

# **GUIDELINE**

**for**

**LOCAL ENVIRONMENTAL  
ACTION PROGRAMMES  
IN THE CAUCASUS**



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FOR LOCAL ENVIRONMENTAL  
ACTION PROGRAMMES IN THE CAUCASUS**

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## ABOUT REC CAUCASUS

**The Regional Environmental Centre for the Caucasus** (REC Caucasus) is a non-entrepreneurial (non-commercial) legal person established within the framework of the “Environment for Europe Process” in 1999 by the governments of Armenia, Azerbaijan, Georgia and the EU to assist in solving environmental problems as well as development of the civic society in the countries of the South Caucasus.

REC Caucasus successfully implements its mission through various programmes and projects throughout the Caucasus region. One of the tasks of REC Caucasus is to be a “bridge” between the public and governments. The Centre has proven to be a viable and independent organisation providing services to governments, local authorities, non-governmental organisations, businesses, media, international organisations and other environmental stakeholders. REC Caucasus plays an active role in interagency cooperation, too. The organisation together with active environmental NGOs and the ministries of environment promotes the idea of environmental protection and sustainable development in the South Caucasus countries.

For additional information about REC Caucasus, please, visit [www.rec-caucasus.org](http://www.rec-caucasus.org)

## ABOUT THE AUTHOR

**Paul Markowitz** has twenty-five years experience in environmental policy development and implementation in state government, academia, and non-profit institutions. Over the last 15 years, he has worked in Central and Eastern Europe with local governments and citizens to build their capacity to work collaboratively to address local environment, economic, and social problems. Markowitz has managed and provided training on local environmental action projects in Ukraine, Bulgaria, Poland, and other Central and Eastern European countries. He is the author of the Guide to Implementing Local Environmental Action Programs in Central and Eastern Europe for representatives of local governments and non-governmental organisations. He holds a Masters Degree in Resource Economics from the University of Vermont.

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## FOREWORD

In the beginning of 2003 REC Caucasus initiated the process for applying LEAPs methodology to the South Caucasus countries. Since then the pilot projects: Local Environmental Action Plans (LEAPs) have been developed and implemented in the three selected cities of the South Caucasus –Ararat, Ganja and Kutaisi. The LEAPs documents have been developed in close cooperation with the local authorities and citizens. Final documents published in Russian and national languages were presented at the final city conferences and the memorandums of understanding between the city mayors and REC Caucasus were signed. According to the memorandums the local governments took the responsibility to integrate LEAPs in city development plans and implement priority actions identified in LEAP.

Our experience has found that LEAPs are effective tools for addressing environmental problems, raising public awareness, expanding public access to information, and increasing public involvement in local environmental issues. Further, LEAPs have shown themselves to be effective approaches to improving local decision-making by involving key stakeholders at the local level. In addition, LEAPs improve accountability and transparency of local government by forming partnerships between local government and civil society and providing a mechanism for direct public input into governmental decisions. Further support is needed to broaden and deepen the impact of LEAPs by institutionalizing LEAPs at the national level, increasing the number of communities implementing LEAPs, and establishing a network of LEAP communities throughout the region.

This Guideline to Local Environmental Action Programmes (LEAPs) in the Caucasus has been prepared to assist municipal government officials, representatives from non-governmental organisations, and ordinary citizens to better manage environmental problems at the local level. It is presented here as a preliminary and introductory reference on basic planning methods and tools that have been used by some local governments and citizen groups in the Caucasus.

This Guideline is designed to provide a step-by-step “how-to” approach to developing and implementing LEAPs. While we recommend that you consider each of the steps described here, this Guideline is not intended as a “strict cookbook” that must be adhered to precisely. Rather, citizens in your community will need to design a LEAP to meet local circumstances, needs, and priorities.

This LEAP document is only a first step towards solving the environmental problems of the Caucasus cities, towards sustainable development and creating better human living conditions for present and future generations.

## ACKNOWLEDGMENT

The Guideline is a result of common work by experts who transformed their knowledge, experiences, ideas and visions into concrete actions and in that way help their community to solve the problems that were created in the past century.

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**Keti Samadashvili**

Environmental Policy and LEAPs Programme Manager

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## GLOSSARY

<b>Assessment tool</b>	a methodology for assessing environmental conditions
<b>Baseline conditions</b>	existing environmental conditions that are used as a basis for measuring environmental improvements
<b>Brainstorming</b>	a technique used by groups to develop as many ideas as possible without evaluating how feasible each idea might be
<b>Capital</b>	resources needed for the acquisition, construction or improvement of designated assets such as buildings and equipment
<b>Collaboration</b>	a process wherein citizens and local governments work together to address issues
<b>Collaborative leadership</b>	a style of leadership wherein leaders view their roles primarily as convening, catalyzing, and facilitating the work of others. Collaborative leadership focuses on bringing citizens together and helping them to build trust and the skills for collaboration
<b>Community Environmental Initiative</b>	any activity that involves residents in making their community a better place to live and results in visible environmental improvements, e.g. tree plantings and river clean-ups
<b>Community Environmental Inventory</b>	an environmental assessment tool for assembling large amounts of information on the status of a community's environment, natural resources, economic activity and physical conditions
<b>Comparative Risk Analysis</b>	an environmental assessment tool for comparing environmental problems in a systematic way based upon the best available information about the relative risks these problems pose. It attempts to answer the question, given what we know at this time, which environmental problems pose the greatest risks to our health, the natural environment, and the quality of our lives?
<b>Compliance monitoring</b>	measures whether an implementing institution has fulfilled its obligations, e.g. installed 5,000 low-flow showerheads
<b>Cost-effectiveness analysis</b>	an evaluation tool that helps to determine the relative costs for achieving a measured improvement in environmental protection compared to other actions
<b>Economic incentives (or instruments)</b>	a broad set of environmental management tools that provide a direct financial incentive to polluters to reduce their pollution activities
<b>Effectiveness</b>	a criterion used to evaluate how well a particular action reduces or prevents an associated public health or ecological threat
<b>Effectiveness monitoring</b>	a type of monitoring that measures whether specific actions are achieving their intended result, e.g. reducing water usage by 20% per household
<b>Emission Fees</b>	an economic incentive that charges polluters for pollution within admissible limits
<b>Environmental Action Plan (EAP)</b>	a multi-stakeholder plan of action on the best ways to solve environmental problems in the community. The EAP includes goals, targets, and actions for addressing the top environmental problems

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<b>Environmental goal</b>	provides strategic direction for long-term efforts to solve environmental problems and an opportunity to build consensus among stakeholders on what they hope to accomplish over a period of time
<b>Environmental issue assessment</b>	a profile of environmental conditions in the community as it exists today. An Issue Assessment helps citizens to paint a portrait of the place where they live given the current environmental status of the air, water, and land
<b>Environmental problem ranking</b>	ranking of environmental problems based upon the relative seriousness they pose to human health, ecological health, and quality of life
<b>Evaluation criteria</b>	provide an objective and transparent basis for selecting among a broad number of possible actions
<b>Fines and penalties</b>	an economic incentive applied to those individuals or industries that pollute above allowable limits or violate other regulatory requirements
<b>Impacts</b>	the threat or risk of an environmental stressor on human health, ecological health or quality of life
<b>Implementation agreement</b>	an agreement among institutions with responsibilities for implementing specific actions identified in the Environmental Action Plan. The Implementation Agreement identifies specific tasks, roles, and resource commitments from each implementing institution
<b>Implementation plan</b>	a document that integrates the actions for each priority issue into one overall, comprehensive strategy. The Implementation Plan ideally includes goals and targets from the EAP, identifies specific tasks that need to be undertaken to implement each action, assigns a time schedule for completing each task, determines who will be responsible for completing each task, and identifies associated costs for each task
<b>Indicator</b>	a quantifiable measure of whether goals and targets are being achieved
<b>Issue summary</b>	a compilation of information on alternative actions for addressing environmental priorities
<b>Loan</b>	a borrowed source of capital from a financial institutional wherein the borrower agrees to repay the original borrowed amount plus interest over a period of years
<b>Local Agenda 21 (LA21)</b>	a community-wide, participatory process for addressing sustainable development issues. LA21 was first defined in the Sustainable Development Action Plan (Agenda 21) at the United Nations Conference on Environment and Development (Rio Conference) in 1992
<b>Local Environmental Action Programme (LEAP)</b>	a community-wide, participatory process for addressing environmental problems. A LEAP involves developing a community vision, assessing environmental issues, setting priorities, identifying the most appropriate strategies for addressing the top problems, and implementing actions that achieve real environmental and public health improvements
<b>Memorandum of Agreement (MOA)</b>	an agreement among stakeholders to conduct cooperative work that identifies specific activities, respective roles and responsibilities, and timeframe, among other items

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<b>Monitoring and Evaluation Team (MET)</b>	a group of individuals responsible for designing the evaluation approach and evaluating project results. The MET is composed of individuals with specific expertise in project evaluation, agencies responsible for providing environmental data, and implementing institutions, such as industries, with specific environmental requirements
<b>National Environmental Protection Funds</b>	a major source of capital financing for environmental protection investments in many Central and Eastern European countries. These funds are one of the basic instruments for implementing national environmental policies and are either directly managed or supervised by the Ministries of Environment in their respective countries
<b>Pollution prevention</b>	involves minimizing the generation and release of all waste materials into environmental media (air, water, and soil). Pollution prevention activities focus on improved operations and maintenance, product reformulation to eliminate the need for toxic materials, substitution of less toxic alternatives, process redesign or modernization, and recycling and reuse of wastes
<b>Priorities for action</b>	a ranking of environmental issues that incorporates a wide range of criteria, such as their relative seriousness to human and ecological health, legal requirements, public preferences, and the municipality's legal ability to control. The Environmental Action Plan focuses on these priorities for action.
<b>Project Financing Plan</b>	a plan that addresses all aspects of raising the necessary capital for constructing a large environmental facility or system, including technical aspects of the project, how much the project is expected to cost, and how the borrower expects to repay borrowed funds to the lender
<b>Public information meeting</b>	a meeting for the public designed to both educate community members on a particular issue and seek their opinions and suggestions
<b>Rapid Urban Environmental Assessment</b>	an environmental assessment tool that enables local experts to rapidly assess the state of the urban environment
<b>Revenue sources</b>	funds raised on an annual basis to pay for capital and operating costs of environmental facilities
<b>Risk</b>	the probability of adverse effects on something of value

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<b>Risk assessment</b>	an environmental assessment tool that is used to measure the probability of an adverse impact (risk) on human health, ecosystems, and quality of life
<b>Sources</b>	human activities that result in the release or exposure of stressors to the environment
<b>Stakeholder Committee (SC)</b>	a diverse group of individuals responsible for steering the LEAP composed of representatives from local government, businesses and industries, schools, academia, and non-governmental organisations, among other institutions
<b>Statutory planning process</b>	a planning process required by law, e.g. the preparation of municipal budgets or multi-year land-use development plans
<b>Stressors</b>	chemical pollutants or physical impacts that adversely affect individual species (including humans) or complete ecosystems
<b>Sustainable community</b>	a community that uses its resources to meet current needs while ensuring that adequate resources are available for future generations. It seeks improved public health and a better quality of life for all its residents by limiting waste, preventing pollution, maximizing conservation and promoting efficiency, and developing local resources to revitalize the local
<b>Sustainable development</b>	a multi-faceted development approach that strives to strengthen local economies, while respecting the limits of the natural environment to function and sustain human activities over time
<b>SWOT Analysis (strengths, weaknesses, opportunities, and threats)</b>	a tool for evaluating a community's or organisation's capabilities. Strengths are unique capabilities that you can build upon while weaknesses are the areas you need to work around or where you need to strengthen your capacity. Opportunities are external forces that can help you to achieve your goals, while threats are forces that can work against you and you need to avoid or minimize their influence
<b>Target</b>	a measurable commitment to be realized within a specified time frame and used in evaluating and measuring progress toward implementing the EAP
<b>Team building</b>	activities undertaken by a group of individuals to strengthen their ability to work together

## INTRODUCTION

### Purpose of these Guideline

This **Guideline to Local Environmental Action Programmes (LEAPs) in the Caucasus** has been prepared to assist municipal government officials, representatives from non-governmental organisations, and ordinary citizens to better manage environmental problems at the local level. It is presented here as a preliminary and introductory reference on basic planning methods and tools that have used by some local governments and citizen groups in the Caucasus.

