

# Barcelona, Spain

## Education for Sustainable Development: The Barcelona School Agenda 21 Program



The Barcelona School Agenda 21 is a pioneering environmental education program for schools within Barcelona and a source of inspiration for similar initiatives beyond the city. The entire community around each school is involved in providing solutions and making commitments for a more sustainable city, for the environment and for the school itself.

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ICLEI Case Studies

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### Abstract

Since 2001, the Barcelona School Agenda 21 Program promoted by the Barcelona City Council's Environment Department, in collaboration with the AGBAR Foundation and the Barcelona Municipal Institute of Education (Programa Agenda 21 Escolar de Barcelona, or PA21E), has taken the lead in directly involving the educational community in Local Agenda 21 and its efforts toward sustainability.

The program's aim is to stimulate and support schools in designing, carrying out and appraising sustainability plans of action, as well as improving educational practices towards that end. Continuous support and training is provided to school directors, teachers and district supervisors. A network of schools committed to sustainability has also been developed to share the learning process and to work towards common objectives. Thanks to this program the number of schools in Barcelona, that have initiated environmental projects or included environmental topics in their educational curriculum, has grown considerably.

In these schools, a participatory philosophy embraced by Local Agenda 21, plays a leading role. This is reflected in the prominence and leadership given to students and to the entire school community, and the interaction between the school and other city actors (enterprises, associations, or the administration).

### Schools offer a valuable way of promoting sustainability

Schools offer a valuable way of promoting sustainability principles and students themselves can exert significant influence on families and the community. Although many activities have been carried out in schools since the 1980s, such as publications and teachers trainings in the field of environmental education, these initiatives were sporadic and not widely effective. Well-planned, long-term and comprehensive educational programs, with support from the administration, were needed. Barcelona City Council's Environment Department therefore identified the main objectives and priorities of the program: Strengthening environmental education, building a network among schools committed to sustainability in order to increase cooperation and encourage the exchange of ideas and experiences, endorsing the concepts of sustainable development by sharing the schools' best environmental practices, and emphasizing a culture of participation within schools.



**Population / Land area**  
1,619,337 (2010) / 102.16 km<sup>2</sup>

**Municipal budget**  
Approx. € 2,429 million (2010)

*Barcelona joined ICLEI in June 1995*



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## Case Study

### The City Context

Barcelona is a metropolis of considerable size. It is a dense and compact city with a festive atmosphere and a thriving tourist industry. While the nearby mountains and sea are popular attractions, they also place serious spatial constraints on the city, which long ago used up all the flat space available. This situation generates many environmental problems that are not easily managed. Still, Barcelona enjoys the benefits of modern, highly functional urban planning.

The Barcelona City Council's decision to build a sustainable city, combined with citizen commitment to help conserve the environment, has enabled the city to manage the environment more successfully than many other European capitals, even those of smaller size with less complex environmental conditions.

Barcelona has pursued a more efficient and sustainable model of development by designing better public spaces and by providing space for nature and biodiversity. Its efforts are meant to achieve greater comfort with respect to noise and air quality, to minimize waste generation, to shift towards sustainable management, and to adapt to climate change.

### PA21E: Ten years of commitment and education for sustainable development.

The School Agenda 21 Program, designed in 2000 as part of Barcelona's Local Agenda 21 initiative, is meant to provide support to schools that want to work towards a more sustainable city. All non-university level schools can participate in PA21E, from nurseries (0-3 years) to secondary schools (13-18 years), including all levels of special education schools. The response of the schools has exceeded the initial forecasts. In 2001, during the first year of the program, 69 schools took part in the initiative. The number of participating schools has increased year after year, reaching a total of 352 in 2010/2011, which account for over 50 per cent of the public schools of Barcelona.

#### The main strategies of the program are:

- Providing permanent support to teaching staff through personalized advice, online communication, specific training, documentation services and other resources. This is made possible thanks to an interdisciplinary coordinating team attentive to the needs of each school.
- Ensuring medium and long-term work based on instructive appraisal, acknowledgement of efforts and progress.
- Sharing experiences as a basis for learning.
- Coordinating with the municipal management areas, the city districts, and other stakeholders.

To encourage the schools to take part in the program, numerous presentation sessions, visits and meetings with interested school directors and teaching staff were carried out. Establishing and maintaining personal contact has been key to enrolling and maintaining schools in the program.

