

ecoBUDGET

Introduction for Mayors and Municipal Councillors

UN HABITAT

I.C.L.E.I.
Local
Governments
for Sustainability

UNEP

eco
BUDGET



Contents

■ Forewords	4
■ Money is not the only resource – the full cost of municipal action	6
■ Managing resources through a budget	7
■ Responsible for all resources	8
■ <i>ecoBUDGET</i> : Integrated management of all municipal resources	9
■ The phases of the <i>ecoBUDGET</i>	10
■ Why manage environmental resources through a budget?	16
■ <i>ecoBUDGET</i> is Participatory Budgeting	17
■ Six good reasons for <i>ecoBUDGET</i>	18
■ Responding to the climate change challenge	20
■ <i>ecoBUDGET</i> in practice	21
■ <i>ecoBUDGET</i> resources	25
■ <i>ecoBUDGET</i> partnership	27





The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, city or area, or of its authorities, or concerning delimitation of its frontiers or boundaries, or regarding its economic system or degree of development. The analysis, conclusions and recommendations of this publication do not necessarily reflect the views of the United Nations Human Settlements Programme, the Governing Council of the United Nations Human Settlements Programme, or its Member States.

Authors

Holger Robrecht, David Meyrick

Contributors

Bedoshruiti Sadhukhan, Emani Kumar, Prof. Asesh Maitra (India), Victorino Aquitania (Philippines), Prof. Johan Nel (South Africa), Andrea Burzacchini (Germany)

Layout

Raimund Tauss, Papyrus Medientechnik GmbH, Freiburg

Copyright ©

United Nations Human Settlements Programme (UN-HABITAT), United Nations Environment Programme (UNEP), and ICLEI – Local Governments for Sustainability, 2008. *ecoBUDGET*® is a registered trademark of the ICLEI – Local Governments for Sustainability European Secretariat GmbH

Publication identification number

HS 992/08 E



Forewords

A balanced budget is important at any level of governance, not least the financial administration of cities. Drinking water, energy provision, and waste management all rely on the proper functioning of a city's finances. Taxation and correct valuation ensures proper delivery of essential services and investments, while any budget imbalance is quickly seen in the quality and quantity of the services provided.

Traditionally, ecosystem services, which we rely on for life, livelihoods and recreation, have not been systematically valued and budgeted for. The abundance and adequate functioning of resources and processes that keep our air and water clean and provide us with food, shelter and pleasant surroundings have been taken for granted. However, as resource depletion and unsustainable use increase, decision makers are paying more and more attention to the real value of natural resources.

The Millennium Ecosystem Assessment clearly outlined the costs of ecosystem loss to human well-being. Unfortunately, ecosystems and their services are rarely part of the urban development and decision making equation, which is usually dominated by fiscal and economic development factors.

But what if we could change this by developing a system whereby both monetary and more subtle environmental values worked in harmony, informing policy for sustainable urban development? What if neighbourhoods were built with biodiversity as well as increase in housing stock in mind, and costs and benefits were weighed in terms of both the environment and economic development?

The key to sustainable urban development lies in managing natural resources with the same efficiency and attention usually reserved for financial resources. This is what *ecoBUDGET* does.

ecoBUDGET is a management system in which natural resources and environmental quality are measured and accounted for in a budget. Efficiency gains are measured by indicators that are chosen to reflect the situation of the individual municipality and the ecosystems and services on which it relies.

ecoBUDGET was developed for local governments, to help them plan, monitor and report natural resource consumption within the municipal territory. It is a cross-cutting instrument, based on three pillars: environmental master budget; statement of environmental assets and sustainability analysis; and measures management, budget balancing and evaluation.

Now that more than half the world's population lives in cities, urban governance and management of finite and often scarce environmental resources is crucial. By bridging the gap between economic and ecological thinking, *ecoBUDGET* makes a true contribution to achieving sustainable urban development.

Anna Tibaijuka
Executive Director
United Nations Human Settlement Programme (UN HABITAT)

Achim Steiner
Executive Director
United Nations Environment Programme (UNEP)

*eco*BUDGET – available to you!



*e*coBUDGET is ready to be introduced by local authorities worldwide. Now that the world has become aware of the scarceness of natural resources, there is no reason for limiting the annual budgeting, controlling and reporting to our financial resource, money. It's time to routinely apply *eco*BUDGET besides financial management so that municipal councils have equally control over environmental quality and the use of natural resources.

Since I first published the idea of environmental budgeting in 1987, the methodology was developed by an ICLEI team, the approach was pilot-tested in a number of cities and counties, and the *eco*BUDGET® model developed to prove global applicability.

*eco*BUDGET works well. This has been demonstrated in municipalities in Germany, Greece, India, Italy, the Philippines, Sweden and the United Kingdom.

I would like to thank the team leader at ICLEI and author of this guide, Holger Robrecht, for his excellent work and recognize the Directors of our South Asia and Southeast Asia Secretariats, Emani Kumar and Victorino Aquitania, for the successful management of the pilot projects in India and the Philippines. This guidebook draws on the results of their solid work.

Thank you also to the co-author, David Meyrick, as well as to the other contributors: Prof Asesh Maitra, Prof. Johan Nel, Bedoshruiti Sadhukhan, and Andrea Burzacchini.

We at ICLEI are proud to be able to co-publish this booklet with UN-HABITAT and UNEP and with endorsement from United Cities and Local Governments (UCLG), and appreciate in particular the support received by UN-HABITAT.