This Guideline is designed to provide a step-by-step “how-to” approach to developing and implementing LEAPs. While we recommend that you consider each of the steps described here, this Guideline is not intended as a “strict cookbook” that must be adhered precisely. Rather, citizens in your community will need to design a LEAP to meet local circumstances, needs, and priorities. You will need to define your own process. This means adapting materials from this Guideline, as well as other relevant guidance documents, to create a process that works for your community.

This Guideline describe the step-by-step approach towards development and implementation of LEAPs.

**Chapter one** of the Guideline gives the general description of Local Environmental Action Programme, its goals, objectives and experience in environmental planning, particularly in Armenia, Azerbaijan and Georgia.

**Chapter two** is dedicated to analyses of national environmental legislations in the three South Caucasus countries, roles and responsibilities of local authorities in environmental management.

**Chapter three** lists the potential LEAPs participants, i.e. the Stakeholders.

**Chapter four** describes in detail the LEAPs development stages, including initiation, identification of priority environmental issues and elaboration of environmental action plan.

**Chapter five** is about action plan implementation.

The issues related to organisation and implementation of LEAPs monitoring and assessment are considered in Chapter six.

**Chapter seven** describes the main principles of public involvement.

### Historical Perspective on LEAPs

#### History of LEAPs in Eastern Europe, Caucasus and Central Asia (EECCA)

Implementation of LEAPs in the countries of Eastern Europe, Caucasus and Central Asia has been started several years ago thus giving wide opportunities for using the existing experience in development of new LEAPs.

Over the last several years, a litany of environmental problems has surfaced in the Caucasus countries that pose severe ecological, public health, and economic impacts to the region. Under recent laws, local governments in the Caucasus countries have been given broad, new responsibilities to address environmental problems. Local governments in the Caucasus often have the following environmental responsibilities:

- Managing solid waste,
- Controlling the disposal of dangerous substances on their territory,
- Providing clean and adequate supplies of drinking water,
- Managing wastewater,
- Protecting and maintaining green areas,
- Planning for and controlling land-uses,
- Educating the public about environmental issues, and,
- Controlling air pollution emissions from transport and local heating sources.

The shift to decentralization is an important aspect of the transition to democracy. The new emphasis on local control of environmental problems recognizes that local governments and their citizens have the best understanding of local problems, issues, and needs. By decentralizing decision-making authority, environmental actions can be tailored to meet the specific needs of a community or region.

Some examples of successful LEAPs include:

- **Bulgaria:** Troyan, a community of 40,000 people in north-central Bulgaria, identified insufficient supplies of drinking water as its highest priority. More than 70 percent of the water supply was being lost from leaks in the old underground pipe network. The municipality implemented a low-cost leak detection and repair programme that resulted in water savings of 10 percent. The City's efforts have been recognized by the UN Commission on Sustainable Development.
- **Macedonia:** In Labunista, Macedonia (pop. 2,000) the link between high incidences of dysentery among children and the open sewer system was the obvious priority issue. Funded through a small grant and contributions from citizens through a voluntary tax, citizens joined worked together to install a sewage pipeline to eliminate the direct threat to human health.
- **Poland:** In the Municipality of Elk, Poland, a community of 50,000 people identified pollution of Lake Elk as the most serious issue facing the community—in terms of both its adverse environmental and economic impacts on the community. The community has improved water quality in the lake through a multi-faceted plan of sewage and storm water improvements, mechanical aeration in the lake, economic sanctions against polluters,

improved enforcement, and broad-scale public education.

- **Russia:** The formerly closed city of Nizhnii Tagil, Russia, with a population of more than 400,000, has worked on several different environmental issues. First, the community improved air quality and community health by finding low cost ways to significantly reduce particulate emissions from the mining industry. The community improved solid waste management by reducing open dumping, restructuring city user fees to support new collection efforts, improving air quality by reducing uncontrolled burning of waste, and upgrading ground water monitoring at the landfill. Finally, citizen-led efforts resulted in a greenway for the city to conserve open space and increase tourism and business development resulting from the recreation potential of the greenway.
- **Ukraine:** until recently, the city of Balaklava, served as a centre for the former Soviet Union's naval fleet and repairs and was considered a “closed city.” With the break-up of the Soviet Union and the relocation of the fleet, citizens tied their revival of tourism. In order to stimulate tourism, the community saw that it had to deal with the myriad of environmental problems facing the city, including contamination of the bay, poor state of the green areas, illegal waste dumps, and lack of wastewater treatment facilities. Balaklava citizens and local government have removed illegal waste dumps, initiated a plastic bottle recycling collection programme, refurbished parks, removed solid waste from the bay, installed new sewage collection system, and renovated pedestrian areas.

### International Agreements Supporting LEAPs

LEAPs are supported by international agreements. In April 1993, the Ministers of Environment from Western and Eastern Europe and the United States agreed upon a broad strategy for tackling environmental problems in the region known as the **Environmental Action Programme for Central and Eastern Europe**<sup>1</sup>. The Action Programme outlines a multi-step process for national governments to set environmental priorities and take appropriate actions to improve environmental conditions in the region. It emphasizes the importance of identifying priority actions based upon environmental threats to human health and the health of local ecosystems, and the need to identify a range of strategies for reducing these threats. Further, the Action Programme emphasizes pollution prevention and resource conservation strategies that require modest

1 *Environmental Action Programme for Central and Eastern Europe*, March 1993. Environment for Europe, Lucerne, Switzerland.

expenditures while achieving substantial environmental improvements.

Further, in June 1998, delegates from 36 European countries signed a convention on public participation, known as the **Aarhus Convention**<sup>2</sup>. that strongly encourages governments to actively involve citizens in environmental decision-making. The Convention, pending approval by each country's respective parliaments, binds the signatory countries to abide by a set of principles and practices pertaining to the public's rights to environmental information, decision-making, and justice. The Convention lays out procedures for public participation in decisions related to specific development activities, plans, programmes and policies, executive regulations, and other legally binding regulatory instruments. This Convention is significant because it establishes a uniform set of standards for involving citizens in environmental decision-making and emphasizes the importance of fully integrating environmental considerations in governmental decisions. It recognizes that each person has the right to live in an environment adequate to his or her health and well-being. It recognizes that, in order for citizens to be able to assert this right and observe this duty, citizens must have access to information, be entitled to participate in decision-making, and have access to justice in environmental matters. The Convention states that improved access to information and public participation in decision-making means better environmental decisions and greater public awareness.

Citizens from communities all around the world are starting to embrace a new way of thinking and acting about their future. These citizens are interested in pursuing a new approach to community development that simultaneously seeks to protect the environment, alleviate poverty and disease, improve the quality of life, and secure a strong and vibrant local economy. In response, the concept of “sustainable development” has emerged as a multi-faceted development approach that strives to strengthen local economies, while respecting the limits of the natural environment to function and sustain human activities over time.

According to the International Institute for Local Environmental Initiatives,

Sustainable development can be defined as development that delivers basic environmental, social, and economic services to all residents of a community without threatening the viability of the natural, built, and social systems<sup>3</sup>.

In 1992, sustainable development received a major boost when representatives from 140 countries joined

2 *Convention on Access to Information, Public Participation in Decision-Making, and Access to Justice in Environmental Matters*, June 1998. Fourth Ministerial Conference on Environment for Europe, Aarhus, Denmark.

3 International Institute for Local Environmental Initiatives, Toronto, Ontario, Canada

## What is a Local Environmental Action Programme?



together for the United Nations Conference on Environment Development and adopted “Agenda 21”— a sustainable development action plan for the 21st century<sup>1</sup>. Among other features, Agenda 21 encourages local governments in each country to work closely with their citizens to develop a “Local Agenda 21 (LA21).” Under LA21, local governments are encouraged to:

- Learn from citizens and local, civic, community, business, and industrial organisations about their priorities, values, and proposed solutions;
- Acquire information needed for formulating the best implementation strategies, and to implement appropriate policies, laws, and regulations to move toward sustainable development in their communities; and,
- Develop local sustainable development action plans in cooperation with their citizens.

Thousands of communities worldwide are implementing LA21 – striving to become sustainable communities. Sustainable communities can be defined as those communities that value healthy ecosystems, use resources efficiently, and actively seek to retain and enhance a locally-based economy. They have a vision that is embraced and actively promoted by all of the key sectors of society, including businesses, disadvantaged groups, environmentalists, civic associations, government agencies, and religious organisations. Sustainable communities emphasize ecosystem protection, meaningful and broad-based citizen participation, and economic self-reliance. According to Concern, Inc.,

A sustainable community uses its resources to meet current needs while ensuring that adequate resources are available for future generations. It seeks improved public health and a better quality of life for all its residents by limiting waste, preventing pollution, maximizing conservation and promoting ef-

ficiency, and developing local resources to revitalize the local economy<sup>2</sup>

LEAPs provide an excellent starting point for developing a sustainable community. They help to ensure that your community has adequately examined and addressed major environmental issues that adversely affect both human health and the health of the ecosystem. LEAPs emphasize minimizing pollution and waste, efficiently using natural resources, promoting pollution prevention, and assuring sustainable resource use over the long-term. LEAPs stress the importance of meeting economic needs while respecting the limits of the natural environment to function and sustain human activities over time.

Both LEAPs and LA21s involve the participation of a broad spectrum of stakeholders to guide the planning processes, and both involve identifying key issues facing communities and developing plans of action to address these issues. However, as noted above, LA21s encompass all elements of sustainability, while LEAP is more narrowly focused on environmental issues. For communities that are just starting to think about becoming “sustainable,” the process of tackling all major issues may be somewhat daunting. Thus, LEAPs provide a manageable “entry point” for communities to start to address the broader issue of sustainability.

It is important to point out the concept of “sustainable communities” is still emerging and continually evolving. There is no one “right” path to sustainability, and communities worldwide are struggling to define “sustainability” and interpret what it means for their future development. These communities are constantly exploring innovative approaches that seek to meet human needs within the limits of the natural world.

<sup>1</sup> Agenda 21, 1993. United Nations Conference on Environment and Development, Rio de Janeiro, Brazil.

<sup>2</sup> CONCERN, Inc. Washington, DC.



## 1.1 Overview

Local Environmental Action Programme (LEAP) is one of the effective tools for environmental problem resolution at the local levels in the Caucasus countries. LEAP implies evaluation of the environmental problems, identification of the priority issues and the most acceptable ways for their resolution, as well as implementation of the activities effectively improving conditions of the environment and human health. LEAP is based on the deliberate public participation in local decision making process.

LEAP development is the process consolidating the people with different interests, values and outlooks. Often, LEAP process is managed by the Stakeholders' Committee (SC) consisting of the representatives of all main local institutions, including enterprises, NGOs, scientific-research institutes, governmental agencies, state authorities, private sector. SC members jointly work during 12-24 months period and try to achieve the consensus on the recommended priorities and activities directed towards resolution of environmental problems of the local community. These recommended priorities and actions are then included into environmental action plans that represent the basis for the future environmental investments. Recommendations included into the action plans are reflected in the decisions of municipal councils and other executive bodies.