#### Winner of 2010 Dubai Award

Winner of the 2010 Dubai International Award for Best Practices to Improve the Living Environment. PA21E was selected as one of twelve winners of the Dubai International Award, sponsored by UN-HABITAT, which recognizes best practices for improving living conditions.

## The Citizen Commitment to Sustainability - Barcelona Agenda 21

The Municipal Council for the Environment and Sustainability (CMMAS) was active in promoting Agenda 21. Throughout the draft process (1998-2002), emphasis was placed on involving citizen organisations and groups based on the conviction that it is only possible to build a more sustainable city with everyone's participation and cooperation. As a result, the Citizen Commitment to Sustainability was adopted. This document sets out the principles and goals shared by all citizen organisations that sign it voluntarily. Each signatory (over 700 in 2010) draws up its own action plan to specify the measures it proposes to implement in order to help achieve the collective objectives.

A complete support program is made available to the schools throughout the year, including telephone, email and fax consultation and information services, a support website, twice-weekly electronic bulletins, training courses, exchange days, reflection groups, personalized counseling, teaching resources and material, and participation in networks of schools and other organizations.

Another important point in the process was the definition of a clear participation scheme, with milestones established at points throughout the school year, as well as the design of a methodological guide to orient the progress of the participants.

By joining the program, each school must submit a yearly project report that states the number of people and organizations that will be involved, the objectives to be achieved, the actions to be carried out, and the resources required.

### Every phase of the project prefigures corresponding objectives and actions

The first phase called "Motivation", serves to identify the actions that may promote interest, commitment and participation toward sustainability. The second phase "Diagnosis", highlights strong and weak points of the participating school in order to determine the appropriate starting point of action. This leads to the definition of an "Action Plan", phase three, where changes to be made are identified. Phase four is the actual "Intervention" where the planned actions are put into practice. The project processes and outcomes are then appraised in phase five "Evaluation".

Each school year begins with a solemn ceremony at the historical building of the City Hall in which the schools deliver their Commitment to the Mayor. Two closing events are held at the end of the school year, one for primary and junior schools and one for secondary schools. During those mini-congresses, pupils have the opportunity to showcase the projects they have been working on and exchange experiences.

PA21E is built on the basis of cooperation, school autonomy and long-term commitment, which is meant to go beyond an isolated activity or project. In this respect, the long-term objective is to continue to increase the degree of autonomy of the schools in relation to the performance of their environmental education programs, their discussions and decisions on changes, and the undertaking of their own commitments. Once they have participated in the program for five years, the school centers are asked to make a comprehensive self-appraisal after which they receive a plaque of acknowledgement, together with a reward of 1,000 Euros as financial support and as a stimulus to carry out a new triennial project.



Credit: Barcelona City Council

Building a more sustainable city with everyone's participation

## Results and Impacts of the Project in the Community

Results can be clustered into six main areas:

**Participation of schools in the program**, and adoption of strategies for sustainability in environmental education and management. The program directly involved 352 schools in 2010. Over the years, more than 80,000 pupils, 7,500 teachers, 1,400 supplementary school staff members and over 60,000 families have taken part.

**School projects addressing sustainability issues.** The number of projects carried out by the schools has been growing annually. The total number of projects in the 2010/2011 year was 283. These have included energy, water and paper saving initiatives, efforts to naturalize courtyards and gardens, and the promotion of sustainable consumption practices. Other projects, for example, involved the installation of thermal or photovoltaic solar mini-plants in 28 schools, the establishment of 48 “Safe Paths to School,” and the creation of more than 150 school vegetable gardens.

**Training of educators.** The PA21E provides specific training in environmental education and sustainable development topics to an average of 350 people per year, mostly school directors and teachers, but also technicians from the ten city districts and other school staff.

**Activities involving exchange.** Various exchange opportunities are offered every year to both teaching staff and pupils.

Aside closing events, regular meetings throughout the school year are organized for teaching staff, secondary school students and schools belonging to the same district.

**Use of support services.** The supporting services provided by the municipality have been decisive for the program since over 90 per cent of the schools have requested some type of information, training or counseling service (e.g. in 2009, 355 people were trained and 105 specific counseling sessions were carried out).

**Cooperation, autonomy and long-term commitment.** To guarantee the autonomy of each school, 100 per cent of those participating possess their own self-appraisal mechanisms. In general, 35 per cent could be described as autonomous, 48 per cent as semi-autonomous, and 17 per cent as dependent.

