### Facilitating the logistics for a sustainable food system

Open a wholesale market at Mercabarna for ecological fresh food in 2021 which promotes the sale of ecological produce and encourages local ecological producers to participate in it.

BCN CC,  
Mercabarna and  
Municipal Markets

Open a food reuse centre at Mercabarna in 2021 (2,500 Tm/year).

BCN CC,  
AMB

Create an identification system as well as logistical and commercial facilitation instruments together with Mercabarna, municipal markets, traders associations, agricultural organisations, etc., in order to significantly increase the presence of short-circuit, sustainable, ecological, local fruit and vegetables in the city's local commerce.

BCN CC,  
Mercabarna and  
Municipal Markets

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Boost the commercialisation of local, ecological vegetables in season at Mercabarna, especially those produced in abundance in Catalonia (tomatoes, dried onions, lettuce and green beans).

Mercabarna

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**Supporting the city's agro-ecological sector**

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Support and promote urban and suburban agriculture, as well as the city's agro-ecological sector and the Parc Agrari del Llobregat.

BCN CC

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# CHANGE OF CULTURAL AND EDUCATIONAL MODEL



Culture is a key element for tackling the climate crisis, as the cultural context is the reference framework which shapes the way people live and act. We are faced with the challenge of transforming a culture based on increasing consumption of energy and resources, which ignores the undesirable effects this has on ecosystems, societies and the most vulnerable territories, into a culture that recognises planetary limits and fosters sustainable ways of life.

Education, cultural activity, communication and encouraging citizens to take action are vital instruments for advancing down this road. Involving everyone and cooperation between cities and regions can enable the change we need to come about. The More Sustainable Barcelona network is a key piece in this cultural transformation. We need to strengthen its programmes, promote climate action in the neighbourhoods, incorporate raising awareness of the climate emergency into education and the city's cultural programmes and transmit clear messages.

We want a city where people, organisations, institutions and businesses each assume their own responsibility and, together, the city's responsibility for minimising its impact and reversing its ecological debt. A city that learns, with committed Barcelona citizens who know they can change the situation by their actions and protect the future for the generations to come.

## Most important challenges

- Being consistent in what we say and what we do. Conducting more internal education on the commitments taken on in relation to the climate crisis as an administration/organisation/business.
- Finding ways to reach everybody, in all the neighbourhoods, and get commitment and action from the various sectors of the population.
- Boosting education on sustainability and global justice in the formal education system. Prioritising the participation and empowerment of young people. Stepping up teacher training.
- Incorporating the challenges of sustainability and the climate emergency in the cultural debate. Getting the support of various groups, including intellectuals, artists, cinema professionals, radio, television, communicators, influencers and opinion creators in general.
- Facilitating the development of joint learning/action projects and encouraging people and organisations to get involved.

## Key actions and actors

## Agents involved

### Promoting climate action

Have a facility and a person in charge of climate and sustainability in each district, with the aim of promoting climate action and extending the sustainability culture to the neighbourhoods.

BCN CC

Have subsidies to the value of 1M€ a year for developing projects that contribute to achieving the goals and targets of the Climate Plan and this declaration.

BCN CC

Promote climate emergency actions (energy improvements, a guarantee of environmental quality, sustainable mobility, etc.) from the cultural facilities run by the ICUB or with municipal participation.

BCN CC

Develop an educational programme on climate change for city schools, including climate transition programmes geared towards young people (secondary schools, universities).

BCN CC

Introduce criteria for reducing the climate impact, and the 2030 Sustainable Development Agenda at five major city events (for example, La Mercè, the Marathon, Grec Festival, Smart City Expo World Congress, Mobile World Congress) and neighbourhood festivals.

BCN CC

Promote cooperation between cities on climate justice, in the subsidy call and direct, city-city cooperation.

BCN CC

### Disseminating knowledge of the climate crisis

Incorporate information and discussion on the climate emergency and future model into the cultural programming of cultural facilities (libraries, museums, civic centres, elderly centres, youth centres) and dedicate international days and weeks to the climate crisis.