## 1.2 Goals and Objectives of LEAPs

LEAPs goals, among others are:

- To **improve environmental conditions** in the community by implementing concrete, cost-effective action strategies;
- To **promote public awareness** of and responsibility for environmental issues, and to increase public support for action strategies and investments;
- To **strengthen the capacity of both local government and NGOs** to manage and implement environmental programmes, including their ability to obtain financing from national and international institutions and sponsors;
- To **promote partnerships** between citizens, local government officials, NGO representatives, scientists, and business people, and to learn to work together in solving community problems;
- To **identify, assess, and set environmental priorities for action** based on community values and scientific data;
- To **produce a local Environmental Action Plan (EAP)** that identifies specific action strategies for solving problems and promoting the vision of the community.

## 1.3 Benefits of Conducting a LEAP

There are numerous benefits to conduct a LEAP. These include:

- **Building consensus among diverse community interests:** LEAPs help to build communication, partnerships, and common solutions among diverse sectors of the community. Led by a multi-stakeholder group, representative of a broad cross-section of the community, LEAPs emphasize team building and consensus decision-making.
- **Fostering broad public support for environmental actions:** By engaging citizens from the beginning, communities have ownership of difficult decisions and support actions to solve problems. Through openness and transparency, LEAPs lead to action plans that identify the most appropriate solutions for addressing the top environmental problems and build strong public trust for future actions.
- **Targeting limited resources where they will do the most good:** Every community is facing increasing problems with fewer resources. By assessing and ranking environmental problems based on the human and ecological risks they pose, as well as public viewpoints and the municipality's ability to control or influence a particular problem, LEAPs generate practical, cost-effective actions that communities can handle.
- **Applying national policy at the local level:** LEAPs provide a framework for helping communities to incorporate national policies using practical approaches at the local level.
- **Encouraging sustainable development:** LEAPs help communities to examine and address major environmental issues that adversely affect both human health and the health of the ecosystem. They emphasize minimizing pollution and waste, efficiently using natural resources, promoting pollution prevention, and assuring sustainable resource use over the long term.
- **Strengthening communities' ability to solve other problems together:** Beyond the environmental and human health benefits that LEAPs bring to a community, the approach to citizen engagement and problem-solving becomes a strong thread in the fabric of the community. The approach can be equally relevant to addressing social and economic challenges.

## 1.4 Stages of LEAP Development and Implementation

A Local Environmental Action Programme involves several different phases, including:

- Phase 1. Get Started**
- Phase 2. Assess Environmental Issues and Set Priorities**
- Phase 3. Develop an Environmental Action Plan**
- Phase 4. Implement Actions Strategies**
- Phase 5. Monitor and Evaluate Results**

The planning phases of LEAPs (Phases 1-3) can vary in duration from 5-30 months, while the implementation and monitoring/evaluation phases are on-going. Stakeholder committees (SC) in some communities have found that longer planning timelines can result in more comprehensive environmental action plans. On the other hand, citizen-based volunteer efforts may be difficult to sustain over a long period of time. In addition, your community may feel some urgency to move ahead with implementation efforts. Your SC will need to select a planning horizon that balances its desire to prepare a detailed environmental action plan with energy and time availability of your members.

### Phase 1. Getting Started (3-6 months)

Starting a LEAP involves gaining the support of the local government and forming a stakeholder committee. First, LEAPs require a close working relationship between citizens and local officials. Local officials hold the key to implementing environmental programmes — from financing capital investments to adopting local ordinances. Overwhelmed with a wide range of environmental problems that need immediate attention, some local officials are collaborating with citizens to help to address these problems. This collaborative approach can only be successful if it is built upon a foundation of common purpose and trust between your local government and citizens.

LEAPs begin with a core group of committed individuals who are interested in bringing the community together to address environmental issues. In some communities, local governments have taken the lead, while in others, non-governmental organisations (NGOs) have initiated the idea and encouraged their local governments to participate. As mentioned earlier, the involvement of different constituencies and affected individuals is usually manifested through the formation of a multi-representative body called a Stakeholder Committee Group (SC). Perhaps most importantly, the SC is responsible for reaching out to the rest of the community, soliciting their views on environmental priorities and solutions, educating them on the problems facing the community, and actively involving community members in improving the local environment.

### Phase 2. Assessing Environmental Issues and Setting Priorities (6-12 months)

Environmental issue assessments and priority setting are one of the most critical components of a LEAP. An environmental issue assessment is a profile of environmental conditions in the community – as it exists today. It helps citizens to paint a portrait of the place where they live given the current environmental status of the air, water, and land. Some environmental assessments describe the impacts of these problems in terms of the threat (or risk) they pose to human health, ecological health, and the quality of life.

Environmental issue assessments generally fall into two broad categories: participatory and expert assessments. Participatory assessments rely primarily on lay people to collect data and information on environmental problems in the community, while “expert” assessments are more formalized methodologies that scientifically and statistically evaluate and document environmental conditions in the community. Oftentimes, these two approaches are blended to develop issue assessments that are based upon both scientific data and broad public input.

Many communities use information gathered during the assessment stage as the foundation for setting environmental priorities. Priority setting helps to target environmental improvements toward the most critical problems and can help to ensure that your community achieves the greatest public health and environmental benefits for its money. A successful priority setting process will require the support and cooperation of representatives from government, businesses, and non-governmental organizations.

### Phase 3. Developing an Environmental Action Plan (6-12 months)

The Environmental Action Plan (EAP) is the cornerstone of a LEAP. The EAP focuses on the most serious environmental problems identified during the priority setting phase. The preparation of the EAP begins with establishing environmental goals, targets and indicators. Environmental goals provide an opportunity to build consensus among the SC on what it hopes to accomplish over a set period of time, e.g. three-five years. Targets are measurable commitments to be realized within a specified time frame and are used in evaluating and measuring progress in implementing the Action Plan, while indicators measure whether environmental goals and targets have been achieved.

The next step in developing the EAP involves reviewing existing environmental practices. This process can include examining your community's capabilities to address environmental problems, as well as external factors that may either assist or hinder your community. The SC then identifies a set of action strategies to help to achieve the goals and targets. These action strategies include educational activities, economic incentives, technological measures,

community programmes, and regulatory actions to address various problems.

After identifying a range of possible action strategies, it is important that the SC choose evaluation criteria that serve as the basis for selecting its preferred action strategies. Your SC will probably need to undertake specific economic, engineering, and/or environmental analyses to ensure that the selection of action strategies is based upon sound information. The SC then prepares a draft EAP that summarizes the results of its work. The draft EAP is submitted to the public for comment and ultimately adopted by the Municipal Council. This EAP then serves as a long-term guide for environmental actions in the community.

#### **Phase 4. Implementing Strategies (on-going)**

All the planning efforts of the SC – assessing issues, establishing priorities, and developing an action plan – lead to implementation. The environmental planning process helps to ensure that the community is targeting the serious problems, as well as the “ripest opportunities,” i.e. those actions where environmental improvements can be readily achieved.

As the primary institution responsible for implementing recommendations from the EAP, it is absolutely critical that your local government takes full “ownership” of its recommendations. This ownership can be manifested by integrating specific recommendations from the EAP into statutory planning processes of the Municipality, such as the preparation of a land-use plan or municipal budget.

The first step in project implementation is identifying all agencies and institutions with potential responsibilities for project implementation, including local, regional, and national governments, private sector, and non-government organisations. The private sector offers one effective option for project implementation. Many communities in the United States and Western Europe have found that private companies can play a valuable role in implementing a range of environmental programmes – from collecting solid waste to operating wastewater treatment plants.

Any implementation strategy involving multiple agencies and private companies will require an appropriate organisational structure to ensure effective implementation – either by modifying an existing structure or creating a new one. Once the proper organisational structure is established, the participation of these institutions can be secured through a written agreement.

After securing the participation of all implementing institutions, the next step is to prepare an Implementation Plan. The Implementation Plan integrates each of the different action strategies into one overall, comprehensive programme. It helps to ensure that each of the different

action strategies work synergistically toward a common set of goals and targets. One of the biggest implementation challenges is project financing. A “Project Financing Plan” can help to ensure that your SC and Municipality have addressed all major issues related to securing adequate funding.

#### **Phase 5. Monitoring and Evaluating Results (on-going)**

Once implementation has begun, it is important to monitor and evaluate results. An effective monitoring and evaluation system provides an opportunity to: a) compare your implementation efforts with your original goals and targets; b) determine whether you are making sufficient progress toward achieving expected results; and, c) determine whether you are adhering to project time schedule.

The first step in preparing a monitoring and evaluation programme is to review the environmental targets and indicators developed in the EAP to make sure they are still current and reflect the latest information. Next, it is

### **1.5 National Environmental Planning in the South Caucasus**

#### **Example of Environmental Planning in Georgia**

Historically, the population of Georgia, thanks to the existing natural conditions of the country, never sought the sources of income outside its borders. The same reasons underlie the special attitude towards the environment: rivers, forests, land became the issues of permanent concern of Georgians.

Together with the scientific-technical development, from the 50-ies of the last century, like the other countries, environmental issues in Georgia are gaining the special importance. In this period Georgia represented just the small part of socialist system. Based on this, the primary significance was attributed to the communist ideology, which performed the cornerstone of all the decisions made in the country.

Georgia was one of the firsts in the Soviet Union to create the State Committee for Environmental Protection at the Council of Ministers in 1975. In April the same year, the regional departments of environmental inspectorate were created. Gradually, elaboration of the long-term action plan for rational use of natural resources and protection of the environment has been commenced. This plan can reasonably be considered as a predecessor of the current LEAPs. On August 30, 1970, Decision No 118 of the Executive Committee of Local Deputies

approved the respective Action Plan for Kutaisi. It can be stated that, despite the ideological pressure, the Action Plan fully covered the range of the measures for protection of water, air and green areas. It listed the particular activities, terms of their implementation and identified the respective expenses by the years. However, the implementation was envisaged through the pure administration, without any involvement of and control by the local community. It shall also be mentioned that public control was entrusted to the Society for Protection of the Nature, which was created by the Decision No 476 of Council of Ministers of Georgia dd. July 28, 1977. The mentioned Society was not participating in decision-making, and its main function was implementation of the activities. After dismissal of the Soviet Union, the events of 1990-1993 resulted in excessive politicisation of the environmental issues and active works were shifted to the background. Although, we shall admit that some exceptions also happened, and the session of International Environmental Foundation conducted in Kutaisi on October 24, 1993 promoted activation of the local environmental efforts. In 1995, City Council of Kutaisi passed the decision on transparency of and access to environmental information. Gradually, the NGOs working in the field of environment rose in the city, the principles of cooperation with state authorities were formulated and, finally, all the above resulted in LEAP developed for Kutaisi.

important to establish a reporting system that will record the performance of all institutions with implementation responsibilities. This reporting system provides a system of accountability for all responsible parties on how well they are achieving the goals and targets established in the EAP.

Once you have finalized your targets and indicators, established your reporting system, and collected your data, you are ready to conduct your project evaluation. The evaluation process involves comparing your actual results to the targets identified in the EAP. One of the most important aspects of an evaluation process is that it actually provides usable results to project implementers – information that can be utilized by project managers and staff to improve results. The evaluation also provides valuable “lessons learned” that can be incorporated into future implementation activities. Finally, it is important to communicate the results of the evaluation process with community members and to report their responses to various implementing agencies.