## Lessons Learned

**Flexible attitude.** The project's success can be partly attributed to the critical and flexible attitude it encourages. Barcelona Local Agenda 21 and the Citizen Commitment Towards Sustainability provide a horizon of social, economic and environmental sustainability criteria and framework towards which every actor can work within a network, according to the degree of commitment and the style and pace that each organization is willing to contribute.

**Self-identification of most suitable approach.** Each school has a very different starting point. By allowing schools to identify the most suitable approach, through interaction with teaching staff, accounting for the school's strengths and weaknesses, objectives and goals can be set more flexibly. Schools are different



Setting ducks free at a park in Barcelona.

given their value they assign to education, the skills of the teaching staff, the commitment of the school board to certain goals, the organisational model, and the background of the pupils. A challenge is that a large part of the teaching staff, for example, face limits in defining the concepts behind the term “environmental”, which has consequences for the planning of educational objectives.

**Pupil Participation.** Another challenge is achieving an adequate level of pupil participation. PA21E encourages the idea that schools should help pupils develop decision-making and team working skills and cooperation. Creating a culture of sustainability and behavior change through education can be a slow process. The aim of the program is not to change behavior through indoctrination, but rather to encourage a learning process that develops skills and knowledge for socially critical citizens able to deal with complex issues. The PA21E focuses on lifestyle choices, on the ability to create a sustainable future, on the social, structural and institutional change, in addition to the personal and individual changes. This provides pupils with the capacity to critically engage environmental issues, and plan and realize alternative ways of behaving. The overall aim is to achieve more democratic schools that invite participation while encouraging leadership.

**Self-Assessment.** Continuous improvements over time are stimulated through a process of self-assessment by each school. In 2005, a working group formed by teachers from different schools developed a set of indicators for the program that provides guidance for the self-evaluation process. The assessment consists of five areas: educational approach, the curricular program according to school subject and education level, the management of resources and improvement of the school environment, the school community, and relations with actors outside the school.

**Coordination with municipality.** The final lesson learned relates to the importance of coordinating environmental education with the municipal managers. This is important for finding the best possible solutions to incorporate environmental criteria in buildings and provide services that meet the sustainability criteria (energy savings, waste management, eco-products, etc.), that some schools strongly demand.

## Replication

The School Agenda 21 Program unfolds in a conceptual space somewhere between the educational sphere and the environmental dimension of the Barcelona Local Agenda 21. The program is not unlike many Eco-school programs that adopt a comprehensive approach to sustainability and promote innovation in school level only. Rather PA21E is part of the community effort to define and implement a path of transformation towards a more sustainable city. PA21E has served as a model for many other cities that have implemented similar programs; for example, Sabadell, Vilanova i la Geltrú, Lleida, and Tarragona in Catalonia; Ciutadella de Menorca in the Balearic Islands; Aveiro, Portugal; and Perugia, Italy. Additionally, training about the program has been provided for municipal



Children pushing the „wheel of sustainability“ in urban gardening.



Students learn about solar energy in their own facilities.

## Key Contacts

### Barcelona City Council

Environment Department  
Torrent de l'Olla 218-220, 5th floor  
E-08012

Barcelona, Spain

Email: [agenda21escolar@bcn.cat](mailto:agenda21escolar@bcn.cat)

[www.bcn.cat/agenda21/a21escolar](http://www.bcn.cat/agenda21/a21escolar)

### ICLEI World Secretariat

Capacity Center

Kaiser-Friedrich Strasse 7

D-53113 Bonn, Germany

Tel: +49-228/ 976299-00

Fax: +49-228/ 976299-01

Email: [capacity.center@iclei.org](mailto:capacity.center@iclei.org)

[www.iclei.org](http://www.iclei.org)

managers and educators in Spain, Chile, Argentina, Mexico and Cuba. The intergration of the school education program with LA21 can be replicated in many cities. It is especially applicable to those with a comprehensive sustainable development strategy for example LA21 programs and shared through relevant networks (e.g. ICLEI - Local Governments for Sustainability).

## Budget and Finances

The financial resources come from three sources: the Environment Department of the Barcelona City Council (around 80 per cent), the Barcelona Municipal Institute of Education (around 10 per cent) and the Agbar Foundation (around 10 per cent). The last three years of the project were financed in the following way (in Euro):

Year	Total budget (€ per year)	Barcelona City council (~ 80%)	Municipal institute of education (~10%)	Agbar Foundation (~ 10%)
2008	321,480	245,000	34,480	42,000
2009	458,480	382,000	34,480	42,000
2010	467,000	387,000	35,000	42,000

## Sources

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- <http://educationforsustainabledevelopment.com>

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