Konrad Otto-Zimmermann
Secretary General, ICLEI
Initiator of Environmental Budgeting

Money is not the only resource – the full cost of municipal action

Decision makers in local government face the ongoing challenge of how to provide services to the residents with limited resources.

Whether drilling a new well to provide drinking water, renewing a road surface, buying new buses or issuing driving licences, municipal services require resources.

Next to skilled human resources, municipal services also require financial and natural resources. New trucks cost clean air in that their operation burns oxygen, emits carbon dioxide, creates dust, and has negative impact on human health. A new road costs biodiversity in that green space is converted into asphalt and natural habitats are split and separated. At the same time, a new road produces noise, i.e. it costs tranquillity. Similarly, new housing areas impose costs in terms of biodiversity, clean air, agricultural soil, and fresh water since the additional inhabitants will convert more fresh water into sewage. Clearly, municipal action always has both financial and natural cost implications.



"For too long, we have been of the opinion that there were only two types of capital for development – financial and human capital, the latter being knowledge, skills, creativity and education. We have been living in illusion that there was nothing like environmental or natural capital, and that we could use environment, the environmental capital free of charge. Only now, we can clearly see that this idea is no longer carrying and not allowing for economic development processes, too. We have overspent more than 60 percent of the ecosystem services available, as we luxuriously live based on economic growth without reinvesting in the environmental capital stock."

Klaus Töpfer, Immediate past Executive Director, UNEP

Managing resources through a budget



How do decision makers manage financial resources?

Like all public institutions, local governments usually manage their financial resources through an annual budget.

Financial budgeting systems are well established, accepted, and routinely applied by the municipal administration and the decision making bodies.

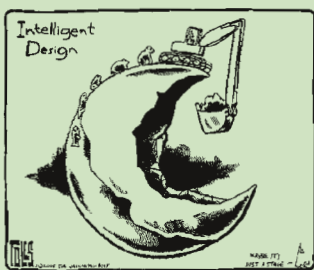
Normally every year, municipal councils set a framework for financial spending through a budget. The budget allocates financial resources for various purposes and establishes maximum expenditure levels for specific purposes. Through prudent management of the budget, decision makers determine the financial health of the local authority; they allow for investment and incur or repay debts.

Throughout the financial year, the administration must ensure that expenditure is kept within the approved budget. In general, significant excess of expenditure requires prior approval by the Council and the central government. Financial control, where properly applied, is exercised through mechanisms such as accounting, monitoring and auditing as well as financial and budgetary reporting. At the conclusion of the year, a balance sheet (statement of financial position) gives a snapshot of business at that time listing assets and liabilities of the local government - also referred to as the local government's equity or net worth.

[illegible]

“As we can manage our artificial resource – money – in terms of a budget, why shouldn’t we do the same with natural resources?”

Konrad Otto-Zimmermann
Secretary General, ICLEI

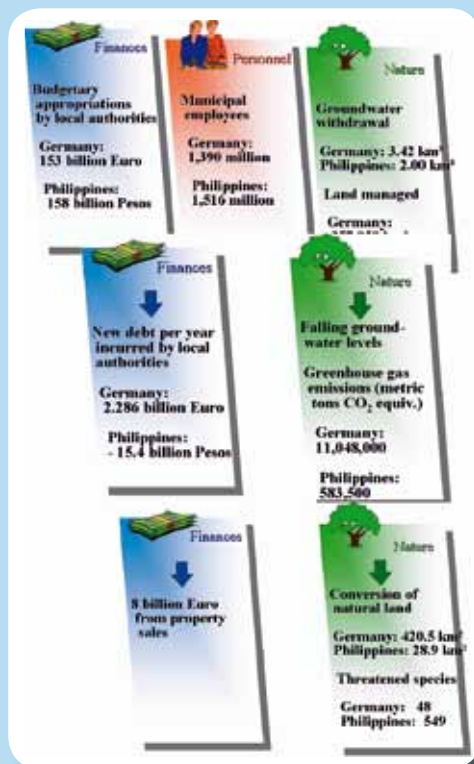


Local Governments responsible for all resources

World-wide, local governments manage and bear responsibility for significant amounts of resources, both financial and natural.

Key data for two countries with different human development indices and ecological footprints – Germany and the Philippines – illustrate this point. In both countries, decision makers are responsible for managing substantial financial budgets and supervising personnel to efficiently deliver services. This could also be done for natural resources, e.g. drinking water. Municipal balance sheets usually present new financial debts incurred, but they do not show the billions of tonnes of CO₂ emissions burdening the global climate. Decision makers often consider property sales as an appropriate way to reduce financial debts with the aim of achieving positive balances and gaining options for investment. However, they are not aware that this is usually at the cost of converting natural resources into settlements or business areas (often threatening habitats and wild-life species).

In fact, local government leaders bear responsibility for the availability and use of resources, for debt, and for property and asset management.



The twenty-first century faces massive urbanization, with a large portion of the world population living in urban areas. As such there will be increased demand for urban services as well as conflicts about scarce natural resources. Cities will be unable to provide the increased resources if existing resources are not utilized in a sustainable manner. ecoBUDGET is an environmental management system, specially designed for local governments that provides a framework to assist in sustainable local development and effective management of the urban environment.