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### **1.6 LEAP Experiences in the South Caucasus**

#### **The Regional Environmental Centre for the Caucasus (REC Caucasus)**

with the financial support of the US EPA and the Netherlands Ministry of Housing, Spatial Planning and the Environment (VROM) in the beginning of 2003 initiated process for applying LEAPs methodology to the South Caucasus countries. Since then the pilot projects Local Environmental Action Plans (LEAPs) were developed and implemented in the three selected cities of the South Caucasus – Ararat, Ganja and Kutaisi. The LEAPs documents have been developed in close cooperation with the local authorities and citizens. Stakeholders committee created for each city was working on the document during one and a half year. Action Plan was based on the status report developed by the local experts.

Final documents were issued on Russian and national languages and presented on the final city conferences, where the memorandum of understanding between mayors and REC Caucasus was signed. According to the memorandum local government of cities took responsibility to integrate LEAPs in city plan and implement priority actions identified in LEAP.

An important component of the LEAPs process is provision of financial support to implement some of the LEAPs environmental solutions. For this purpose REC Caucasus initiated a small grants programme and provided funding for 15 projects ranging from environmental awareness and education initiatives to low-cost, pollution reduction and environmental improvements in each of the LEAP cities. This included small grants for local governments to encourage partnerships with businesses and/or NGOs, as well as small grants for NGOs. Projects addressed improving drinking water supplies and irrigation systems, improving waste management, planting of greenery and raising environmental awareness.

Training package for LEAPs development and implementation in the South Caucasus has been developed in Russian and national languages. National trainings for local authorities in Armenia, Azerbaijan and Georgia were organised to disseminate widely information about LEAPs. The representatives from different cities (14 cities in each country) received training in LEAPs methodology and learned about “best practice” of Local planning existing in the South Caucasus.

The pilot LEAPs projects have demonstrated that the South Caucasus cities are clearly ready to implement participatory approaches to community problem-solving. There is an urgent need to develop these activities further and to replicate its successes, in order to address the weaknesses in local decision making. Best practice as elaborated in the three first pilot towns is disseminating to new municipalities in order to replicate experience on a broader scale throughout the South Caucasus countries.

## Legal Bases for LEAPs



## 2.1. Agenda 21

In 1992, Rio de Janeiro hosted the United Nations' Conference on Environment and Development, where Agenda 21 was adopted. Agenda 21 constitutes the legislative framework for the future of the "sustainable development process" - the process that started in 1972 in Stockholm. Environmental issues are the most essential elements of sustainable development.

Among other features, Agenda 21 encourages local governments in each country to work closely with their citizens to develop a "Local Agenda 21 (LA21)." Under LA21, local governments are encouraged to:

- Learn from citizens and from local, civic, community, business, and industrial organisations about their priorities, values, and proposed solutions;
- Acquire information needed for formulating the best implementation strategies, and to implement appropriate policies, laws, and regulations to move toward sustainable development in their communities; and,
- Develop local sustainable development action plans in cooperation with their citizens.

Local Environmental Action Programmes (LEAPs) provide an excellent starting point for developing a sustainable community. They help to ensure that communities have adequately examined and addressed major environmental issues that adversely affect both human health and the health of the ecosystem. LEAPs emphasize minimizing pollution and waste, efficiently using natural resources, promoting pollution prevention, and assuring sustainable resource use over the long-term. LEAPs stress the importance of meeting economic needs while respecting the limits of the natural environment to function and sustain human activities over time.

## 2.2 National Environmental Action Plans - NEAPs

National Environmental Action Plans (NEAPs) have been prepared for numerous countries in Central and Eastern Europe, Caucasus and Central Asia. NEAPs identify the most severe national environmental problems and define a programme for addressing these problems. In the Caucasus, each country has adopted legislation that requires state bodies to develop, adopt, and implement NEAPs. These bodies have territorial branches that act and implement the state programmes at the local level.

- In Georgia National Environmental Action Plan (Programme) was adopted by the President Decree # 191 on 20.05.2000.
- Azerbaijan NEAP was adopted by the decision of the Cabinet of Ministers of Azerbaijan in January, 1998.
- In Armenia NEAP was prepared by the Ministry of Nature Protection in Armenian and English and approved by the Government's decision N801 dated 14th of December, 1998.

- In Armenia NEAP-2 was prepared by the Ministry of Environmental Protection in Armenian and English and approved by the Government's protocol decision N33 dated 14th of August, 2008

## 2.3 Local Environmental Action Programmes - LEAPs

Local Environmental Action Programmes, from the legal point of view, are the initiative of the local authorities and their right, granted by the legislation, to take environmental decisions within their competence and fulfil them at the local level. LEAPs incorporate meaningful public input in local government decision-making. They provide a forum for bringing together diverse individuals with different interests, values, and perspectives to guide the community through the planning process. Representatives from local and regional governments, businesses, NGOs, and academia, among others, work together over a 12- to 24-month period—in partnership with the local government—to forge a consensus on recommended priorities and actions for addressing environmental concerns in the community. These recommended priorities and actions are compiled in an environmental action plan that serves as a blueprint for future environmental investments. Recommendations from the plan are then incorporated into the decisions of the municipal council and other implementing bodies.

LEAPs must be in line with the national legislation, taking in consideration local peculiarities.

### 2.3.1 Development, Implementation, Responsibilities

#### *Environmental Issues from Constitution*

All three South Caucasus' state constitutions contain so called "green" articles that guarantee the right of citizens to live in a healthy environment and to have equal use of the natural surroundings. Citizens have the power not only to protect their rights, but also to demand respect and have their rights observed by others. Everyone is obliged to protect the natural and cultural surroundings. Overall, responsibility for environmental policy issues stays with the state structures. The state provides the essential means to enable the exercise of mentioned rights, while delegating some rights for environmental protection to local authorities.

The Georgian Constitution obliges the state to guarantee the protection of nature and the rational use of it in order to ensure a healthy environment, corresponding to the ecological and economic interests of society, and taking into account the interests of current and future generations. This corresponds with the sustainable development concept. The Constitution of the Republic of Armenia obliges state authorities to ensure the reproduction and efficient utility of natural resources through the environmental protection activities. The Azerbaijan Constitution provides the right for compensation for damage done to health of the citizen and property because of violation of ecological requirements.

All three Constitutions provide individuals with the freedom to have access to and obtain information about environmental quality. Everyone has the right to gain information about the true ecological situation. The right to possess environmental information is useful for execution of the right to participate in environmental decision-making processes. LEAPs can be considered as the result of execution of this right. At the same time, it can also be regarded as its main tool.

#### *Local self-governance*

The constitutions of the three South Caucasus states recognize the right of the people to exercise their power through local self-governing bodies. Constitutions of Armenia, Azerbaijan and Georgia contain special articles on local self-government. There are sets of laws that are specified not only on the general issues of the self-government, but also on the elections, supervision by the state, budgeting and economical activities of the self-governmental bodies.

All three states are parties of the European Charter of Local Self-government. Under the Article 3 of the European Charter, local self-government is the right and the ability of local authorities, within the limits of the law, to regulate and manage a substantial share of public affairs under their own responsibility and in the interests of the local population. Each of the three South Caucasus countries has adopted laws on local self-government, including:

- Georgia: New law on local self-government was adopted in Georgia on 16th of December 2006 (Law Number 2304 - RS);
- Azerbaijan: The Law No 698- IG on "Status of municipalities" has been in force in Azerbaijan since 2nd of July, 1999;
- Armenia: The Law of Republic of Armenia on Local self governing body, law is admitted by RA National Assembly, on 07.05.2002 and the number is HO-337.

Above mentioned laws of all three states define the structures, authorities and competencies of local self-government bodies. These bodies are admitted as independent legal entities, with all requisites inherent to the legal entities.

Local self-government bodies are divided into representative and executive bodies. Executive body of the local self-government implements the decisions of the representative body, while legislatures grant local authorities with the exclusive delegated and voluntary authorities for execution of their activities. Exclusive authorities include compulsory authorities. Unlike voluntary authorities, compulsory authorities are clearly defined by legislation. Within the voluntary authority, local bodies, using their own additional resources, are entitled to execute all kinds of activities that are in-line with the interest of local population and legislation. Funds of the local budgets, in the first place, shall be used on the compulsory expenses. Delegated authorities are those that are delegated by the state bodies for execution of the state objectives

on the local level. Delegation of these authorities shall be done through the special legal provisions or agreements. When delegating their powers, state structures are obliged to assign them with the relevant means and resources for execution (performing).

Obligatory requirements of local authorities include approval of the perspective plans and programmes of social-economic development of the self-governing unit, implementation of the activities in the social and environmental fields, and control over this implementation. Accordingly, preparing LEAPs is the responsibility of local authorities. At the same time, local environmental action plans may consider not only obligatory activities, but also those ones that are performed within the delegated and voluntary (if there is enough resources for this) authorities.

Final decisions taken by the self-government bodies can not be directed to the violation of the rights and authorities of the physical persons and legal entities. At the same time, the same physical persons and legal entities, regardless of their organisational-legal formation, shall observe the decisions of the self-government bodies taken within its competence. Only the bodies that have issued them or the decision taken by the court can cancel decisions of the self-government bodies. Not observing or violation of this decision involves appropriate responsibilities in accordance to the legislation.

Legislative and administrative supervision of the activities of local self-government authorities is also regulated by the national legislations, in accordance to the requirements of the European Charter of Local Self-government.

## 2.4 Self-government in Environmental Legislation

Three countries of the South Caucasus have a lot in common. There are numerous environmental laws adopted by our states. The list of new laws continues to grow, while the old laws are renewed and improved.

Environmental laws consider provisions on the role of local self-government structures. Environmental planning and environmental action plans are developed on regional, local and departmental levels.

Laws on protection of ambient air define the right of the executive bodies of the local authorities and self-governances to develop plans of measures for protection of ambient air at the local level.

According to national legislation on the issues related to water use, among other functions of local authorities and self-governance in the field related to the water, local authorities have the legal rights to execute state policy on water use at the local level, in line with participation in development of complex schemes and balances in sphere of use and protection of water. Measures for utilizations and protection of water bodies having state importance are financed from the state budget on basis of the respective programmes and in accordance with the procedures set out in respective laws. Damages caused to the water objects as a result of the natural hazards are

## LEAP Participants



repaired from the local budget sources. Measures for avoiding negative impact of waters and implementation of activities for liquidation its consequences shall be implemented on the account of water users (if the damage was caused by them), local budgets and state budget in accordance with the legislation.

According to the laws on flora and fauna, development of the state programmes and their implementation is in the framework of competence of the territorial services of state authorities. Competences of bodies of local self-governance in sphere of protection, conservation, reproduction and utilisation of fauna are set out in laws on local self-governance.

Forest Codes also consider development of local programmes for protection, conservation and reproduction of forests and promotion of their implementation in cooperation with authorized state bodies, as one of the functions of local authorities and self-governance in sphere of management of state forest fund.

### 2.5 Budgeting, Finances, Funds

Development and implementation of LEAPs by the local authorities ensures the spending of local funds on the needs of the given community, through the participation of the stakeholders at the local level who are interested in the prosperity of their own region. Local budgets are the constituent part of the state budgeting systems. General laws concerning the budget system regulate the main state principles of budgeting, including the issues of the budget on the local level. At the same time, main laws concerning self-governance have special provisions on the property sources and the budgets of local self-government bodies. Local authorities decide independently on the disposal of the local budgets. Revenues of Self-Government Unit Budget mainly consist from the local taxes, fees and other non-tax revenues envisaged by the legislation, including capital revenues, equalization transfers<sup>1</sup>, loans, and grants. Other revenues can also be allowed under legislation. If there is no possibility to finance local programmes of social and economic development from the local budgets, donations and subventions can be allocated from the state budgets. National legislations envisage support of the local budgets through their financing from other budgets by providing them with the conditional transfers ; conditional subventions and subsidies. Delegated authorities must be always financed from the state budgets. Municipalities, in the limits set by the legislations, define local taxes and duties.

