



Local Accountability for Kyoto goal S

4. GUIDE FOR DEVELOPING THE CLIMATE BALANCE

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1. Guide for developing the Climate Balance

The Climate Balance is the monitoring system developed by the LAKS project in order to yearly evaluate the state of implementation of policies included in the Mitigation and Adaptation Plan and consequent results obtained. You can compile the Climate Balance every year in order to make it a continuous accountability process and integrate the Mitigation and Adaptation Plan in the decision making process of your Municipality.

In order to develop and structure your first Climate Balance you can follow the instructions included in this document and use the attached tools.

A key aspect in developing this monitoring process is embedding it in the already existing environmental monitoring or reporting tools in your Municipality. The first step is therefore to clearly map all the tools and processes that are already active in your public administration in order not to duplicate documents and data collecting if they can be integrated in already existing reporting tools.

One of the main objectives of the LAKS process is to develop an accountability cycle in order to integrate climate policies in the decision making and reporting processes of your municipality. For this reason is fundamental to link the climate balance with the most relevant financial documents (e.g. financial budget, balance, etc), environmental management tools (e.g. EMAS environmental declaration, environmental action plan, etc.) and accounting/reporting tools (e.g. environmental or sustainability reports, environmental balance, etc.).

In this way all sector and the different decision makers of the Municipality can be informed on the results of the Mitigation and Adaptation Plan and can continuously compare actual local emissions with the baseline year.

1.1 The environmental accounting: brief overview

Environmental accounting stands for all the systems that allow detecting, organising, managing and communicating environmental information and data, these last ones expressed in monetary and physic units. The idiom “environmental accounting” indicates the reorganizing of the accounting systems by including new cost categories and reclassifying of traditional categories as to offer trustworthy and useful information for the control, management and communication activities. It should be able to offer to the public administration the necessary information for pointing out the environmental critical situations and for the efficiency control of the carried out policy.

The environmental accounting is part of an internationally accepted set of principles. The 1992 Rio de Janeiro UN Conference on the environment put a milestone by approving the 21 Agenda for the sustainable development, stipulating –among actions to be taken – the environmental accounting practice in all countries.

The European Commission has many times underlined in the V and VI Action Program for the environment, the importance of adopting environmental accounting instruments at all levels of administration, in order to integrate the information contained in the traditional economical-financial programming and balance documents and thus adequately support the public decision process. On March the 2nd, European Council Recommendation states the following: “The adoption of an environmental accounting system at all levels of the government would allow the political decision makers to report to the administered communities on the environmental results and carried out policies, based on trustworthy data and constantly updated information on the environmental state, to include the “environment” variable in the public decision procedure at all governmental levels and finally to increase the transparency on the results of the public bodies policies on the environment”.

Initially, the environmental accounting functions were:

1. Measuring and evaluating the state and the variations of the natural environment and of the anthropic activities impacts on it;

2. Accounting and evaluating the monetary and financial fluxes referred to the natural common goods use and to the man-environment interaction.

The first methodological profile has brought up physic accounts expressed in physic nature measuring units; the second methodological profile regards the monetary accounts.

The local application of the environmental accounting and environmental balance has out-spotted other two functions:

1. The information and statistic one;
2. The governmental one, connecting the data, physic and monetary indexes “account” to the environmental policies formulation, programming and control (the “statement of accounts” of the obtained results).

Some of the most internationally recognized methods are briefly described in the following boxes.

Focus: The CLEAR method

CLEAR (City and Local Environmental Accounting and Reporting) is nowadays the most diffused environmental accounting system specific for the local administrations in Italy. It was developed beginning with 2001 through a Life project by the Ferrara City Hall and other 17 local authorities. It is a method thought for the local public administrations and deciding authorities in order to get environmental politics quantifiable and evaluate their impacts, efficiency and results. It is a structured method defining the accounting principles and guaranteeing the environmental balance development, contents, and structure. It stipulates the annual environmental balance (estimated and final) based on a political- Authority procedure aligned to the ordinary balance sheet.