Mr. Kanna Lakshminarayana, Honourable Minister of Transport for Andhra Pradesh, India

ecoBUDGET: Integrated management of all municipal resources

While all resources should be managed soundly, local budgeting usually addresses only financial resources. *ecoBUDGET* is an environmental management system uniquely designed with and for local governments. It allows municipalities to manage natural resources as efficiently as they manage financial resources. The traditional budgeting accounting system is complemented by an environmental budget, in which natural resources are measured instead of money.

ecoBUDGET aims to plan, control, monitor, report on, and evaluate the consumption of natural resources (such as climate stability, air quality, land, water, raw materials, and biodiversity). The ultimate aim is to keep environmental spending within limits set in an environmental “Master Budget.” The Master Budget identifies indicators for short and long-term environmental (and potentially social) targets orientated to the sustainable management of environmental resources. Once approved by the Council, the targets become politically binding for the entire organisation. Political decision makers and senior urban managers are involved systematically in the *ecoBUDGET* cycle, allowing political steering in the use of environmental resources. *ecoBUDGET* embraces all environmental resources, i.e. the impact of delivering municipal services as well as environmental spending by the entire community including industries, households, education and health institutions, transport companies, etc.

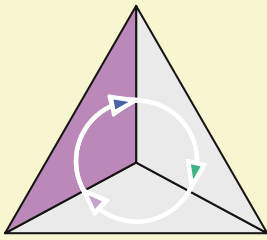
The *ecoBUDGET* cycle mirrors the three phases of the municipal financial budgeting cycle including budget planning (i.e. the preparation of an environmental budget), budget spending (i.e. the implementation of planned measures to meet the budget), and budget balancing (i.e. balancing the annual environmental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

At the end of the budgetary year a Budget Balance presents a statement of the environmental situation and the degree to which the previous year’s Master Budget was met. Two more reports, the Statement of Environmental Assets and the Sustainability Analysis, supplement the municipality’s snapshot of its level of sustainability.



We all know that there is a massive destruction of our environment. Our forest cover is thinning and we are experiencing scarcity of some natural resources. Knowing that it can help us protect the environment, I welcome ecoBUDGET even if it was my political opponent who started its implementation.

Luna Piezas, Lord Mayor, Tubigon, Philippines



The Phases of the *ecoBUDGET*

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.

1st Phase: Budget Preparation

Step 1 – Set Up

The administrative procedures/ mechanisms of the process are key. Urban planning and management structures have to be reviewed and set up. Ideally, a cross-departmental team, assisted by representatives of the civil society, non-governmental organisations (NGOs) and other local interest groups should have the overall responsibility of managing and executing *ecoBUDGET*. The reporting structure and framework, as well as frameworks for managerial directives and internal audits, need to be developed.

Step 2 – Preparation

A Preliminary Report is the basis to prepare budget estimates. It records the expected changes both in environmental consumption and within the political and legal framework and serves as the basis for the identification of priority resources, estimates of resource consumption and evaluation by the Council and the public. The Preliminary Report also identifies the need to prepare the (environmental) Master Budget, the steering document that politicians will refer to. The Master Budget contains:

- (i) The priority natural resources to be protected or effectively managed by the local government. (Environmental) indicators in physical units represent these resources.
- (ii) Strategic long-term targets for these resources to be accomplished in a given period, formulated on the basis of political decisions and lead by the principles of sustainable development.
- (iii) The spending framework (i.e. budget limits) within the forthcoming environmental budgetary year, represented by the individual indicators and operational short-term targets as an aid for achieving the long-term goals.

What does an Master Budget look like?

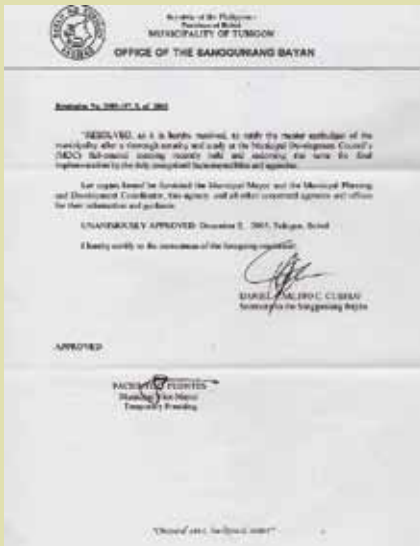
Resource	Indicator	Base year value	Last Year Value (2004)	Short Term Target (2009)	Long Term Target
Biodiversity (Tahigon)	Coral and Seagrass Cover (%)	35 (2001)	40	45	70 (2015)
Climate (Bologna)	Energy production from renewables (GWh)	72.0 (1997)	120.7	213.4	224.9 (2009)
Water (Guntur)	Supply of potable water (litres/capita/day)	no values (2000)	110	120	135 (2015)

1st Phase – Budget preparation



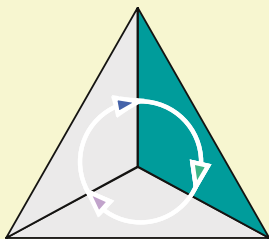
Step 3 – Approval

The Master Budget is approved by the Council. The Council's discussion, debate, and opinion forming in preparation for a political decision are central aspects of the process. Existing problems and even contradictions are outlined in the text. The draft document should be made publicly available, e.g. through Local Agenda 21 committees, or local media. Political approval makes the environmental budget binding for the local government and all participating actors. This way, the budget becomes an integral and compulsory aspect of decision-making with targets and budgets being considered in all decisions, planning processes and implementation.



What are the main aims of *ecoBUDGET*?