There are some special requirements for the local bud-

<sup>1</sup> Conditional transfers – Conditional transfer is financial provision for ensuring the performance of delegated functions by the self-governing unit. Conditional transfer shall only be used to perform the authorities delegated by the state. Special transfers to the budget of self-governing unit shall be used to fund the expenditures for the liquidation of the results of ecological and other kinds of disasters, specific capital and other necessary expenditures.

gets. According to the new Georgian law on Local Self governance, self-governing units can take loans or grants only from the Government of Georgia or with its authorisation in compliance with the Georgian legislation. While in Armenia loan contracts can be concluded by municipalities on the ground of the Ministry of Finance's conclusion after the solicitation of the governor.

It is worth to mention the Law of Republic of Armenia on Targeted Use of Environmental Fees Paid by Companies. According to it, environmental payments, paid by the companies listed in the law (CJSC Armenian Caper Program, Zangezur Copper-molybdenum Complex, Agarak Copper-molybdenum Complex, Dino Gold Mining Company, Akhtala Ore Mining and Processing Enterprise, Ararat-Cement, Mika-Cement, Razdan-HPP, Yerevan-HPP, Gadjegorc, Gadj, LLC Armenian Molybdenum Production, OJSC Makur Erkat, Aske-Group and Charentsavan "Centrolit"), are assigned environmental fees to the budgets of the communities negatively affected by their activities.

The list of the communities and amounts to be assigned into their budgets from the environmental fees is approved by the Law on State Budget for the current year. Assignments from environmental fees to the community budgets are considered as the targeted funds and shall be used exclusively for environmental programmes of the particular community. These programmes consider the measures for protection of entrails, conservation and rehabilitation of forestry and water resources, flora and fauna and atmospheric air of the community.

Draft of the local budget in Azerbaijan is forming on the ground of the assessment of the activities of municipal agencies and other legal entities, physical persons that execute economic activities, social-economic prognosis and earmarked programmes existing on the territory of the municipality. In order and conditions defined by the Azerbaijan legislation municipalities are allowed to create earmarked non-budget funds.

In Georgia, there is special Municipality Foundation that is aimed on the support of the institutional and financial development of the local self-governing bodies and attraction of investments to the local infrastructures and services.

### Conclusion

Legislation of the South Caucasus countries develops and needs farther feedback from the civil society and local communities. Local Environmental Action Plan is the tool for them to participate in this process. At the same time, the aim is to get the sufficient legal procedures for the LEAPs preparation and implementation itself. All these lead to, so called, "Environmental Democracy" – the process that started in Rio and is essential for the Sustainable Development.

## INTRODUCTION

LEAPs rely on collaboration among all different stakeholders in a community. Successful LEAPs ensure that those individuals who are affected by environmental issues are actively involved in the decision-making process. This requires reaching out to the various interests within your community, and bringing them into the LEAP planning process. Collaboration is the key to an effective LEAP. Collaboration requires strong leaders, the support of the Municipality, and a credible and open process. It involves hard work, patience, and commitment. This collaboration process is usually facilitated through the formation of a Stakeholder Committee (SC) that guides the LEAP and involves the general public. An effective SC can play a significant role in charting a plan of action for future environmental investments that have broad-based support throughout

leadership is absolutely critical to success. Local governments have direct responsibilities for implementing most of the action strategies that evolve from the LEAP planning process, including adopting local ordinances, approving capital budgets and borrowing funds, and overseeing or managing such municipal public service companies as electric, district heating, and solid waste. The active participation and support of both the Mayor's office and Municipal Council throughout the LEAP process is absolutely essential.

Most communities form an "Initiative Group" to get the LEAP process started. The Initiative Group's primary responsibility is to bring key individuals in the community together to help to organise the Stakeholder Committee. These individuals include representatives from the Mayor's office and the Municipal Council, environmental

### Figure

#### List of the Members of Initiative Group in City of Ganja

- Ganja Regional Scientific Centre of National Academy of Sciences of Azerbaijan;
- Deputy Head of Executive Power of Ganja;
- Chairman of Nizami Municipality of Ganja;
- Lawyer-consultant of Kapaz Municipality of Ganja;
- Consultant on Environmental issues of Executive Power of Ganja;
- President of Ganja Association for Agribusiness;
- Chair of Ecology of Azeri Agricultural Academy
- Pro-rector in Science of State Technical University of Azerbaijan
- Head of NANA GRNC Laboratory
- Chair of Humanitarian Organisation Ojag
- President of Children's Foundation

the community. And while this collaboration process may not always be easy, the rewards of an involved and supportive citizenry are well worth the effort!

### 3.1 Initiative Group

LEAPs begin with a core group of committed individuals who are interested in bringing the community together to address environmental issues. In some communities, local governments have taken the lead in initiating LEAPs, while in others, non-governmental organisations (NGOs) have initiated the idea and encouraged their local governments to participate. Sometimes, several NGOs have joined together to initiate a LEAP. Still, in other communities, LEAPs have begun with a few interested individuals discussing the idea, developing a common purpose, and inviting others to participate. There is not one "right" way to initiate a LEAP!

Whoever initiates a LEAP, local government support and

non-governmental organisations, regional government institutions, media, large industries and businesses, academic institutions, and environmentally concerned individuals. It is important that representatives from each of these major institutions be included to help to ensure their future participation on the SC (i.e. if key institutions are involved in organising the LEAP then they are much more likely to participate in the LEAP itself.) The initiators can ask representatives from each of these institutions to help to launch the LEAP process and establish the SC.

It can include the members of Mayor's Office, representatives of NGOs, state regional institutions, like media, large industrial facilities and organisations, educational system, as well as active members of the local community. Participation of the abovementioned representatives in the Start Up Conference will be the basis for ensuring their further involvement in SC.

### 3.2 Project Stakeholders Committee

The Project Stakeholder Committee (SC) guides the community through each step of the LEAP. It is responsible for soliciting the views of community residents on environmental priorities and solutions, educating them on the problems facing the community, and actively involving the public in helping to improve the local environment. It is important that the SC have adequate representation among various constituencies within the community. This diversity of views will help to provide the SC with both legitimacy and credibility in the eyes of the public.

In most communities, the SC serves in an advisory capacity and makes recommendations to the local government. Local governments have primary responsibility for managing a broad range of environmental problems – from drinking water to land-use issues to transportation planning. As the democratically elected body, the Municipal Council has the authority to make decisions on behalf of the community. Thus, the SC makes recommendations and passes these on to the Municipal Council. These recommendations will ideally form a roadmap for future environmental investments by the Council. Thus, it is essential that the SC have the clear support from the local government to help to ensure that its recommendations are fully considered by the Municipality in its planning and investment activities.

It is important to note that the SC is not a legal entity – at least initially (though it may decide to incorporate as a non-governmental organisation at some future point). Rather, the SC draws its effectiveness and influence from the diversity of it represents.

#### Potential Stakeholder Committee Members

Who are the key people to get involved in a LEAP? Who are the people, organisations, businesses, and public agencies that might have a direct interest in environmental protection? Who are the principal stakeholders or people/groups with a vested interest in your work? What individuals and institutions will be expected to make specific environmental investments?

For establishment of SC the initiative group may compile the list of stakeholders to be represented in SC and invite them for participation. Selection shall be open and fair to built confidence towards this process. The methods for involvement people in SC may be different, including round tables, consultations, working meetings, etc. When carrying out meetings it shall be kept in mind that participation of people in SC is very important. It shall be emphasized that SC will be developing an Action Plan on the basis of which grants will be allocated. Prior to establishment of SC an optimal number of SC members shall be determined. The pres-

ence of mayors at certain SC meetings is also important to ensure full support of municipalities in implementation of LEAPs.

Some potential LEAP stakeholders are identified below, including representatives of<sup>1</sup>:

- *Local governments* are the most critical stakeholders in a LEAP. Local governments have direct responsibilities for implementing most of the action strategies that evolve from the LEAP planning process. If possible, it is valuable to include representatives from both the staff of the Municipality as well as the Municipal Council.
- *Environmental and civic organisations* that are concerned with the environment, such as: environmental non-government organisations, hiking and bicycling groups; boating organisations; fishing or hunting clubs; public health organisations; housing estate associations; church organisations; and student groups at local schools and universities.
- *Businesses and industries* that are major environmental polluters.
- *Businesses and industries* whose livelihoods depend on local natural resources, such as paper companies, fishing and hunting tour guides, resorts and local hotels, commercial fishing or other industries dependent on renewable resources, and businesses that require clean water for manufacturing.
- *Public or private utility companies*, that manage drinking water, solid waste, and wastewater systems that are knowledgeable about environmental issues and the conditions of existing facilities.
- *Environmental professionals*, including ecologists and other natural scientists, physicians, landscape architects, and land-use and natural resource planners.
- *Regional government institutions*, including regional environmental inspectorates, regional health inspectorates, and regional tourism offices.
- *Local colleges, universities, and public schools* especially departments in environmental studies, biology, ecology, geology, and other natural sciences as well as economics, urban planning, public policy, and other social sciences.

<sup>1</sup> Adapted from Community-Based Environmental Protection: A Resource Book for Protecting Ecosystems and Communities, July 1997. Office of Sustainable Ecosystems and Communities, Office of Policy, Planning and Evaluation, USEPA, Washington, DC.

- *Private landowners* whose properties may be directly affected by environmental problems, such as individuals living adjacent to a landfill.
- *Religious and ethnic groups.*
- *Labor unions* and other workers' organisations.
- *Community residents* who represent specific interests or the "general public."
- *Media:* representatives of local newspapers, radio, and television.

Stakeholders may exist outside the immediate geographic area. For example, a river restoration effort in your community may affect many communities downstream. Conversely, the economic activities of people and businesses outside of your community (e.g., air pollution) may cause your community environmental problems.

Engaging stakeholders early in the process is key to success – as this helps to ensure that these individuals feel ownership of the decision-making process. People are much more likely to work together successfully if they are involved at the onset of a decision-making process rather than after decisions have been made!

It is very important to duly elucidate the information on

cess will gather at the Start Up Conference and will create the SC. Following the Start Up Conference, the first SC Workshop shall be called. It can be dedicated to assessment of community capabilities, elaboration of action plan, etc.

### 3.3. Working Committees

Many LEAPs involve the formation of specific Working Committees – especially in larger communities where the workload may be significant. While the SC supervises the planning process and ensures that all viewpoints are heard, the Working Committees help to implement distinct elements of the planning process. Each Working Committee is composed of a small group of stakeholder representatives, usually appointed by the SC, who have a particular interest or expertise in a specific issue or problem. In order to ensure that all planning efforts are fully integrated, it is important that the Working Committees report and make recommendations to the SC.