The method is based on the environmental data collecting and management “accounting” (counting and accounting) conceptual evolution into “accountability” (reporting the accounts), that indicates the putting up of a responsibility system for clarifying the existing relationships between decisions, activities and control parameters of the outcomes (indexes).

The environmental balance is structurally based on the legal competencies of the authority and contains the pursued strategic tasks and environmental politics to which physic indexes (Physic accounts) and economic ones (Environmental expenses) are associated in order to evaluate the proceeding of the activities put into practice.

The process is developing according to the following steps:

- › Defining the authority’s environmental politics starting from analysing the environmental politics, programs and tasks explanatory documentation;
- › Developing the accounting system. Identifying the fields for reporting, defining the measurement and control parameters (physical and monetary indexes) for the policies’ effects assessment; gathering of indexes values by installing systematic gathering procedure of relevant information;
- › Reporting. Communicating the authority achievements of tasks through the report release, that is a synthesis of the environmental accounting system (Final environmental balance).

The involving of the stakeholders is foreseen all along the process so that the system might include their expectations and the accounting system might be shared. The process’s circle closes with redefining the policies based on the outcomes and the authority’s performance (estimated environmental balance).

The reference standards

The CLEAR method was defined based on some internationally accepted standards and methodologies. The main reference points regard the implementation process (AA1000), the reporting (GRI) and the environmental expense (SERIEE-EPEA). The CLEAR method has reprocessed these methodologies principles and criteria and adapted them to the needs of the local authorities’ environmental policy management and reporting.

Focus: ECObudget

EcoBUDGET is the environmental management system developed with local governments in mind. Based on the physical description of use and consumption of natural resources within the municipal territory, ecoBudget allows local governments to present tangible achievements of their sustainability oriented policies to the greater public.

Without assigning monetary value to the environment, ecoBudget applies principles and routines of financial budgeting to the management of natural resources.

Unlike other environmental management systems, ecoBudget is concerned with the management of natural resources within the municipal territory and community as a whole.

ecoBudget is unique in its requirement that quantitative long-term and annual targets must be ratified by the city council. Therefore it influences the direction of local environment policies.

The *eco*BUDGET cycle is a 5-step approach that mirrors the three phases of the municipal financial budgeting cycle including budget planning (i.e. the preparation of an environmental budget), budget spending (i.e. the implementation of planned measures to meet the budget), and budget balancing (i.e. balancing the annual environmental accounts). These are familiar to decision makers so that environmental budgeting becomes as much a part of local authority routines as financial budgeting.

- Phase 1 - Budget preparation and approval

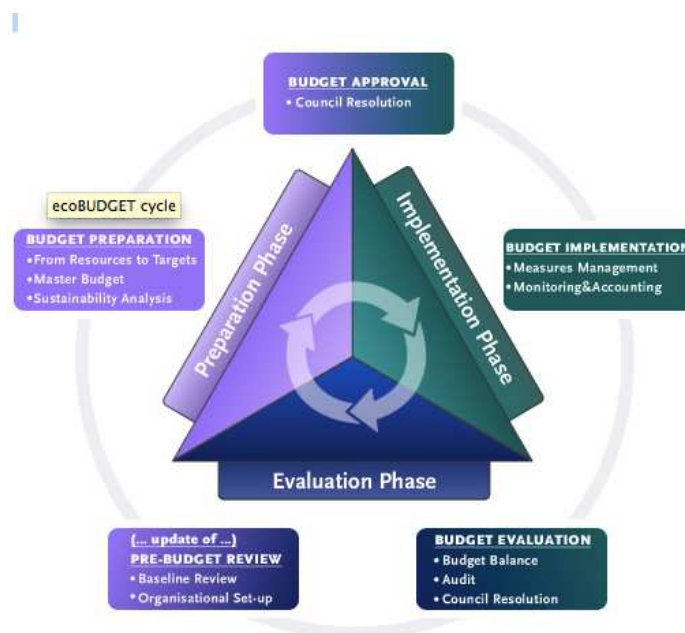
Based on the current environmental situation in the municipality, departments identify the natural resources they require for budget planning, identify budget priorities, set targets and prepare the environmental master budget which is presented to the Council for approval.