- Build a comprehensive political management approach to local sustainability.
- Present the state of the environment to politicians and the public.
- Enable decision makers and the administration to set priorities for environmental protection.
- Limit the amount of pollution and use of natural resources in the community.
- Plan and control the consumption of environmental goods throughout the budgeting period.
- Integrate instruments for sustainable management of all resources, financial, human and natural.
- Perform a periodical budgeting process for natural resources and environmental quality.



The Phases of the *ecoBUDGET*

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.

2nd Phase: Budget Implementation

Step 1 – Implementation of measures

Target accomplishment is no coincidence. In fact, conscious planning and management of measures is key. What measures and projects should be implemented in the forthcoming budget year? What actions should specifically be realised to support target achievement? And what are their environmental costs and benefits?

In addition, numerous activities may already be in place without their impacts on the environment having been considered. And then, unexpected events may occur suggesting a reconsideration of priorities or spending limits. All this impacts on the local government's environmental spending framework and should inform decision-making during the budget implementation period.

Example of measures worksheet

RESOURCE	Indicators	MEASURES (TARGET 2006/2009)	MAIN RESPONSABILITY	Contact reference person	Indicator's info
AVAILABILITY OF MATERIAL	% of sorting waste	Agreement between Hera Sp.A. and trade unions of Bologna neighbourhoods Sorting Waste communication Marketing	HERA	Mr. G. Magli tel. Fax e-mail	The percentage is calculated over the total - 10% (representative of the amount of sweeping road waste)

What are the activities implemented in *ecoBUDGET*?

It is basically all events, measures, actions and projects planned within the budget period that have an impact on environmental resources.

In Tubigon, Philippines, they looked like this

- Launched the Municipal Ecological Solid Waste Management Programme
- Hosted the Municipal Ecological Solid Waste Management Programme Poster & Slogan Making Contest
- Carried out House-to-House Campaign on Household Waste Sorting

Phase 2 – Budget implementation

Step 2 – Monitoring and accounting

At the beginning of the budget year, an account is “opened” for each indicator of the environmental budget. After the accounts are established, it is crucial to regularly and frequently monitor impacts and keep track of data. Up-to-date book-keeping of the accounts will show whether the components of the environmental budget are being adhered to. The importance of book-keeping must not be underestimated. It is only sound and structured monitoring and accounting that provides a basis for taking stock and evaluating achievements.

Resource (related to issue)	Indicator	Current value	Short-term target value 2006	1 st Account March 2006	2 nd Account June 2006	3 rd Account Sept. 2006
Water Quality	Monitoring of the quality (number of parameters monitored)	1 (Only Residual Chlorine)	14 (with indicative figure)	3	4	9
Greenery	Surface of green area (sq. per 1000 inhabitants)	78	100	78	79	78
Air quality	Assignment of hawkers' ID (number) Currently the number of identified hawkers is 1714	450	650	480	590	630

Example of monitoring and accounting worksheet

Step 3 – Expense control, dealing with unbudgeted or excessive expenditure

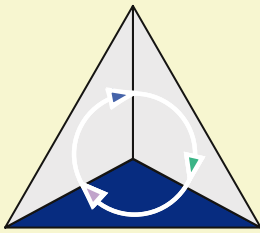
Up-to-date book-keeping also provides information for decision-makers regarding the status of budget implementation and the environmental situation. **Interim reporting to the Council and continuous monitoring allows for corrective measures when it seems unlikely that a target will be achieved.** For example, the *ecoBUDGET* manager of Växjö, Sweden, presents a report to the Council every six months: this allows for the possibility to take appropriate measures in case that a target might be missed, dealing with events not budgeted for, and keeping politicians on top of budget implementation. Particularly challenging are unexpected events that occur: an investor interested in developing a business district or new settlement, an opportunity for financing an infrastructure project, or (on the down-side) an environmental disaster – flood, storm, fire, drought, or another natural disaster would change the environmental situation radically. Political consideration would supplement the master budget in the case of unexpected events.



Tubigon, Philippines: Installation of flow meters at all water sources to achieve targets for potable water supply



Guntur, India: Community support to construction work



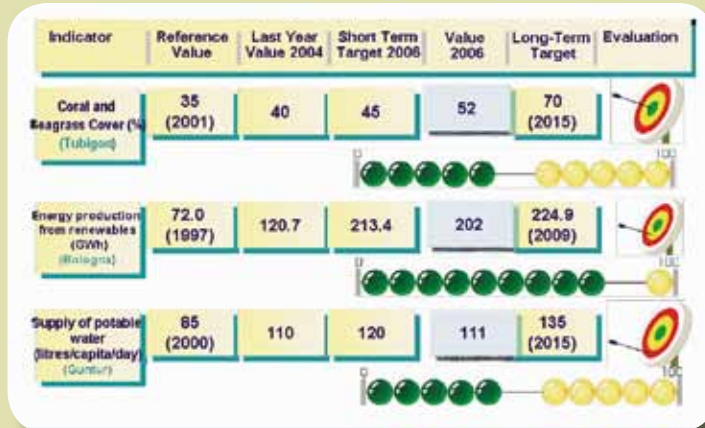
The Phases of the *eco*BUDGET

3rd Phase: 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.

Step 1 – Preparing budget balance – a statement of the environmental situation

The Budget Balance reviews the local environmental performance. This statement of environmental accounts shows whether resource consumption was kept within budgetary limits and what environmental quality has been achieved due to measures taken by the local government and other actors involved. The extent to which the municipality's short and long-term targets have been met is displayed graphically. The example shows an arrow for short-term target attainment, the abacus for positioning the annual achievements between reference year and long-term target (in percent). Decision makers and the public should be easily able to comprehend the results (both successes and failures) and identify what priorities should be addressed in the forthcoming budgeting period.