Working Committees are often composed of individuals with specific expertise from outside of the Stakeholder Committee, although representatives from the Stakeholder Committee can also serve on the working committees if their skills or experience are appropriate. For some tasks, such as risk assessment, a SC may hire paid experts and these experts participate on one of the Working Committees. Working Committees can be involved in conducting research, preparing technical

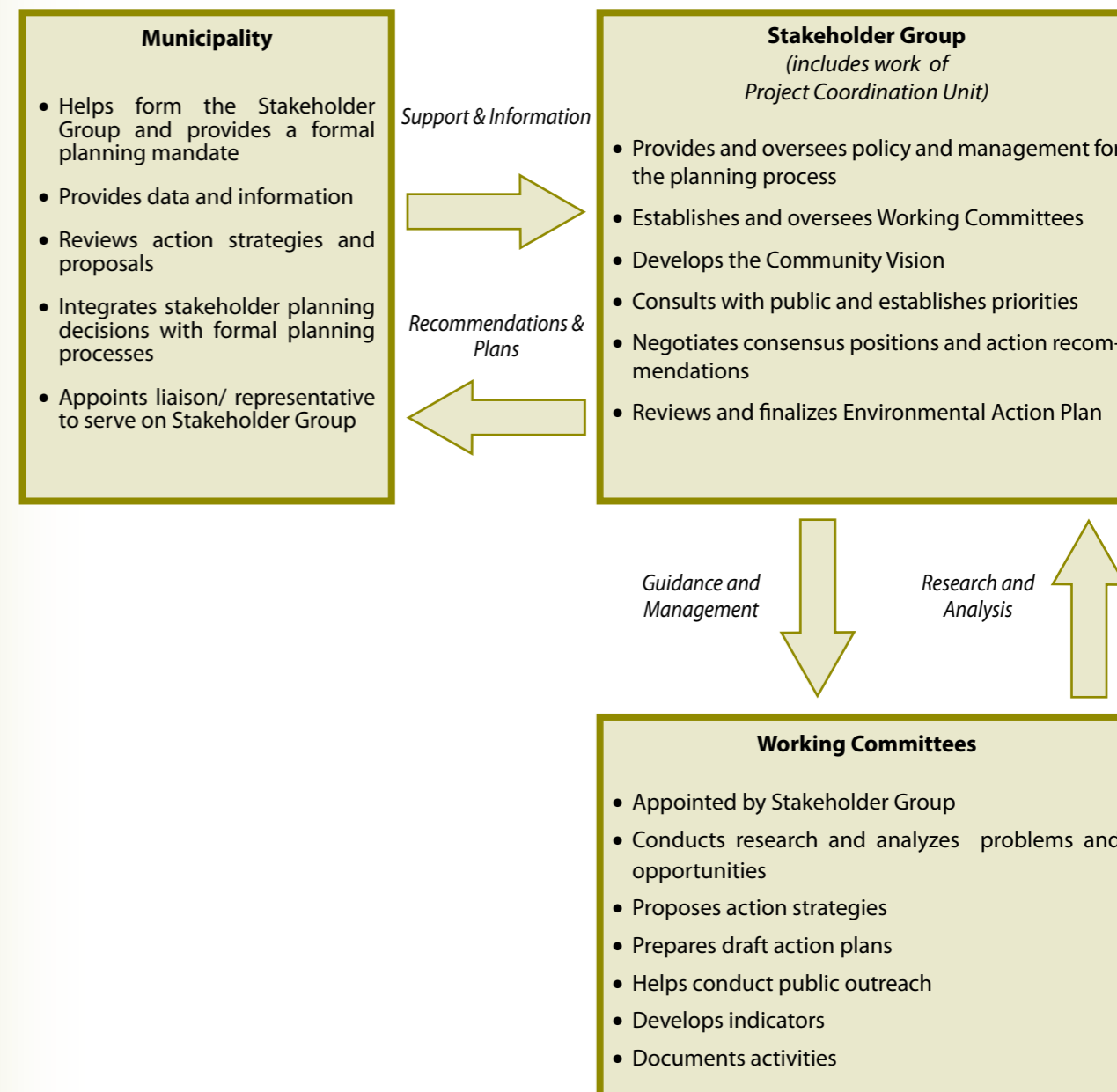
Activity fields	Number of Representatives
City self-governance	2
State authorities and machinery	6
Educational system	5
Public organisations	4
Environmental organisations	3
Business sector	9
Citizens	3
Mass media	1
Health sector	3

SC formation, to ensure possibility of participation in SC for each and every community member. It is necessary to send the personal invitations for the Start Up Conference.

People showing desire to participate in the LEAPs pro-

analyses, and implementing public outreach activities. They contribute information and conclusions, as well as action recommendations, to the SC for review and discussion. Based upon these recommendations, the SC negotiates and approves a final Action Plan and submits this to the Municipal Council for approval.

### Proposed Organisational Structure for a Local Environmental Action Programme<sup>1</sup>



### 3.4 Local Coordinator

Many communities have found that a project coordinator can play a critical role in completing the numerous logistical tasks associated with a LEAP. Where financially feasible, the coordinator should be paid to help to ensure that they devote sufficient time and energy to their job. As an alternative, the Municipality can appoint a staff person, such as the municipal environmental expert, to serve as a part-time coordinator. (Or the municipal staff person can work in conjunction with a paid coordinator.) A paid coordinator can be especially important because the SC is composed of volunteers who often have other full-time commitments, and thus are limited in the amount of time they can devote to the project.

The coordinator's responsibilities can include:

- organisation of SC meetings (including taking minutes at meetings and mailing meeting agendas);
- arrangements for meetings with government agencies and other information sources;
- facilitation of data collection and other necessary research;
- performance of logistical tasks associated with public education and involvement activities; and,
- assistance in preparation of drafts of the problem descriptions, environmental action plan, and other key documents.

<sup>1</sup> Modified from The Local Agenda 21 Planning Guide, 1996. International Council for Local Environmental Initiatives, Toronto, Canada.

When selecting a coordinator, the SC will want to use an open and transparent process to help to ensure that the most qualified individual is hired and that the process is bias-free. An open process will send a message to the community that the selection process is fair and that the best person has been hired for the job. Considering the following information in the job description:

- background about the project
- coordinator's responsibilities
- qualifications (educational and experience)
- time commitment and salary
- application requirements (i.e., submit resume, cover letter, etc.)
- deadline for submitting applications

In preparing the job description, consider the following qualifications: experience in environmental field and understanding of environmental issues; familiarity with the community and local environmental problems; ability to work well with people; strong organisational abilities; and skills in writing, facilitation, and financial management. The same qualifications can also serve as the criteria to select your coordinator.

After adequately publicizing the availability of the position, the SC may want to establish a hiring committee to review the applications, interview the most qualified candidates, and recommend a candidate(s) to the full SC. The SC can then either approve the top candidate or decide to interview the top two or three candidates.

### 3.5 Project Coordination Unit

Some communities establish a Project Coordination Unit that helps to ensure that Stakeholder Group's work is implemented efficiently and effectively and reports directly to the Stakeholder Committee. The Project Coordination Unit can be composed of one or more members of the Stakeholder Committee, a representative of the local authority, the local coordinator, and a paid consultant to help to guide the process, among other individuals. The Project Coordination Unit can include serve:

- Writing progress reports and presenting them to the SC;
- Overseeing project's budget and finances and subcontracting with experts;
- Overseeing the LEAP information and outreach promotion efforts (e.g. Internet page, local bulletin, press releases, public meetings, and organising public events);
- Serving as media spokespeople; and,
- Preparing agendas of SC meetings.

### 3.6 Role of Consultants

Some communities hire consultants to undertake cer-

tain aspects of developing the local environmental action plan. Your community may want to hire a consultant in situations where there is a lack of expertise among SC members or to serve as an overall guide for the community on the LEAP process. Consultants may be valuable in undertaking the following aspects of the LEAP, among others: Analyzing environmental issues, facilitating the environmental priority setting process, conducting economic analysis of preferred environmental management actions; and evaluating project results.

In selecting a consultant, the SC should consider issuing a request-for-proposals that helps to ensure that you select a consultant that is most advantageous to your needs and offers the most responsive and responsible services for the quoted price. Be sure to check any relevant national laws or regulations pertaining to proper procedures for public sector purchases of supplies, equipment, and services.

### 3.7 Decision-Making

Communities in the Caucasus are faced with many different challenges. Whether it is providing clean drinking water, ensuring a strong local economy, or providing a range of social services, local government officials are being asked to address an increasingly complex set of issues. In addition, they are finding it more and more difficult to develop solutions that are satisfactory to all community members. Local officials are besieged with unresolved conflicts and plenty of headaches.

In recent years, local officials from communities worldwide have started to take a different approach to making decisions – they are inviting citizens to help them to address local concerns and issues. Local officials are finding that it is in their self-interest to engage citizens in addressing environmental problems and sustainable development issues. Municipal council members and other elected officials are often faced with immediate problems – and don't have the luxury of undertaking long-term planning and addressing issues that require long-term solutions. They are finding that community members bring a wealth of energy and expertise to help to solve community problems.

Citizens can play an important role in providing information, monitoring compliance with governmental laws and regulations, and formulating innovative solutions. Further, local government officials are realizing that when citizens are involved in helping to make decisions – and thus have some ownership of the solutions – that they will be much more likely to support specific investment decisions by the local government.

Citizen involvement and collaboration are the cornerstones of a LEAP. Collaboration means getting people

involved in creating their own solutions – rather than responding to and modifying someone else's. LEAPs provide a collaborative process for ensuring that the views of those individuals who are directly affected by environmental issues are reflected in local decisions. LEAPs are designed to hear and respond to the needs of all participants.

Collaboration requires exploring mutual interests rather than taking positions. Once you take a position – you are usually prepared to defend that position. Taking positions immediately puts you in a defensive mode. Exploring mutual interests requires looking for common ground that can bring you and those with different

views together. Usually the collaboration process involves working with individuals and groups that might normally be considered adversaries. For example, LEAPs bring environmental advocates and polluters together to work on mutually acceptable strategies for improving the environment. Working side-by-side, these individuals are provided with the opportunity to learn each other's perspectives and chart a common future for the community. Thus, collaboration requires a very conscious effort to reach out to non-governmental groups, government agencies, business associations, and individuals who can provide a valuable contribution to your efforts.

#### Putting Collaboration to Work<sup>1</sup>

*Collaboration is a challenging art. It often means talking seriously with people you do not know, agree with, or even like. It means dealing with people you may fear or those you think have power over you. To make your collaboration efforts more successful (not to mention more fun and less stressful), consider the following principles.*

- **Hear their concerns and ideas before telling them yours.** In important discussions, many of us tend to state our own ideas first. But you are far more likely to be heard if you first listen to the ideas of others. Once they have stated their views, their minds will be clear to hear your ideas.
- **Understand their interests before describing yours.** Look for the interests, fears, and values that underlie the things they are saying. Repeat what you think you are hearing. Ask if your understanding is correct.
- **Describe your interests instead of defending your position.** Most of us have a good idea of how our interests can be fulfilled. That is our "position." If, instead, we talk about what we want – our problems, needs, and interests – before seeking solutions, the discussion may lead to alternative ways of fulfilling those interests.
- **Join them before asking them to join you.** Look for ways in which their interests are consistent with yours. Then work with them to focus on how you can both get what you want.
- **Set aside differences and disagreements to solve mutual problems.** If you are talking with people with whom you have disagreed in the past, do not ignore those differences. Instead, clear the air by acknowledging them. Agree to disagree respectfully on certain points, but keep in mind that what is most important is that you are part of the same community and you're eager to collaborate on this particular effort, regardless of past differences.
- **Employ active listening.** Acknowledging, empathizing, and clarifying are the most valuable skills that can be brought to any important communication.
- **Pursue easier issues first.** Your collaborative effort may go smoothly, but if it is a highly charged discussion and the issues are difficult, tackle the easiest one first. That success will give you confidence and momentum to take on the more difficult issues.

<sup>1</sup> Economic Renewal Guide, 1997. Michael Kinsley, Rocky Mountain Institute, Old Snowmass, Colorado, USA.



## Get Started



## INTRODUCTION

Local Environmental Action Programmes (LEAPs) offer a process for getting citizens involved in local environmental decisions. They involve a close working relationship between citizens and local government officials, and the participation of a diversity of individuals and groups who are directly affected by environmental decisions. This diversity of views is often facilitated through the formation of a Stakeholder Group (SC) composed of individuals representing local government, businesses and industries, schools, academia, and non-governmental organisations, among other institutions. This subchapter describes a process for starting the LEAP process, including raising public awareness and forming the project stakeholder committee.

