

## EXECUTIVE SUMMARY

# THE BARCELONA METROPOLITAN AREA SUSTAINABILITY PLAN 2014-2020

### Introduction

The AMB Sustainability Plan (PSAMB) falls within the scope of Law 31/2010, dated 3<sup>rd</sup> August, regarding the Barcelona Metropolitan Area, which sets out the need to draft a Metropolitan Action Plan for protecting the environment, health and biodiversity, as well as defining measures to combat climate change and the creation of an Agenda 21 programme.

### Vision and mission

The Sustainability Plan's vision is to consolidate the AMB's status as a leading example of the implementation of policies with sustainability criteria, enhancing protection of the environment and biodiversity, and alleviating and adapting to climate change, in order to ensure a better quality of life for the city's residents in a way that is consistent with the challenge of sustainability and climate change, as established in the Barcelona Metropolitan Strategic Plan.

The mission of the PSAMB is to become a transversal action plan that integrates environmental sustainability criteria in a coordinated manner throughout all of the Metropolitan sector policies that fall within the jurisdiction of the AMB.

**Structure.** The PSAMB has been drafted based on the different spheres of operation for which the Barcelona Metropolitan Area is responsible. For each of these levels of work or operation, a sub-plan has been drafted with diagnostics and action proposals for improving the environmental quality of the corresponding level. The three sub-plans are: the Integrated Regional Environmental Improvement Plan for the Barcelona Metropolitan Area, the Environmental Service Promotion Plan for Towns in the Metropolitan Area, and the AMB Management Environmental Quality Plan.

Meanwhile, each of the levels of operation tackle sustainability based on 6 core concepts, one of which spans across all of the spheres. These core concepts are:

#### 1. Land, ecology and biodiversity

The Metropolitan Area has impacts that are directly related to the management of the inland and coastal aquatic and land ecosystems within the area. In the case of water management, in addition, an integrated management approach is crucial for maintaining a guaranteed standard at the same time as preventing environmental impacts.

#### 2. Energy and climate change

Cities and, by extension, their metropolitan areas contribute significantly to global warming. At an international level, cities consume 75% of the energy and are responsible for 80% of

greenhouse gas emissions. Cities therefore bear a large burden of responsibility for this process but, at the same time, they have the opportunity to be a key part of the solution.

### 3. Sustainable transport

Urban transport is fundamental for citizens and the smooth operation of economic activity. Nevertheless, the impacts derived from the transport generated affect the environment and people's health.

In order to reduce these impacts, we have to move towards more sustainable mobility that lets us satisfy our transportation needs at a reasonable cost and timeframe, as well as minimizing the impacts.

### 4. Means of production and consumptions

The consumption of resources is necessary to guarantee the quality of life of the city's residents. However, this generates a series of impacts on these same natural resources. As a result, the ecological footprint of large cities extends far beyond its territorial borders. As such, it is necessary to increase the efficiency of resource consumption, as well as establishing production and consumption guidelines that ensure a low small environmental impact.

### 5. Environmental health

The state of the urban environment is a decisive factor in the levels of health and wellbeing of the population. Air quality and levels of exposure to noise and odour pollution, among others, are particularly important aspects for which action on a Metropolitan level is absolutely vital.

### 6. Sustainability education

Promoting environmental, social and economic sustainability in the Metropolitan Area and contributing to educational governance based on civic participation, strategic planning and shared social responsibility through formal, non-formal and informal education based on a Sustainability Education Programme that outlines the Metropolitan Area's mission to set an educational standard.

## **Drafting process**

In order to draft the PSAMB, which began in mid-2012, the tasks performed by various working groups formed by the Institution's technicians have been crucial, as well as the sessions conducted at the internal and municipal levels and the work of the permanent Climate Change Committee. Thanks to the cooperation between these groups, an initial draft of the PSAMB was developed, which was later subject to external participation processes, both digital and face-to-face, which involved the collaboration of technicians, scientists, residents' associations, organization's and the general public. All of these groups contributed towards the final document with their suggestions, amendments and observations.

In this way, the result of the whole working process is a report in which the diagnosis is divided along the lines of the three levels of operation and proposals in terms of the six core concepts, as well as with respect to categories that arose as a result of participation processes.

## Diagnosis

Initially, a diagnosis of the different spheres of operation was conducted in order to ascertain the current status of the Metropolitan Area, the needs of the towns and the current situation of the Institution itself.

Area level. The main studies are based on:

- The diagnosis of the state of biodiversity conservation, ecological connectivity, current pressures and future trends.
- Energy consumption, CO<sub>2</sub> emissions derived from energy consumption across the Metropolitan Area, and the problems and effects of climate change in the area.
- Mobility and transportation.
- The energy supply, renewable resources (potential of solar energy, mini-windmills, biomass, geothermal energy, etc.), the water cycle and waste management.
- Air quality, and noise, light and odour pollution.

Municipal level. In this section, there is an overview of the main municipal bye-laws of the towns within the Metropolitan Area, in line with the strategic pillars of the PSAMB. In addition, a definition is given of the role of the working group created specifically for performing tasks related to the support that the AMB can give to the towns and the main needs of the Metropolitan town councils with respect to implementing environmental policies within their municipal districts.

AMB internal management level. Based on the cooperation of employees from various departments of the Institution, working groups and external companies, a diagnosis of the current state of the AMB itself was conducted. This includes the head offices and the infrastructures related to the services that are offered directly.