What does a budget balance look like?

Phase 3 – Budget balancing



Step 2 – Report and debate

The results of the concluding budget period are fed back to the political decision makers through the environmental budget balance and a report presenting achievements and performance of policies and programmes. Two other documents supplement the municipality's snapshot of its level of sustainability: the Statement of Environmental Assets takes stock of the amount of natural capital available to the municipality – just like a 'savings book'. The Sustainability Analysis presents an overview of how efficiently the municipality has been using natural resources when delivering services to the citizens.

Step 3 – Approval by council / release

Budget Balance and report are discussed by the city council, ratified and presented to and discussed with the public. By approval, the Council releases the administration from legal accountability.

The conclusions drawn from the previous-year results may influence the execution of the current *ecoBUDGET* and inform the preparations for the the next *ecoBUDGET*.



The phases of the *ecoBUDGET*

Why manage environmental resources through a budget?



The regime of the annual cycle regularly places environmental concerns on the political agenda and provides the opportunity for decision makers to consider the implications of policies or of any other decision for resources.

Reduction in urban poverty, resource friendly development, good governance and enhanced administrative and management performance capacity are some of the basic elements of this (ecoBUDGET) process.

Mr. Kanna Lakshminarayana,
Honorable Minister of Transport for Andhra Pradesh, India

Budget planning emphasises issues of highest priority. Date-specific targets in the environmental budget set goals for environmental quality and resource use when delivering services. Monitoring and accounting of the full cost of municipal activities help to keep control over the impact of decisions and actions during the budget period. Thus, accounting aids understanding of the cause-effect relationship of political decision making in relation to natural resources. How much land does it cost to build a road? How much clean air or tranquillity is lost by using that road?

The balance report serves as a basis for decisions on targets and measures for the following budget period. In effect, environmental budgeting supports the sustainability performance of local governments and attention to natural resources and environmental quality is sustained. Resource management becomes highly integrated, effective and efficient. Importantly, *ecoBUDGET*, through its continuous feedback loop of setting targets, implementing action and evaluating performance supports accountability of political decision making.

*Nowadays, there are two ways to view development. The first considers monetary profit as being the only criterion to measure success. The second ensures that the impassable thresholds of workers' dignity are not violated, that natural resources are conserved and that human health is not jeopardised. I believe that *ecoBUDGET* is instrumental for cities that strive to pursue the second form of development.*

Sergio Cofferati, Lord Mayor of Bologna (Italy)

ecoBUDGET is Participatory Budgeting

Citizen and stakeholder participation is the key to success. In fact, strong community involvement invariably leads to good results in accomplishing targets. It is an advantage to engage community and stakeholder groups from the start and to continue to engage them throughout the entire *ecoBUDGET* cycle.

The *ecoBUDGET* cycle offers an ideal platform for improved local environmental governance based on community engagement in setting targets, agreeing on activities, implementing measures and evaluating progress towards municipal sustainability. Improved participation and communication between local government, stakeholder groups and the community have been recognised by all municipalities involved in *ecoBUDGET*.

The crucial cause for the success of the ecoBUDGET programme in the city of Guntur in India was the strong political commitment and the selection of issues that are of relevance to the people of the city.

Mr. Kanna Lakshminarayana,
Honourable Minister of Transport for Andhra Pradesh, India

How the public gets involved

Community and stakeholder groups can literally be involved at each phase of the *ecoBUDGET*. However, it is important to note, that final power to approve priorities, targets, actions and resources used rests with the Council. *ecoBUDGET* managers usually work with different stakeholder and citizen groups to implement planned measures. Both informal meetings and community assemblies are held to co-ordinate citizen involvement.

Tubigon, Philippines kicked off its first *ecoBUDGET* cycle with 15 local administrators as well as numerous representatives from the private and non-governmental sector. The Municipal Development Council short-listed environmental issues and concerns as well as looking at political priorities and applicability having regard to the capacity of the stakeholders to implement actions. Several dissemination events took place to keep the public involved and informed about the development of the draft Master Budget.

With its strong support for community involvement, *ecoBUDGET* can be seen as transferring the idea of Participatory Budgeting, as originated by Porto Alegre, to environmental governance. Through its periodical routines, *ecoBUDGET* also clearly supports the Local Agenda 21 process.

ecoBUDGET is aimed at encouraging local governments and civil society to work together in introducing improved methods of development and environmental planning, through the introduction of improved systems for environmental management.

Mr Alistair MacDonald, Head of the Delegation of the European Commission, Manila, Philippines



Six good reasons for *ecoBUDGET*



1st Advantage: Mayors and CEOs become true resource managers

Budgeting supports mayors and managers to optimise the use of local government resources when deciding how to deliver services. Complementing financial management through an annual environmental budgeting cycle integrates natural resources in municipal resource management. Thus, it helps mayors and chief executive officers to become true municipal resource managers, like the Mayor of Tubigon, Philippines, and the Head of Planning Department, Växjö, Sweden.

2nd Advantage: Implementing the UN Millennium Development Goals

Millennium Development Goal 7 calls for integrated resource management by referring to “managing and protecting the environment thus helping to reach the other Millennium Development Goals”. With *ecoBUDGET*, integrated environmental and resource management is introduced. Experiences with *ecoBUDGET* in India and Philippines have proved the potential to provide goods and services, while protecting environmental resources and supporting poverty alleviation.