### 4.1 Establish Initiative Group

Usually, LEAP development process starts with creating Initiative Group, which is responsible for:

- Attracting the funds for financing the project initiation;
- Commencing preliminary activities on rising awareness of the population;
- Identifying the potential stakeholders;
- Promoting establishment of SC.

One of the first steps the Initiative Group can take is develop draft LEAP scope and goals to tailor the LEAP to your community's unique needs and provide a starting point for the Stakeholder Committee. The Initiative Group can help to define the scope of the LEAP by considering some of the following questions:

- Are environmental problems in the community clearly understood or is an environmental assessment needed?
- Are there already clear environmental priorities in the community that have broad public support or do you need to set priorities? How extensive and elaborate should the environmental priority-setting process be?

### Figure

As it is known, the LEAPs process in the Caucasus was initiated by the Regional Environmental Centre for the Caucasus. For this purpose REC Caucasus announced contest for selection of the pilot cities in Armenia, Azerbaijan and Georgia.

At the initial stage of LEAPs Project, long before the announcement of the contest, the Initiative Group was created in Kutaisi. It included representatives of local authorities (Mayor's Office, and Sakrebulo), Regional Department of the Ministry of Environmental Protection and Natural Resources, NGOs and higher schools, state environmental agencies.

Initiative Group aimed towards investigating the potential capabilities and outlooks for successful participation in city selection contest existing in Kutaisi, as well as providing media, NGOs and other stakeholder with information on LEAPs. The Provisions on Initiative Group were elaborated. The meetings of the Group were held weekly.

It is noteworthy that, consequently, all the members of Initiative Group became the most active participants of LEAP development in Kutaisi. The Local Coordinator and his deputy were also elected from the Group members. Besides this, two trainers (out of four) and moderators, as well as some of the SC members came from the Initiative Group.

Within the short period, Initiative Group managed to collect data on organisations involved in the environmental activities, generalise the information on scientific and professional personnel, conduct the press-conference for media representatives (see Press-release), organise meeting with environmental specialists and study the public opinion on environmental issues in the city.

It is necessary to mention that, with the financial assistance of Mayor's Office, one of the NGOs participating in Initiative Group conducted poll, during which 1,000 persons were questioned. 54% of questioned were women; the age distribution was following: 37% – 25-40, 33% – 40-65.

The ranking of the issues was following:

- Household waste disposal (34%).
- Air pollution by automobile transport (32%).
- Poor drinking water quality (32%).

According to majority of the respondents, the responsibility for resolution of environmental issues existing in the city shall be laid on the local authorities. 22% of the questioned think that the society shall also contribute to resolution of the environmental problems.

Initiative Group also employed the 'hot-line', which was available for every citizen of Kutaisi for posing a question or proposals on environmental status of the city.

- To what extents will your LEAP address sustainable development issues, i.e., should your efforts incorporate economic, community development, social, and equity concerns?
- How will the LEAP tie in with other planning processes underway, such as the preparation of the municipal land-use plan or development plan?
- What should the geographic focus of your efforts be (neighborhood, city, watershed)?
- How informed are community residents about local environmental problems?
- Is there already a local environmental action plan in existence? If so, does it need to be updated?
- How long do you want the planning process to be and what period of time should the local environmental action plan cover?

### 4.2 Secure Sponsors and Funds

Another primary responsibility of the Initiative Group is to raise enough funds to cover start-up costs, and if

possible, some of the operational funds. LEAPs costs can be divided into two major categories: start-up costs and operational implementation costs. Start-up costs include those expenses for initially publicizing the LEAP concept in the community and helping to create the SC, including preparing publicity materials, conducting mailings, and organising a Community Forum or public meeting. There are also operational costs associated with the LEAP itself, including maintaining an office (telephone/fax, copying, mailings, and office supplies), conducting studies and research, and paying a coordinator. A paid project coordinator can play a critical role in managing the logistical matters associated with a LEAP.

### 4.3 Conduct Community-Wide Informational Campaign

Raising public awareness is a good first step toward getting the LEAP off the ground and forming the SC. The primary purpose of these public awareness efforts is to

Press-release  
Kutaisi, Georgia  
July 11, 2003

### *Kutaisi faces the chance of becoming the first city in Georgia to develop LEAP*

For the first time in the South Caucasus countries the Regional Environmental Centre for the Caucasus launches the LEAPs Programme, which represents the long-term environmental planning and respective implementation process.

The main goal of the Programme is to promote public participation in environmental decision-making, reveal and analyse existing environmental issues, set the priorities and identify the ways for implementing the respective measures, mobilise the necessary resources involving the various financing sources.

For implementation of the Programme one city in Georgia (as well as in Armenia and Azerbaijan) proving to have the sufficient capacities will be selected.

Particularly the mentioned capacities shall include:

- readiness of local authorities to support the Project;
- proven achievements in the environmental field and level of NGO development;
- positive examples on cooperation between NGO and state sectors;
- existence of the qualified specialists;
- interest of media in environmental issues.

The Initiative Group aiming towards revealing the potential of Kutaisi for successful participation in pilot city contest has been created.

Initiative Group invites everybody, who is interested in the above mentioned Project to participate in its work.

### ***Protection of environment in Kutaisi is our common concern!***

Contact Details  
City Sakrebulo – 43579  
Mayor's Office – 4 88 43  
Regional Service for Protection of Environment – 42453  
NGO Spectrum - 4 8057  
NGO ASA - (893) 254718  
NGO Habitat - 73439

**Below are several useful hints for raising funds:**

- **Seek a diversity of funds:** Seek funds from a variety of sources, including local and regional governments, industries, local businesses, and non-government organisations. This diversity will help to establish the fact that the LEAP is truly a community-wide effort. It will also help to avoid over-reliance on one funding source and potential problems associated with a particular funding source seeking to “control” the process.
- **Seek 'in-kind' contributions or donations:** Not all expenses require cash expenditures. For example, your local government or a non-governmental organisation can provide office space and access to computers, phones, and other office equipment. Printing companies and copy centres can be asked to print posters and brochures free-of-charge or at reduced fees.
- **Pursue grants:** Grants provide one viable source of funds for LEAPs. For example, your Municipality might have money available in a local environmental fund. Private foundations or National Environmental Funds are other possible sources of grants.

inform and educate community members about the scope and goals of your efforts and to solicit their input in the design of the LEAP. Further and perhaps most importantly, your public awareness efforts can help to stimulate the interest of community members to participate on the SC. Successful public outreach efforts require two-way communication. It means both educating the citizens and seeking their ideas, concerns, and opinions. This process of “educating and opinion seeking” can help to ensure that the priorities and solutions developed by your SC reflect those of the broader community.

To raise public awareness about your LEAP, the Initiative Group might consider the following options:

- **Hold a Community Forum:** This Forum provides an opportunity for bringing together concerned residents to learn about a LEAP, begin to identify environmental issues, and an opportunity to identify individuals who might be interested in serving on the SC.
- **Work with the Media:** Local television, newspaper, and radio coverage of project events and results is absolutely critical. You might consider the following approaches to working with the media: 1) meeting with newspaper editors or reporters to inform them about the project; 2) conducting a newsworthy event, e.g., hold a press conference at a polluted site; and, 3) providing the media with regular news releases and information updates.
- **Survey community residents:** Consider surveying town residents either through the mail, phone, or directly in public places or at meetings. Be sure to solicit their views on the need for a LEAP, what environmental issues they believe are most serious,

and who they think should be on a SC. You might consider offering incentives to survey respondents, such as a lottery drawing for products or services donated by local businesses.

- **Prepare publicity materials:** Consider publishing a brochure describing what a LEAP is, what the purpose and goals are, how long it will take, and what the benefits to the community will be of undertaking one. Be sure to distribute the brochure widely throughout the community. You might also consider preparing a poster publicizing the LEAP or specific events, such as the Community Forum, leading up to the formation of the SC.
- **Hold a community celebration:** People like to enjoy themselves! Promoting environmental awareness and having fun can be mutually complementary. Consider sponsoring events such as fairs, outdoor activities, dances, and community actions or holding contests for school children, such as a recycled art competition or sponsoring a contest for all residents to develop a logo for your project. You might combine a celebration with an activity that gets citizens involved in improving the local environment, such as collecting trash along a stream bank, planting trees on the Earth Day, or even painting a mural on a prominent building.

Some of your public awareness efforts can be specifically targeted toward potential stakeholders. For example, you might consider attending a meeting of the local business association to explain the LEAP goals and solicit their participation on the SC. You may want to survey residents surrounding a polluted site to find out their views on the severity of environmental problems in the community.

**Figure**

**Experience of organising informational campaign in Kutaisi**

At the first stage of LEAP implementation, the informational campaign has been organised in Kutaisi. It included meetings in schools, organisations, NGOs. The information on goals, objectives and targets of the LEAP were made publicly available through the publications in press.

One of the most important events at this stage was LEAP Presentation conducted in Kutaisi Technical University with participation of heads of local authorities, scientists, environmentalists, employees of the state environmental agencies, physicians, students, representatives of NGOs and media. The Presentation was attended by the honourable guests from the US Environmental Protection Agency and REC Caucasus. The speeches were delivered by Chairman of Kutaisi Sakrebulo (City Council), Rector of KTU, heads of environmental chairs from Kutaisi high schools, head of the Regional Department for Environmental Protection, chief allergist of the city, pedagogues of the secondary schools, etc.

It should be mentioned that Kutaisi newspapers operatively responded to the Presentation and printed several publications covering LEAPs issues.

Huge number of participants and wide resonance caused by the meeting, provided for big concernment in LEAPs both among the population and specialists' circles.

Under the informational campaign, the meetings in the educational institutions (schools, chairs of the universities) and organisations were arranged. The purpose of the meetings, along with dissemination of the information on LEAPs, was collecting an information on environmental problems of the city, recording the proposals and wishes of the citizens related to the environmental issues. For exact registration of the information, the special form has been developed, and it has been filled out for each of the meetings

**4.3.1 Organising Local Environmental Events**

Local environmental events<sup>1</sup> directly involve community residents in making their community a better place to live. Local environmental events result in tangible and visible environmental improvements and can be completed within a relatively short time. People believe what they see. Not every environmental improvement requires large capital investments. Many problems can be addressed with a small amount of money and a large amount of volunteer help. As you begin to identify some of the more serious environmental problems facing the community, keep in mind which problems can be addressed by volunteer citizen action.

Local environmental events and public education go hand-in-hand. For example, a river clean-up or tree-planting project provides an excellent opportunity for distributing brochures to participants about the goals and scope of the LEAP. A public survey can include questions asking people whether they would be willing to participate in a workday to improve the local environment. Doing something meaningful for your community does not necessarily involve sacrifice. In fact, the only sustainable community initiatives are those built

on a foundation of self-interest. You can begin to take control of your life and your community by starting with small projects. Thinking big and starting small is the only recipe for success!

Simple and practical efforts that produce tangible results are essential to building momentum in local environmental event. You can strengthen your community and save tax dollars by using creativity, common sense, and taking direct initiative. Thus, it is important your SC take a positive approach and incorporate fun and personal benefit in a simple, straight-forward manner to help to tap significant citizen energies in undertaking innovative solutions. Building this positive spirit and common ground is a prerequisite to doing any meaningful environmental protection. To succeed, you need to have a strong sense of possibility, and this comes not just from talking, but from working together on constructive activities.

Not every environmental initiative has to be organised by your SC. Sometimes simply suggesting various ideas to different organisations can catalyze a number of activities. Alternatively, your SC can help a particular group in obtaining the necessary resources or providing logistical support.