- Phase 2 - Budget implementation

Following the Council's approval, programmes and measures are undertaken to meet the environmental targets. The implementation measures and compliance with the targets are monitored and accounted for.

- Phase 3 - Budget balancing

At the end of the budget year, just as with financial budgeting, a statement of the environmental accounts is prepared - the (environmental) Budget Balance.



Focus: The Global reporting initiative

The Global Reporting Initiative (GRI) is a multi-stakeholder international process that aims to develop and diffuse the guidelines for creating sustainability balance sheets. The guidelines regard organizations governmental, non-governmental, companies) that want to report the economical, environmental and social aspects of their activity, products and services. In particular, they:

- Present the balance-sheets' basic principles and specific content in order to guide their preparation;
- Assist the organizations in presenting their economic, environmental and social performance in a balance and reasonable way;
- Promote the sustainability balance-sheets comparison, still taking into account the practical aspects related to information diffusion between different organizations;
- Support the benchmarking and the performance sustainability's appreciation with regard to codes, standards and voluntary initiatives;
- Are stakeholders' engagements facilitating instruments.

The guidelines published in 2002 were mainly developed for companies, but other organizations like governmental agencies and no-profit organizations can make use of them. A supplement for the public administration was recently released. Its purpose is to fill the gap in the public domain reporting instruments and give a significant contribution to the internationally emerging sustainability reporting system. Eurostat, the European Statistics Institute has defined the Seriee system (Système Européen de Rassemblement de la Information Economique sur l'Environnement) within which EPEA (Environmental Protection Expenditure Account), a specific environmental protection expense "satellite" account, was encoded. EPEA is the European satellite account of the environmental protection expense targeted for registering the economical transactions concluded by the whole of the economical operators and regarding the environmental protection function. The established methodology for setting the items regarding Public Administration's expense for environmental protection is based on the analysis of expense basic units (expense items) for Final balances of various public authorities and their classification by a shared scheme (CEPA). A second satellite account (RUMEA) for the use and management of natural resources is now being defined.

1.2 The Process

STEPS	ACTIONS	DESCRIPTION
A. Map already existing financial, management and accounting/reporting tools	A1. Mapping of financial reporting tools A2. Mapping of environmental management tools A3. Mapping of environmental accounting/reporting tools	This action aims at clarifying the already existing documents or processes that can be embedded in the climate balance process
B. Monitoring of the state of implementation of projects	B1. Definition of the progress indicators B2. Evaluation of the state of implementation of projects. B3 GHG Emission Report updating	These preparatory actions aim at defining the basis for structuring the climate balance by identifying relevant indicators and staff responsible
C. Financial monitoring	C1 Analysis of the costs and savings of the projects directly imputable to the Municipality	This part of the process foresees the monitoring of financial aspects related to the projects, costs of the interventions and savings.
D. Reporting of information	D1 Drafting the Climate Balance	In this part you have to compile the draft of your climate balance by using the template in attachment
E. Climate balance approval	E1 Build on the approval process	This final step foresees the annual approval of the climate balance by your city council

1.3 The Tools

Two operative tools have been developed to assist municipalities during this step:

TOOL	FORMAT	WHAT IT IS	HOW TO USE IT
Updated emission Report	Word document	An updated GHG Emission Report will help your Municipality to check the progress obtained at local level by comparing the results with the baseline year.	<ul style="list-style-type: none"> • It helps to synthesize the results obtained by updating the emission inventory and compare them with the baseline year.
Climate Balance	Word document	It is structured to check the implementation of all projects mentioned in the Mitigation and Adaptation Plan, following the same structure with government and community sectors. This will help to have a coherent structure in order to facilitate comparison between the two documents (the first where projects have been planned and the second where they are monitored)	<p>You can use this structure to build up your climate balance by analyzing for each sector, every year.</p> <ul style="list-style-type: none"> • Distance to reduction target • Completed projects and emissions reductions achieved • State of implementation of ongoing projects • Indicators of progress for each ongoing project • Projects that are planned but still not started: planned start, expected end

A. Map already existing financial, management and accounting/reporting tools

A1. Mapping of financial reporting tools

Before starting the climate balance process, please add in the following table, analyze the main steps and timing of the approval process of your municipality's financial budget or any other official financial reporting process.