3rd Advantage: Environmental resources are managed in an integrated way

ecoBUDGET is a cross-cutting management instrument affecting a wide range of natural resources and involving relevant stakeholders from local authorities (management, administrative and political) as well as the community (industries, households, traffic, etc.), national and global resource imperatives.

4th Advantage: Unwavering attention to nature & environment is sustained

With its recurring planning, implementation and reporting routine, *ecoBUDGET* can sustain a longer (indefinite) peak time of political attention to natural resources. Local ecology is sustained and is no longer subject to wavering consideration.

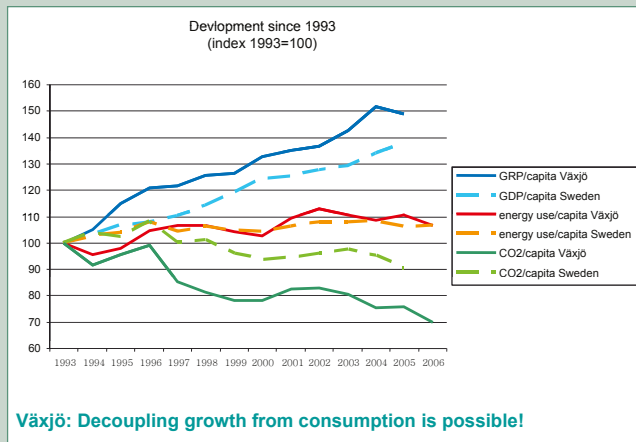


5th Advantage: Improved financial credibility

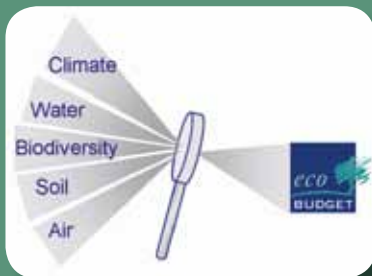
ecoBUDGET provides for targeted implementation of measures and projects and assessment of resource efficiency. Accuracy and transparency of the *ecoBUDGET* documentation (including environmental budget, accounts and balance) allow for proving efficient and effective use of environmental investment in favour of ecological sustainability as requested by many (international) donor organisations. As a result, higher ratings can be achieved in rankings of banks and insurance companies as well as when bidding for project funding and grants.

6th Advantage: Local Capacity Development

ecoBUDGET acts as a framework instrument with which local governments can manage their communities based on the needs and principles of ecological sustainable development. Firstly, it creates an enabling environment of appropriate policies, strategies, procedures and incentive structures that are needed for integrated environmental management. Secondly, it strengthens the capacity of institutions to implement integrated environmental management approaches through procedural discipline, training and intellectual support. Finally, it serves as a basis for activities that simultaneously address local, national, and global environmental issues within the context of sustainable development.



Responding to the climate change challenge



We are experiencing more frequent and more extreme examples of climate change in our daily lives, e.g. rising sea levels, heat waves, flooding, droughts, storms, landslides

and forest fires. The economic and social consequences of these climatic events are forcing political leaders to consider ambitious and radical targets.

However, targets responding to the challenge of climate change invariably need to be realised at the local level. Local governments have a huge potential to fight climate change by developing and implementing climate mitigation and adaptation strategies and by involving their citizens. *ecoBUDGET* is a tool that could assist local governments to combat climate change. There is need for a highly integrated approach. Given rapidly changing conditions, the traditional long and medium term planning approaches appear insufficient to tackle the problem. Instead, a cyclical management approach is suggested as a more favourable option as it allows timely corrections of measures when new information and data suggest action.

By implementing *ecoBUDGET*, local governments will be able to restructure their entire decision making chain based on an integrated management and governance approach. Working with *ecoBUDGET* will develop capacities to respond to the challenge of climate change. Most importantly, within *ecoBUDGET* local political and administrative decision making will focus on issues of strategic importance and environmental aspects with significant potential regarding climate change response (such as land use planning, energy planning, traffic planning).

Environmental governance at the municipal level is a fundamentally complex process. Complexity, and lack of capacity often inhibit the formal adoption, design, implementation and maintenance of environmental or sustainability programmes. Local authorities need a simple, yet logical and familiar tool and approach to direct and drive environmental or sustainability programmes. ecoBUDGET is just that, it is:

- *simple when compared to more complex tools that require extensive document wars to implement;*
- *logical as it is based on the classical plan, do, check, improvement and reporting loops that underpin most management models;*
- *familiar, as the process, approach and terminologies mimic financial budget and management processes that are entrenched practices in many city administrations, and*
- *flexible, as it is process based, allowing city administrations to identify and address the environmental issues or challenges that are material to them.*

Prof. Johan Nel, Center for Environmental Management, Potchefstroom, South Africa

ecoBUDGET in practice – Växjö, Sweden



Biomass-energy to reduce CO₂-emissions

Becoming fossil fuel free

With its history of environmental action and long-term objective to become “Fossil Fuel Free,” the Municipality of Växjö has been interested in adopting a structured method of implementing its environmental goals and monitoring the impact of its environmental initiatives. Växjö has introduced *ecoBUDGET* and systematically combined it with its financial accounting system. Nowadays, discussions about the city’s financial budget and *ecoBUDGET* take place during the same meetings and appear in the same financial documents.