BCN CC

Publicise the climate emergency declaration with a travelling exhibition that goes round the 10 city districts and various schools.	BCN CC
Spread knowledge of the climate emergency by using existing communication channels: messages at health centres (CAPs), metro channels, etc.	TMB, Health Consortium
<b>Generating knowledge</b>	
Increase climate research (Barcelona Science Plan) to improve knowledge of climate change in the city. Communicate new knowledge by means of the website, science days, talks, etc.	BCN CC
Generate more knowledge around the impact of the climate crisis on global inequalities, migrations (climate refugees) and human rights.	BCN CC

# TAKING CARE OF HEALTH, WELL-BEING AND ENVIRONMENTAL QUALITY



Climate change affects health and quality of life but it doesn't affect everyone in the same way. Factors such as physical condition, health, age, gender, socio-economic situation or the environmental conditions where we live and work determine the possible degree to which climate change affects people. In fact, it is believed that the climate crisis is the biggest threat to health this century. Sustained,

excessive heat leads to an increase in mortality and morbidity, especially among the most vulnerable groups of human beings, but also the rest of the natural world. Between 1992 and 2015, it is estimated there were 980 deaths among men and 2,729 among women (natural deaths of people aged 25 and over) that were attributable to extreme heat, generally fragile older people.

To reduce the vulnerability of people to climate change, we need to work on ensuring the continuity of services and universal access to basic supplies, guaranteeing thermal comfort both inside buildings (housing, facilities, etc.) and public spaces, as well as improving and adapting the services to dependent persons.

We need to advance towards becoming a healthy city that ensures the health and well-being of its citizens. A socially just city that reduces inequalities. And a habitable, comfortable city with quality public spaces.

## Most important challenges

- Reducing the vulnerability of people to the climate crisis, understood to mean those situations that mean some people adapt less to their effects, either because of their socio-economic situation (family income, housing conditions, doing demanding physical activities outdoors), characteristics (gender, age, solitude) or health (people with limited autonomy, chronic diseases, etc).
- Cutting NOX and PM emissions, the main local pollutants which directly affect the population of Barcelona and the surrounding area.
- Reducing vulnerability and energy poverty.
- Improving thermal and acoustic comfort in the city: in homes, sensitive facilities and public spaces.
- Improving our knowledge of the impact climate change has on health, as well as social and gender inequalities.
- Preventing and controlling possible alterations in the geographical and seasonal distribution of vectors (mosquitoes and others) and the diseases they can transmit.

## Key actions and actors

## Agents involved

### Reducing pollutant emissions

Roll out the low emission zone, monitoring the stages envisaged and applying the necessary adjustments.

BCN CC,  
AMB

Study the implementation of supplementary measures for reducing the environmental impact of private motor vehicles, for example: managing parking, ultra-low emission zones, a toxicity toll, etc.

BCN CC

### Improving the conditions the population faces in extreme climate episodes

Activate 100 municipal facilities (30 of them educational facilities) to act as climate shelters in the event of an extreme climate emergency (expand the hours, equip them, ensure accessibility, inform people, design the website, etc.) and have a reference facility in each district.

BCN CC

Have a space for water games in a public space in each district.

BCN CC

Make the current energy advice points climate advice points (offering advice on green roofs, low-carbon eating, etc.) that can also continue to guarantee the basic services of people in a vulnerable situation.

BCN CC

Improve the thermal comfort of 40 state-run schools (Education Consortium), 4 municipal homes for older people and 2 early care centres for children with a disability Increase resilience to changes in the power supply to health, public health and social facilities.

BCN CC,  
Education Consortium,  
Government of Catalonia,  
BCN Health Consortium

Review the emergency protocol activation criteria for heat waves, incorporating a variable for night-time temperatures.

Government of  
Catalonia

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## Protecting the most vulnerable population

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Generate knowledge about the different impact of the climate crisis on women and Barcelona's most vulnerable groups, such as those on low incomes, migrants and refugees.

BCN CC

Create at least 10 superblocks that integrate care and which are geared towards providing a comprehensive care service for dependent persons, with local homecare service teams.

BCN CC

Boost the public health facilities at climatically exceptional moments.

Government of  
Catalonia

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# TAKING CARE OF WATER



With the climate crisis, the shortage of water resources typical of Mediterranean areas will get worse. It is forecast that, by 2050, there will be a need for an additional 18 hm<sup>3</sup> a year of potable water resources. The Climate Plan envisages reducing domestic potable water consumption to 100 litres per inhabitant per day.

An increase in heavy rain is forecast. Due to the city's high degree of impermeability, there will be more cases of the sewers overflowing, as well as untreated water occasionally flowing into the sea. Moreover, the rise in the sea level might mean a reduction in or the loss of part of Barcelona's beaches. In fact, studies show a big part of Sant Sebastià beach will be lost at the end of the century.

We want a more resilient city that is capable of adapting and being proactive in the face of a lack of resources, with a more efficient consumption that promotes alternative resources and protects the coastline and rivers in its sphere.