## Proposals

The total number of actions that resulted from participation at both an internal and external level, and which have finally been included as measures to be implemented between 2014 and 2020, is over 100. Of these actions, the following measures have been started or will be started during 2014:

CORE CONCEPTS	Area level	Municipal level	Internal level
<b>1. Land, ecology and biodiversity</b>	Approach to the ecosystem-related services in outdoor Metropolitan spaces.		Establishing a system of sustainability indicators in Metropolitan parks.
<b>2. Energy and climate change</b>	Creating a Metropolitan climate change observation committee.	Analysis of the urban resource framework from an energy perspective. Drafting a building park map of the Metropolitan Area according to the level of energy efficiency. This map will be available on a server.	Developing a tool for CO <sub>2</sub> calculation at for different management areas at a Metropolitan level.
	Studying the impacts of climate change in the Metropolitan Area and the Area's capacity to adapt. Studying the resilience of the Metropolitan infrastructures and the vulnerability of the Metropolitan Area's energy supply.	Promoting research into, application for and processing of state and European grants to enhance energy efficiency and the implementation of clean energies, based on a municipal initiative.	Reduction of emissions from Metropolitan buildings and facilities in line with AMB's Carbon Strategy with a deadline of 2015, focusing particularly on energy optimization and efficiency.
	Analysis of the urban resource framework from an energy perspective. Drafting a building park map of the Metropolitan Area according to the level of energy efficiency. This map will be available on a server.		Signing up to the Voluntary Agreements Programme of the Catalan Climate Change Office, for all of the AMB's facilities and concessionaires (the offices are already on the programme).
<b>3. Sustainable transport</b>	Drafting a Metropolitan plan for fast public charging points for electric vehicles.	Drafting and monitoring the urban transportation plans of the towns within the Metropolitan Area.	Drafting an AMB Sustainable Transport Plan.
	Improving the environmental credentials of the indirectly managed public transport fleet.		Studying the implementation of a pilot trial for the optimization of the use of telework and teleconferences.
	Conducting the planned actions for promoting bicycle use as a means of transport.		
	Improving the environmental credentials of the Metropolitan night-bus service.		
<b>4. Means of Production and Consumption</b>	2 <sup>nd</sup> phase of development of maps and an online tool for assessing the potential of photovoltaic solar energy and clean hot water systems on the roofs of buildings in the Metropolitan Area. Drafting a map which will be available on a server.	Drafting and implementing local waste prevention plans.	Approval of the review of the Metropolitan Municipal Waste Management Programme (2009-2016).
	Studying the potential of wind power in the Metropolitan Area. Drafting a map which will be available on a server	Technical support for Town Councils for improving the environmental credentials of the municipal waste collection services.	Expanding the " <i>Reparat millor que nou</i> " waste prevention programme ("Repaired better than new").
	2 <sup>nd</sup> phase of the study into local renewable energy generation based on primary biomass. Implementation of a forestry incentivization scheme.		Improving the environmental credentials of AMB's contracts and expanding this action to encompass concessionaire companies through green procurement mechanisms.
	2 <sup>nd</sup> phase of the study into the ecological footprint of the Metropolitan Area.		Pilot trial of the use of reclaimed water from corporate use through tanks in urban allotments (REGENERA BOX).
	The AMB's Water Resource Optimization Master Plan.		First phase of the study into local renewable energy generation based on primary biomass. Promoting an association of forest landowners.
	Maintenance of the hydraulic barrier that prevents saline intrusion into the aquifer of the Llobregat Delta.		
<b>5. Environmental health</b>	Inventory of potentially polluting activities within the Metropolitan Area in order to assess their potential risks and propose measures as required. Mapping projects available on the server.	Consolidating AMB's status as an environmental authority in terms of industrial discharge permits. Promoting the required amendments to regulations in order to establish a discharge notification scheme for various activities with a low environmental impact.	Consolidating AMB's status as an environmental authority in terms of granting prior and prescriptive report authorizations with respect to the water vector and/or other environmental vectors, such as noise and air emissions, to be integrated within the environmental permits and licenses for economic activities.
	Determining areas of critical noise quality: map identifying critical points and corrective measures, available on a server.	Enhancing IT resources to enable joint management of integrated environmental reports with the Metropolitan Town Councils, in relation to environmental vectors (noise, emissions, odour, etc.) and the wastewater vector and their integration within environmental licenses, as well as the creation of a digital platform for requesting and processing discharge permits for interested parties.	Enhancing IT resources to enable joint management of integrated environmental reports with the Metropolitan Town Councils, in relation to environmental vectors (noise, emissions, odour, etc.) and the wastewater vector and their integration within environmental licenses, as well as the creation of a digital platform for requesting and processing discharge permits for interested parties.
	Expansion and improvement of the Odourmap tool (Metropolitan map of odours with an integrated complaint collection tool). Available on a server.		
	Evaluation of the points of conflicts in the Metropolitan Area in terms of light pollution.		Creation of an Air Quality Round Table, with the participation of all of the relevant agents and organizations involved with air quality in the Metropolitan Area.
<b>6. Sustainability education</b>	Execution of the Metropolitan Sustainability Education Programme.		
	Creation of an online map server to be able to consult all of the mapping work conducted as part of the various PSAMB studies.		