In May 2006, Växjö’s Councillors decided to replace the city’s Local Agenda 21 strategy and environmental policy with a new Environmental Programme that would include only measurable, long-term targets covering three areas: Living Life (focusing on consumption and waste issues), Our Nature (focusing on water and conservation issues), and Fossil Fuel Free Växjö (focusing on transportation and energy issues). *ecoBUDGET* is used to ensure that the programme goals are monitored, reviewed and achieved.

Using *ecoBUDGET*, Växjö has decoupled CO₂ emissions from economic growth.
(See graphic at page 19)

The complete integration of the monetary and environmental budgets has given environmental issues and initiatives a higher status and resulted in greater environmental awareness among municipal councillors. As a result, Växjö is able to generate and implement innovative projects such as the construction of highly energy efficient buildings to implement their ecoBUDGET and meet their ambitious targets.

Ms Anna Karin Unger, *ecoBUDGET* Manager, Växjö, Sweden

*eco*BUDGET in practice – Tubigon, Philippines



Community participation in planting Mangroves

Implementing the Millennium Development Goals (MDG)

The foundation of the economy of Bohol Province – in which Tubigon is located – is agriculture, fishery and tourism. Consequently, the viability of the municipality's (and the province's) economy depends on the health of its natural resources: fertile soil, clean water, high biodiversity, adequate forest cover, healthy mangroves, seagrass, and coral reefs. The poor in the province's rural and urban areas are particularly dependent on the province's natural resources. As well as addressing environmental issues, Tubigon has found that *eco*BUDGET can be used to address poverty alleviation and the MDGs. As a result, Tubigon's *eco*BUDGET process is based on the strong participation of community groups and barangays (villages).

Tubigon relies on eco-cultural tourism and agro-industry as primary economic drivers. The mangrove area is one of the main tourist attractions. *eco*BUDGET helps protecting the mangrove area. To this end, it can contribute to the economic growth in Tubigon and support poverty alleviation. The impact goes beyond protecting the livelihood of small farmers and fisherfolk who rely on natural resources for their daily needs.

*Before, we did not know that we lost up to 60% of our water in transit due to leaks in the water pipes. Through the monitoring system introduced by *eco*BUDGET, we were able to discover this huge loss. We are now working on bringing down the amount of losses to the minimum. By preventing the loss of water in transit, we can reduce the cost of production as well as conserve water.*

Noel Mendana, *eco*BUDGET Manager, Tubigon, Philippines

ecoBUDGET in practice – Guntur, India



Hawker helps garbage collection

Air quality improvement supports local economy

Air pollution is a growing environmental problem in the city of Guntur. One of the main reasons for this increasing menace was traffic congestion at important junctions caused by hawkers selling their wares especially during peak hours. In response, the Council made provision of identity cards and assignment of proper designated places for hawkers as indicators of reducing air pollution in its *ecoBUDGET*. Meanwhile Guntur Municipal Corporation (GMC) has completed a survey and identified 1,732 hawkers in the city with only 450 of them having identity cards. With the implementation of *ecoBUDGET*, GMC has demarcated 500 Green Vending Zones, 10 Amber Vending Zones and 12 Red Vending Zones and issued identity cards for 1,395 hawkers. Of these, 950 identity cards of hawkers have been allotted spaces in green and amber zones whereas the rest can roam around the city to sell their wares.

At the same time, hawkers have been made part of Guntur's waste management system, which uses designated GMC staff to collect garbage at the household level. By that, the waste management system includes a strong sustainability component in that it enabled GMC to reach more households while increasing employment options for hawkers through garbage collection. It is a win-win for the local government and the citizens of Guntur.

The city of Guntur continues to manage natural resources through ecoBUDGET, focusing especially in the areas of greenery development, solid waste management, air pollution control and availability of water.

Moreover ecoBUDGET has been proposed to be introduced in three mandals (counties) of the federal state of Andhra Pradesh, with the support of Andhra Pradesh Academy for Rural Development and the Backward Regions Grant Fund of the State Government. The plan is to exhibit these areas as 'Beacon Mandals' for sustainable development, involving all aspects of infrastructure and community development. The grant scheme aims to provide support to village level local bodies in developmental planning and implementation.

ecoBUDGET in practice – Bologna, Italy



City density urges for structural planning

Sustainable city development respects resource scarcity

The City of Bologna has adopted *ecoBUDGET* as the core environmental management system for its institutional activities. It explores successful practices, factors, and conditions to support good governance for sustainable development. The first goal was to use *ecoBUDGET* as a management and communication instrument within the city's Local Agenda 21 plan. However, Bologna found that there are multiple benefits to using the *ecoBUDGET* process. All major decisions regarding resource and territory management are assessed for their suitability against Master Budget targets. A key element of Bologna's implementation of *ecoBUDGET* is spatial and urban planning and using it for the execution of strategic environmental assessment. Building *ecoBUDGET* indicators and targets into planning processes and systems allows for early action that is generally more cost-effective than responding to changes as they occur. This also includes the ability to clearly communicate the impact of different planning scenarios. *ecoBUDGET* is supporting the dissemination of the environmental impact of various scenarios defined by a structural plan as required by Italian legislation. In this way, *ecoBUDGET* has involved the municipality as a whole.

Unique to Bologna is the application of so-called “mayoral targets” valid for one legislative term. In this way the city government aims to bind its political programme to a transparent and voluntary set of quantifiable targets.

ecoBUDGET has helped Bologna to more effectively coordinate municipal initiatives and consequently provided a better structure for these initiatives since it is easier to see links and gaps between and among them. The process of setting targets and then carefully monitoring progress towards them has also been a valuable exercise for Bologna.

