

# ecoBUDGET Bologna

Bologna, Italy 



ecoBUDGET Bologna allows the city to manage its natural resources as efficiently as its finances

ecoBUDGET, an environmental management tool designed specifically for local authorities, has been adopted by the City of Bologna in 2001 as a part of a larger European project [5]. Through the use of ecoBUDGET, the traditional financial budgeting system of the city has been complemented by an environmental budget, which measures natural resources instead of money. ecoBUDGET provides a set of indicators together with short and long-term targets for planning, monitoring and reporting on the consumption of environmental resources within the area of the city. The main aim of ecoBUDGET is to keep the use of environmental resources within set limits [2].

## Country/ City Profile



Country		City	
Population (2014)	61.34 million [6]	Population	386,298 (city) [9] ~ 950,000 (metropolitan) [10]
Land area (km <sup>2</sup> )	301,340 [7]	Land area (km <sup>2</sup> )	140.7 (city) [11] n/a (metropolitan)
GDP per capita (2014, current international \$, at purchasing power parity)	34,706 [8]	GDP per capita (2014, US\$, at purchasing power parity)	n/a (city) 43,978 (metropolitan) [12]
Region	Southern Europe	Region	inland part of Emilia-Romagna

### City's physical geography

Location	<ul style="list-style-type: none"> <li>✓ Located at the edge of the Po river valley and the foothills of the Apennine Mountains</li> <li>✓ Relatively low altitude - city centre at around 54m, some suburban areas at 300 m above the sea level</li> </ul>
Climate	<ul style="list-style-type: none"> <li>✓ Humid subtropical climate with the little influence of the sea (average annual temperature 13.1 C°)</li> <li>✓ Precipitation generally moderate throughout the year (average 709 mm/year)</li> </ul>

## Initiating context

The City of Bologna has embraced sustainable development for many years. The implementation of policies and projects related to urban sustainability has become a tradition in this city. In 1996, Bologna accepted the Aalborg Charter and began a Local Agenda 21 process [2]. From 2000, Bologna was subjected to a regional law regarding the inclusion of environmental and sustainable considerations in the city planning (SEA - Strategic Environmental Assessment). For these reasons, ecoBUDGET, a pilot-project aimed to be tested in several cities, seemed to be the right environmental management and communication instrument to be implemented in the City [4].

## Project description

ecoBUDGET, developed by ICLEI, is an environmental management system for cities. [1] It enables local authorities to manage natural resources in the similar way that they manage financial resources; by using financial planning and auditing methods. A traditional financial accounting system is complemented by an environmental accounting system, in which physical environmental quantities are measured instead of money. ecoBUDGET is used for planning, monitoring and reporting on the consumption of natural resources ( such as climate stability, air quality, land, water, raw materials, and biodiversity, etc.) that are considered significant within the area of the municipality. The main aim of ecoBUDGET is to keep the use of environmental resources within the limits set in an environmental 'Master Budget' [2].

The ecoBUDGET cycle has the same phases as a financial budgeting cycle. Based on the current environmental situation in the municipality, different departments identify the natural resources they require, identify priorities, set targets and prepare the environmental 'Master Budget' which is presented to the City Council for approval. Following the council's approval, different programs and measures are undertaken to meet the environmental targets. The implementation of measures and compliance with the targets are monitored and tracked. At the end of the budget year, just as with financial budgeting, a statement of the environmental accounts is prepared - the (environmental) Budget Balance [3]. Information on the ecoBUDGET cycle is disseminated through public presentations, brochures, and the internet so all the interested stakeholders can get involved at each phase of the ecoBUDGET [2,3].

### Implementation process

The implementation of ecoBUDGET Bologna started in April 2002 [2]. A local implementation team of 21 members from different city and regional departments or agencies was formed. Their first task was to identify the local environmental resources and to develop indicators that serve as basis for Bologna's Master Budget. The team analysed the quality of the city's environment and defined the set of 10 indicators which best represented all the selected resources [5]. In May 2004, the first Budget Balance was ratified by City Council. Almost all the short-term targets were met except those in the areas of air quality (ozone values) and raw materials (waste collection). Since 2004, members of non-environmental departments and local utility companies were also asked to join the process and ecoBUDGET became permanently accepted by the city authority [2].

A key element of the implementation of Bologna's ecoBUDGET is urban and regional planning. The ecoBUDGET process also supports strategic environmental assessment. Including ecoBUDGET indicators and targets into planning documents allows early actions, which are more effective than responding to the changes after their occurrence. This also gives the city the opportunity to communicate clearly the impact of different planning scenarios [3].

### Projects implementation details [5]

Process	The LIT (Local Implementation Team) was established, gathering experts from different fields, to develop a set of environmental indicators and targets or the so-called Master Budget. The Master Budget was discussed and approved by the City Council, calling for the implementation of prescribed measures. At the end of each ecoBUDGET cycle, the results of implemented measures are verified.
Financing	In the beginning, funding was secured from the European's Commission program "Life" in order to adopt ecoBUDGET. As soon as ecoBUDGET was completely integrated into the procedures of the city government no extra funds were required.
Leadership	ecoBUDGET Bologna has been promoted by the Environmental Quality Unit.
Involved stakeholders	<p><b>Operators</b></p> <ul style="list-style-type: none"> <li>✓ Local Implementation Team composed by experts from different city offices and companies (<b>implementing institution</b>)</li> <li>✓ City Council</li> </ul>

### Results

Since the introduction of ecoBUDGET, all the major resource and land management decisions in Bologna are made based on the use of this system. It has a great role in exploring successful practices, factors and conditions that support good governance for sustainable development [3]. ecoBUDGET is used to manage a wide range of natural resources as well as coordinating many municipal initiatives [2].

The process of target setting and progress monitoring towards target achievement has been a valuable experience for Bologna's municipal government. Besides having short-term and long-term targets, the government included new 'mayoral targets', which allow the government to set a political agenda that can be easily measured at the end of its mandate. Moreover, ecoBUDGET is used as an efficient communication instrument within the city itself. The incorporation of ecoBUDGET into urban planning processes has improved relations between the officials responsible for spatial planning and those in charge for environmental protection which consequently led to more integrated and effective strategies and plans [2].

## Lessons learned

Governance of environmental resources at the municipal level plays an essential role in environmental preservation. Complexity and lack of capacity often hinders the adoption and implementation of environmental governance programmes. [3] For these reasons it is of great importance to provide enough staff for the organization and the monitoring of activities. In addition, engaging other, non-environmental departments in the process has a key role in ensuring the continuance of inter-sectoral collaboration and the removal of potential obstacles in the implementation of environmental budgets. A relatively accurate definition of indicators, targets and measures clearly defines the responsibilities of each department, thus enabling easier execution [2].

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