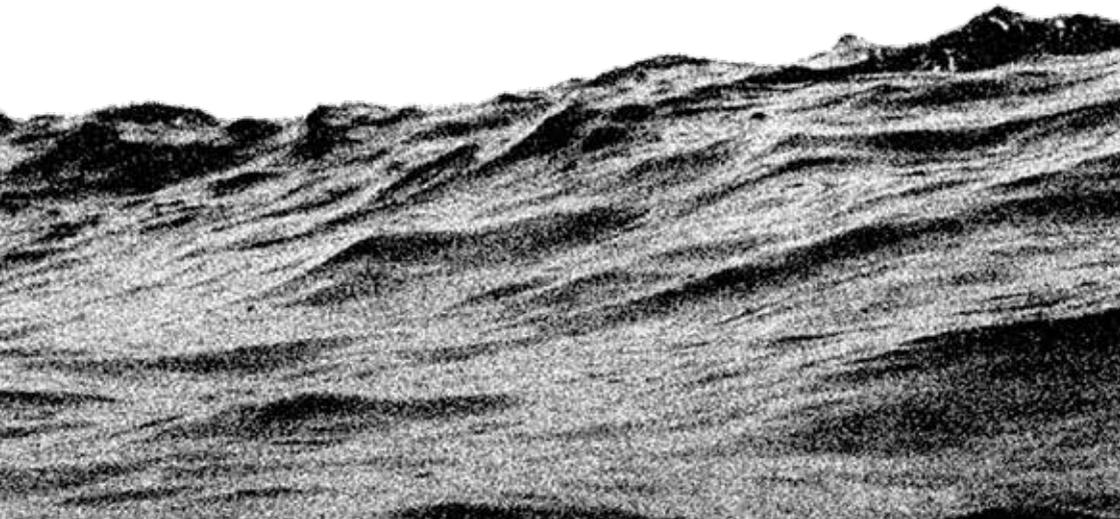
### Most important challenges

- Ensuring the capacity to supply the city, put at risk by the foreseeable worsening of the drought episodes and the reduction of some of the resources currently exploited.
- Reducing consumption of the city's potable water by 10%, replacing it with alternative water resources (ground + grey + regenerated) for uses compatible with them.
- Minimising sewerage system overflows and cases of untreated water flowing into the sea and rivers as a result of torrential rain that could become worse with climate change.
- Protecting the coastline from sea flooding aggravated by climate change (rise in the average sea level and more extreme episodes).

Key actions and actors	Agents involved
<b>Reducing the consumption of drinking water</b>	
Replace 100,000 m <sup>3</sup> /year of potable water with alternative water resources for municipal uses they are compatible with.	BCN CC
Achieve domestic potable water consumption of 100 l/inhab./day by implementing saving measures, public campaigns and initiatives at public facilities that consume lots of water.	BCN CC
<b>Promoting the use of alternative water resources</b>	
Use regenerated water from the El Prat Waste Water Purification Plant, with a potential of 5 hm <sup>3</sup> , for industrial use in the Zona Franca and compatible residential uses (La Marina neighbourhood).	BCN CC, AMB, ACA,
Approve a byelaw that makes the use of grey, rain or regenerated water compulsory in new buildings or major renovations.	BCN CC
<b>Making the city more resilient to flooding</b>	
Increase the sustainable urban drainage systems (SUDS) by 20,000 m <sup>2</sup> .	BCN CC
Carry out the necessary actions on collector pipes and rainwater tanks (the pipes on Avinguda del Paral·lel and Avinguda Diagonal, and the rainwater retention tank on La Rambla de Prim) in order to increase the capacity of the drains and reduce the risk of flooding, as well as avoid overflows on the beach due to heavy rain.	BCN CC
<b>Protecting the coastline and our rivers</b>	
Define and implement the protection strategies and specific use of each beach.	BCN CC, Spanish State
Restore the bed of the Llobregat and Besòs rivers and improve the water quality (by reducing uncontrolled spills) as well as that of the aquifers (saline barrier).	AMB, ACA

# EMISSION SAVINGS AND ACTION BUDGET

	Budget (M€)	Reduction in emissions 2025 (t CO <sub>2</sub> )	Reduction in emissions 2030 (t CO <sub>2</sub> )
 Change of urban model	177.6 M€	3,780	15,120
 Change of mobility and infrastructure model	120.0 M€	307,784	702,018
 Change of energy model	45.7 M€	255,514	683,364
 Change of economic model	24.6 M€	101,896	224,172
 Change of consumption and waste model	120.9 M€	75,353	206,592
 Change of food model	7.3 M€	6,500	14,300
 Change of cultural and educational model	6.0 M€	23,454	46,909
 Taking care of health, well-being and environmental quality	8.2 M€	50,000	50,000
 Taking care of water	53.0 M€	2,350	7,550
	<b>563.3 M€</b>	<b>826,631</b>	<b>1,950,025</b>





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