Ms Raffaella Guêze, *ecoBUDGET* Manager, Bologna, Italy



ecoBUDGET Agency

ICLEI's ecoBUDGET Agency based in Freiburg (Germany) offers professional guidance and training to local governments for all phases of the ecoBUDGET cycle, according to local needs and requirements. ecobudget@iclei.org

Literature

- Handbuch ökoBUDGET, ICLEI, Stuttgart 2001
- Urban Environmental Management, UNEP, ICLEI, FIDIC, Osaka 2001
- The ecoBUDGET Guide, ICLEI, Växjö 2004
- ecoBUDGET Guide for Asian Local Authorities, ecoBUDGET – ASIA Consortium, Delhi 2008
- Heidelberg, Germany. Creating a Framework for Integrated Resource Management, ICLEI Case Study No. 78: 2002
- Tubigon, Philippines. ecoBUDGET – Poverty alleviation through environmental management, ICLEI Case Study No. 101: 2007
- Växjö, Sweden. ecoBUDGET – Integrated environmental and financial resource management for an ambitious municipality, ICLEI Case Study No. 102: 2007
- Bologna, Italy. ecoBUDGET – Cyclical management and strategic environmental assessment. ICLEI Case Study No. 103: 2007
- Liveable Cities. The Benefits of Urban Environmental Planning, The Cities Alliance, Washington, 2007
- Participatory Budgeting in Africa - A Training Companion, UN-HABITAT, 2008; <http://www.unhabitat.org/pmss/getPage.asp?page=bookView&book=2460>

Gain from success and experience of ecoBUDGET municipalities! ICLEI's ecoBUDGET agency involves a team of experts in several countries around the world. Contact us with any query you may have. We are prepared to give introductory presentations, help you set-up and implement ecoBUDGET in your municipality, build capacity and train your staff.

Holger Robrecht, ecoBUDGET Team Leader

ecoBUDGET resources



ecoBUDGET on DVD

ecoBUDGET at Lewes District Council, 2007

ecoBUDGET Webcenter

Find comprehensive guidance, experiences, case studies, downloads and an ecoBUDGET community at www.ecobudget.com.

ecoBUDGET Network

A variety of cities and towns form the ecoBUDGET practitioners network - among others - Heidelberg, Dresden, Nordhausen County, Bielefeld, Kaiserslautern (Germany), Växjö (Sweden), Bologna and Ferrara (Italy), Lewes (United Kingdom), Amaroussion and Kalithea (Greece), Guntur (India), Tubigon (Philippines).

Local Governments worldwide are urged to introduce ecoBUDGET and join the network.

ecoBUDGET Partnership

ICLEI - Local Governments for Sustainability partners with UN-HABITAT, UNEP, UCLG, Cities Alliance for promoting and distributing ecoBUDGET and invites further international organisations to join in.

In many places, I have seen that there is an engineering approach to development. Think of the biggest possible project with the biggest possible budget and try to obtain funds for it, but what ecoBUDGET is all about is really going ahead anyway, money or no money, and a lot can be done without those large capital expenditures that development planners really love.

Mr. Vikram Roy, Advisor, Economic Cooperation, European Union

ecoBUDGET partnership



Only resource efficient cities will ensure the livelihoods of their citizens. The challenges of Climate Change and the scarcity of natural resources such as water are becoming very relevant topics for the daily agenda of local governments around the globe. UCLG encourages its members to use tools and systems such as Environmental Budgeting and to gain support for its implementation world-wide.

Elisabeth Gateau, Secretary General , United Cities and Local Governments (UCLG)

ICLEI – Local Governments for Sustainability

ICLEI is an international association of more than 1000 local governments from 80 countries that have made a commitment to sustainable development and protection of the global environment through local action. [web: www.iclei.org](http://www.iclei.org)



UN-HABITAT

UN-HABITAT's mission is to promote socially and environmentally sustainable urban development with the goal of providing adequate shelter for all. In the field of the urban environment, UN-HABITAT supports local and national governments through the Sustainable Cities Programme and Localising Agenda 21 Programme to address key urban environmental issues. [web: www.unhabitat.org/scp](http://www.unhabitat.org/scp)

UN HABITAT

UNEP

UNEP is the voice of the environment within the United Nations system. In the field of the urban environment, UNEP supports national and local governments to address key urban environmental issues from the urban perspective. UNEP has launched a Campaign on Cities and Biodiversity to engage local governments in managing and protecting biodiversity and involve them in the global biodiversity debate. [web: www.unep.org/urban_environment](http://www.unep.org/urban_environment)



*eco*BUDGET

Introduction for Mayors and Councillors

Decision makers in local government face the ongoing challenge of how to provide services with limited resources. Whether drilling a new well to provide drinking water, renewing a road surface, buying new buses or issuing driving licences, municipal services require resources - both financial and natural resources. New trucks cost clean air. A new road costs biodiversity. At the same time, a new road produces noise i.e. it costs tranquillity. However, while all resources should be managed soundly, local budgeting usually addresses only financial resources. *eco*BUDGET is an environmental management system uniquely designed with and for local governments. It allows municipalities to manage natural resources as efficiently as they manage financial resources. The traditional budgeting accounting system is complemented by an environmental budget, in which natural resources are measured instead of money. The brochure introduces the advantages of *eco*BUDGET for local decision-makers. It aids an understanding of an integrated resource management. The ultimate aim is to support Mayors and Councillors to become true resource managers.

Visit www.ecobudget.com

UNHABITAT