Financial reporting tool	Frequency (e.g. developed on yearly basis, every two years etc.)	Data collecting period	Official approval

A2. Mapping of environmental management tools

Analyze any sort of environmental reporting system that you already implement in your Municipality (if any). Some examples can be the environmental balance, the state of the environment report, the Eco-budget, the CLEAR environmental balance .

Environmental management tool	Frequency (e.g. developed on yearly basis, every two years etc.)	Data collecting period	Official approval (yes/no and when)

A3. Mapping of environmental accounting/reporting tools

Analyze any sort of environmental reporting system that you already implement in your Municipality (if any). Some examples can be the environmental balance, the state of the environment report, the Eco-budget, the CLEAR environmental balance .

Environmental accounting/reporting tool	Frequency (e.g. developed on yearly basis, every two years etc.)	Data collecting period	Official approval (yes/no and when)

TIPS:

- *Involve in the process the sector/s that in your Municipality are responsible for the tools and systems you have identified; it is important to clarify with them at this early stage if and how the Climate Balance can be embedded in already existing tools;*

- Check with them if there are any other accountability tools that is important to take into consideration while developing the Climate Balance;

B. Monitoring of the state of implementation of projects

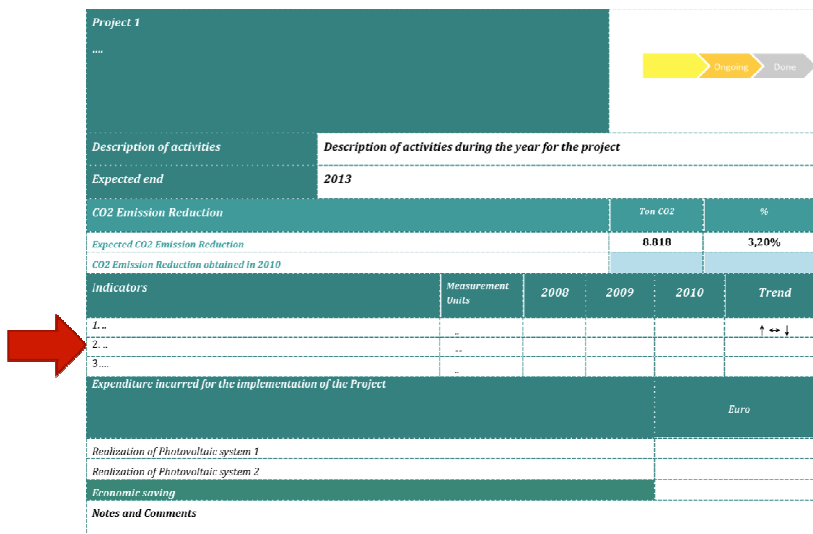
B1. Definition of the indicators of progress

For each measure of the Mitigation and Adaptation plan that is foreseen in the short term you have to select a series of indicators that can be yearly monitored to check the state of the project.

LAKS TOOLS:

TOOL	WHAT YOU CAN USE IT IN THIS ACTION
Updated emission Report	-
Climate Balance	First, list all the projects included in your plan and foreseen in the short period for each sector in the section "ongoing projects". Then, for each ongoing project, start to list the useful indicators you already collect in the appropriate section as showed in the following image

Figure 1. Projects' indicators



Project 1		Ongoing		Done	
Description of activities	Description of activities during the year for the project				
Expected end	2013				
CO2 Emission Reduction			Ton CO2	%	
Expected CO2 Emission Reduction			0.018	3,20%	
CO2 Emission Reduction obtained in 2010					
Indicators	Measurement Units	2008	2009	2010	Trend
1..					↑ ↔ ↓
2..					
3..					
Expenditure incurred for the implementation of the Project				Euro	
Realization of Photovoltaic system 1					
Realization of Photovoltaic system 2					
Economic saving					
Notes and Comments					

TIPS:

- Check and make a list of the indicators that you already collect for other reporting tools you have identified in steps A (e.g environmental balance, sustainability reports etc.) in order to see if there is any that can be useful also for monitoring projects included in your mitigation and adaptation plan;
- Integrate these indicators with others that can be useful to monitor the projects that you have included in the plan taking into consideration that these indicators have to be useful also to calculate CO₂ emission reductions of each intervention;
- Build up a matrix where all indicators to be collected are listed in order to have an unique file where every year relevant indicators are collected;

- *Involve the staff that in your municipality is already dealing with environmental reporting;*
- *Precisely define timing and responsible;*
- *Complete the following table to summarize your decisions.*

Tools that can be embedded in this step	
Responsible	
Other actors involved	
Deadline to collect relevant data	

An example: Reggio Emilia Indicators

Reggio Emilia already has an environmental balance and many indicators are already collected in this process. For this reason, before starting to think about new indicators they have build up an excel file with the following structure in order to list for each intervention indicators that have been already collected.

Project	Useful indicators already collected for the climate balance	Unit of Data	Data in 2009	Notes	Other indicators to be added	useful
1. New photovoltaic plants in public buildings	Installed power plants in public buildings	kW	39,1	-	-	
2. Enhancement of district heating	Inhabitants connected to district heating	N°	49.120	-		
3. Photovoltaic in private buildings					Installed power plants in private buildings (Kw)	

B2. Evaluation of the state of implementation of projects

Each year all the projects foreseen for the short period have to be monitored taking into account the indicators of progress selected in step B1.

Complete the following table to summarize your decisions regarding the main duties that have to be lead in order to finalize this step.

Tools that can be embedded in this step	
Responsible	
Other actors involved	
Deadline to collect relevant data	

LAKS TOOLS:

TOOL	WHAT YOU CAN USE IT IN THIS ACTION
Updated emission Report Climate Balance	Quantify for each <i>completed project, ongoing project, and other projects under the Plan not yet started</i> the indicators you have already collected in the appropriate sections as showed in the following images

Figure 2. Completed projects

Completed projects (what we have done so far)				
<i>Insert here all the action that have been already completed</i> <ul style="list-style-type: none"> Solar thermal system to produce hot water Commissioning of the combined cycle power plant 		Reductions achieved by the Interventions made		
		% (on base year)	Ton CO ₂	Economic saving €
		-%	0000	€

Figure 3. Ongoing projects




Project 1					
Description of activities	Description of activities during the year for the project				
Expected end	2013				
CO2 Emission Reduction	Ton CO2	%			
Expected CO2 Emission Reduction	8.818	3,20%			
CO2 Emission Reduction obtained in 2010					
Indicators	Measurement Units	2008	2009	2010	Trend
1...	..				↑ ↔ ↓
2...	..				
3...	..				
Expenditure incurred for the implementation of the Project					
Realization of Photovoltaic system 1					
Realization of Photovoltaic system 2					
Economic saving					
Notes and Comments					

Figure 4. Other projects not yet started

Other projects under the Plan not yet started				
Projects	Period of realization		Overall reduction expected for 2020	
	Planned start	Expected end	Ton CO2	%
Development of a biomass power plant of 3 MW or 3 plants of 1 MW	Year	Year	17.387	6,30%
****	Year	Year	N.Q.	N.Q.
****	Year	Year	N.Q.	N.Q.
Total estimated reduction CO2			17.387	6,30%



TIPS

- *Develop a common template to be send every year to each sector in order to ask them the quantification of each indicator for projects that are under the responsibility of that sector in order facilitate the data collecting process;*
- *Define timing and responsible of data collection by taking into account timing of other reporting tools data collection;*
- *Be sure to integrate this process avoiding overlapping other tools' data collection and elaboration;*

B3. GHG Emission Report Update

Every year your municipality should complete the inventory with updated data in order to check the state of GHG emissions at local level and have an overview of the results of projects implemented.

LAKS TOOLS:

TOOL	WHAT YOU CAN USE IT IN THIS ACTION
Updated emission Report	In order to calculate emission generated in your Municipality you can use the inventory tool and update it for the current year. After that you can use this template to fill in the updated emissions for each sector in order to make them comparable with your baseline year inventory. By completing this document you can have an overview of results accomplished thanks to the action implemented.
Climate Balance	-

TIPS

- *Decide if you do not have the opportunity (human and financial resources) to update the inventory each year: updating it each year make it easier to maintain the data collecting channels and do not waste work already done for the baseline emission inventory. However, it can be too requiring for a small municipality where human resources are scarce. In this case you can decide to update it every two years;*
- *Identify universities in order to make an agreement for internships and involve students in updating the emission inventory and analyzing data.*


C. Financial monitoring

C1. Analysis of the costs and savings of the projects directly imputable to the Municipality

Every year, together with the state of implementation of projects, is important to monitor the financial resources dedicated to the realization of each project and the potential economic savings deriving from the projects (ex. decrease in electricity expenses for public buildings).

TOOL	WHAT YOU CAN USE IT IN THIS ACTION
Updated emission Report	-
Climate Balance	For each project, quantify the cost of the intervention and the economic savings deriving from them (if any). See the following figure to see where you have to insert these information.

Figure 2. Financial indicators

Project 1					
Description of activities	Description of activities during the year for the project				
Expected end	2013				
CO2 Emission Reduction		Ton CO2		%	
Expected CO2 Emission Reduction		8.818		3,20%	
CO2 Emission Reduction obtained in 2010					
Indicators	Measurement Units	2008	2009	2010	Trend
1..	-				↑ ↔ ↓
2..	--				
3..	-				
Expenditure incurred for the implementation of the Project		Euro			
Realization of Photovoltaic system 1					
Realization of Photovoltaic system 2					
Economic saving					
Notes and Comments					

TIPS

- Decide the deadline of this process depending on your Municipality's budget approval deadline. Ideally the two processes should be held in parallel, in fact coordinating the financial monitoring with the process of municipality's budget approval order to benefit from already existing data collection processes;
- The economic aspects can be a relevant driver for the municipality in order to implement policies, you have to put particular attention in calculating the economic savings deriving from increased energy efficiency.

D. Reporting of information

D1. Drafting the Climate Balance

After collecting all relevant data as described in previous steps, please use the Climate Balance structure that has been developed for the LAKS project to create your Climate balance.

The format of the climate balance include the following sections:

- **INTRODUCTION:** a brief description of the climate balance process and objectives
- **OVERVIEW OF THE IMPLEMENTATION OF THE MITIGATION AND ADAPTATION PLAN:** a brief overview of the state of the art on the comprehensive target of your municipality and an overall evaluation of obtained results compared to the targets.
- **MUNICIPALITY CLIMATE BALANCE:** the monitoring and quantitative evaluation of the projects included in the Mitigation and Adaptation Plan. For each sector projects are divided in accordance with the time span of implementation:
 - Completed projects
 - Ongoing projects
 - Other project under the plan not yet started

TOOL	WHAT YOU CAN USE IT IN THIS ACTION
Updated emission Report	-
Climate Balance	For each sector and each project, add all the information and indicators you have collected so far and describe briefly how much of the target foreseen by 2020 have been achieved. In addition, insert a brief introduction to the Climate Balance to describe the time span you have selected for monitoring, the data collection process and an overview of results achieved. Please see the Sector Local energy production in the template where some examples on how to compile the climate balance have been listed in red.

TIPS

- *Tailor your climate balance according to the structure of your plan in order to make them coherent and allow an easy comprehension of project and sectors;*
- *If you already have an environmental report you can include this Climate balance in your environmental balance and customize the structure in order to be similar to your other reporting tools;*

E. Climate balance approval

E1. Build on the approval process

The climate balance has to be formally approved by the Municipal Council with a process similar to the financial budget in order to make it part of a real accountability cycle that allows climate policies to be integrated in the key decision making moment of the Municipality.

TOOL	WHAT YOU CAN USE IT IN THIS ACTION
Updated emission Report	-
Climate Balance	-

TIPS

- *Identify timing and procedures of the approval of the financial budget and coordinate this to the approval of the climate balance;*
- *Coordinate this activity step by step with the mayor or his office in order to put it into key decision-making processes.*