Some examples of how other organisations might want to get involved in promoting community environmental

<sup>1</sup> Adapted from “Successful Community Building” 1994. Developed by Jeff Bercurvitz, Community Innovations, Strafford, Vermont, USA.

initiatives and raising public awareness include:

- School teachers might create projects in which students study and work to solve local environmental problems as a mean of stimulating their students and trying to get the school to be perceived as a greater asset to the community;
- Businesses might want to learn about they can save money by improving energy efficiency and reducing waste;
- Libraries might create a special presentation and collection on environmental problems and solutions to get people to come through the library doors;
- A historical society might host a session on past environmental problems and successes as a mean of creating awareness about itself; and,
- Teenagers who hang out in the park and paint graffiti on buildings might be willing and able to create murals with environmental themes.

#### 4.3.2 Conduct Community Forum

A Community Forum offers one useful approach for informing community members and potential stakeholders about the LEAP. Community Forums are open to the public. They offer an opportunity to review the basic components of the LEAP, to identify environmental issues, and involve community members on the stakeholder committee. Organising a Community Forum involves the following steps described below.

##### 1) Prepare Kick-Off Conference Forum Agenda

The Forum can provide a unique opportunity to introduce people to participatory, interactive small group working sessions – wherein participants have an opportunity to share their views and contribute in a meaningful way. Be sure to use plenty of visual aids, such as slide shows, photo displays, and maps to help to capture

participants' attention. See Attachment for a sample agenda.

##### 2) Coordinate logistics

Preparing for a Community Forum involves numerous details and tasks. Consider the following logistical arrangements in preparing for the conference:

##### 3) Select speakers and facilitators

You will need individuals to moderate the Forum, give presentations, and facilitate the small group work sessions. The moderator's job is to welcome people and explain the purpose of the workshop, introduce speakers, explain the Forum logistics, and make sure the Forum schedule stays on track. The Mayor and Chairperson of the Municipal Council can offer introductory remarks and encourage community members to participate in the project. Consider inviting technical experts to speak about the severity of environmental problems in the community and/or individuals from other communities with LEAP experience.

You will also need individuals to help to facilitate the small group work sessions. Facilitators can help to assure that the objectives of the group work sessions are accomplished and that all participants have an opportunity to share their perspectives. A few days prior to the Forum, conduct a facilitator training to acquaint facilitators with the materials, brief them on their responsibilities, and provide them with practical experience in facilitating small group sessions.

##### 4) Invite participants

To ensure that you reach out to as many people as possible, consider sending direct invitations to identified stakeholders and publicizing the Forum to the general public through the media, posters, and promotional ma-

Logistics	Considerations
Space	Secure a large meeting room that can comfortably hold 50 to 150 people or more – depending on the size of your community. In addition, several smaller rooms are desirable for the small group work sessions that are sufficient to seat 10-to-15 people each. Plan on conducting a walk-through of the space prior to the forum to be sure the lighting and other mechanical details are in full working order.
Materials	Purchase large pieces of plain paper that are approximately one by two meters (often referred to as 'flip charts') for the small group work sessions. Each small group will also need tape and different colored markers.
Equipment	Use audio-visuals – such as slides, overheads, and videos – to improve the quality of presentations and generally increase audience attentiveness. Thus, you will need access to audio-visual equipment.
Food	Provide refreshments such as coffee, juice, and lunch. Volunteers may be willing to make snacks and bring food. You might want to make arrangements with a nearby cafeteria or restaurant to prepare lunch.

terials. Send invitations to identified stakeholders that include a LEAP description, forum goals, and agenda. Be sure to ask the Mayor and/or Municipal Council Chairperson to serve as one of the Forum co-sponsors and even to review the invitation list.

Media announcements and general publicity are important in order to reach a broad range of community members. Consider asking your local radio stations and newspapers to publicize the Forum as a public service. This will help to reach a broad spectrum of participants. Also, ask reporters to publish articles describing the project, conduct radio interviews, and put up posters around town to spark community interest.

##### 5) Form Stakeholder Committee

The SC guides the community through each step of the LEAP, including identifying and setting environmental priorities, identifying potential solutions, and helping to implement preferred actions. Perhaps most importantly, the SC is responsible for reaching out to the rest of the community and ensuring that the actions of the SC reflect those of the community as a whole.

To form a SC, the Municipality and/or organisers can prepare a list of potential stakeholders they believe should be represented on the SC and invite these individuals to participate. It is important that this selection process be open and fair to help to legitimize the SC in the eyes of the public. It is important to use a variety of methods to encourage, and in some cases persuade, individual stakeholders to participate on the SC. These methods can include sending personal letters, holding one-on-one discussions, and conducting small focus group meetings with certain groups of stakeholders, such as representatives from industries, environmental NGOs, or universities.

As you "sell" the LEAP concept, be sure to explain why you are seeking their participation and why it is important that they participate. For example, point out that the SC will develop a long-term environmental plan for the community that will guide future municipal investments. By joining the SC, they can ensure that their viewpoints are adequately reflected!

In addition to formal invitations, consider opening the SC to interested citizens from the community. Citizen participation can be fostered by holding a Community Forum, as described earlier, or through other public awareness activities. Community Forums can be an especially effective method for bringing citizens together in smaller communities.

Before you form the SC, consider whether you want to limit the total number of people on the stakeholder committee. A larger SC means that each individual has less time to contribute to the discussion, and may make it more challenging holding effective meetings and mak-

ing decisions. On the other hand, the larger the number of people on the SC – the greater the number of stakeholders that can be represented and the more people available to share the workload. You will need to balance these considerations in forming your SC.

##### 6) Define Project Goals and Establish Ground Rules for Group Work

At the first meeting, the SC can review the LEAP scope and goals prepared by the Initiative Group, and make any modifications that are necessary. In some communities, the SC members prepare and sign a Memorandum of Agreement (MOA) that serves as basis for cooperative work.<sup>1</sup> The MOA is reviewed periodically to assure that it is being observed and is up-to-date. The MOA can include the following components:

- LEAP goals;
- Specific activities that are to be jointly undertaken;
- Respective roles and responsibilities of SC members;
- Responsibilities of chairperson(s) and other positions within the SC;
- Types of information to be shared and standards for sharing of information in the process, including agreements on confidentiality;
- Timeframe for completing each LEAP phase;
- Methods for group decision-making and conflict resolution;
- Resources to be provided by each member of the SC; and,
- How recommendations of the Environmental Action Plan will be integrated into the statutory planning activities of the Municipality.

Soon after the formation of the SC, it will be important to consider a number of ground rules and logistical issues related to the efficient operation of the SC. You may want to include these ground rules in your Memorandum of Agreement.

First, the SC will need to decide how often it will meet, how long its meetings will be, where meetings will be held, and at what times. Consider choosing meeting dates in advance so that SC members can make their plans around these dates and so interested members of the public can attend. Also, consider establishing a specific day of the week for a meeting time – such as the second and fourth Tuesday of each month, and agreeing upon a set length of time for each meeting (such as two hours) and stick to it! Meetings that go beyond the agreed upon timeframe usually tend to frustrate participants.

It will be important for the SC to select a Chairperson or Co-Chairpersons to help to guide the SC in its work. He/she can facilitate meetings (although this role is not

<sup>1</sup> The Local Agenda 21 Planning Guide, 1996. International Council for Local Environmental Initiatives, Toronto, Canada.

limited to the chairpersons), officially represent the SC at public forums or events, help to prepare the meeting agenda, work with and supervise the project coordinator, coordinate activities among the Working Committees, and resolve conflicts among SC members. It is important to note that the Chairperson has the same amount of power and rights as any other SC members, but has been elected by the SC to help to guide its efforts. You might consider establishing term limits for Chairpersons, i.e. change Chairpersons every six-to-nine months in order to give other members an opportunity to serve in leadership roles. Alternatively, you may decide to allow a Chairperson to be re-elected for additional terms.

Another issue that SC will need to address is how to receive and expend funds. Since the SC is not a registered organisation, it will need to be affiliated or associated with a legal entity such as the Municipality or a local non-government organisation acting on its behalf.

As a group of individuals who has never worked together before, SC members will benefit by participating in some workshops on how to work collaboratively. These workshops or mini-trainings will help you to function more effectively as a group by providing you with the skills to make decisions, work through conflicts, and become an effective team. These workshops can cover such topics as:

- Team building and leadership development
- Effective communication and conflict resolution
- Brainstorming
- Negotiation
- Effective meetings
- Facilitation skills
- Decision - making methods

Finally, it is important to note that the composition of the Stakeholder Committee can and will change over the course of the LEAP. Individuals will leave the SC as their time, availability, and interests change. Thus, you will probably want to establish a process for accepting new members to replace those that leave. For example, you may wish to establish a process of requesting nominations for new members and their approval by the SC. Be sure to consider the composition of SC as you evaluate potential new members, e.g. are you seeking new members with specific technical expertise or who represent specific constituencies? This review and approval process will help to ensure that the changes in your SC's composition will be done thoughtfully.

#### 4.4 Coordination of Project Implementation

One of the main factors ensuring success in LEAP elaboration is effective management based on reasonable coordination of all the parties involved in the process. This responsibility, usually, is posed on Coordinator and/or Coordination Body of the Project.

##### 4.4.1 Local Coordinator

Based on the experience, the Project Coordinator can play a critical role in implementation of logistical tasks

related to LEAPs. In case the necessary financial resources are available, it is desirable to remunerate the Coordinator's job, for it ensures him applying the sufficient efforts and time in fulfilment of the assigned tasks. Coordinator can be appointed member of municipality (environmental expert, for instance), who has only half time workload. Hiring a Coordinator is extremely significant, because most of the SC member are usually volunteers and are busy at their main jobs, therefore limited in possibility to dedicate their time to the Project.

The obligation of the Coordinator can include:

- Organising SC meetings (including keeping the minutes and dissemination of agenda);
- Organising meetings with state authorities;
- Promoting collection of information and other necessary researches;
- Organising logistical support to the activities related to awareness rising and public participation;
- Assisting in elaboration of 'draft' problem descriptions, environmental action plans and other key documents;
- The Coordinator selection process MUST be open and transparent. This will allow the public seeing objectivity of the process and ascertaining in professionalism of selected candidate.

The following factors shall be taken into consideration in the selection process:

- experience in environmental field and understanding of ecological problems;
- awareness on the local environmental problems;
- communicability;
- organisational skills;
- experience in working with documents and financial management.

After announcement of the vacancy, SC can establish commission responsible for consideration of the applications, conducting interviews with the shortlisted candidates and recommending them to the Stakeholders' Committee. In this case, SC can approve the recommended candidacy, or require conducting the additional interviews with two or three best candidates.

##### 4.4.2 Coordination body

The coordination body is usually created in order to facilitate the effective work of steering committee. Coordination body is directly reporting stakeholder committee. Few members of stakeholder committee, representatives of local authorities, local coordinator and contracted consultants are usually members of coordination body of the project. The responsibilities of coordination body can be listed as follows:

- Preparation of reports regarding the progress of project and presentation to stakeholder committee;
- The control of financing and budget of the project, preparation of contracts with subcontractors;
- Dissemination of information regarding LEAP (web site, local periodic press, official press releases, preparation of public meetings etc.);
- liaison with public information bodies ;
- facilitation of stakeholder committee meetings.

#### What is Collaborative Leadership?<sup>1</sup>

Collaborative leaders operate under very different assumptions from those of traditional leaders. Instead of putting groups or coalitions against one another, they look to the public for power and serve in a very different leadership role. Their role is to convene, catalyze, and facilitate the work of others. They know that the will to solve problems comes not from them or from elected leaders, but from citizens engaged in addressing public issues.

Collaborative leaders possess new and different skills. They know how to analyze and understand the challenge of leadership and how to develop strategies that will overcome resistance and inertia. They know how to bring citizens together and help them to build trust and the skills for collaboration. They help to design constructive processes to collaboratively solve problems and create shared visions.

Collaborative leaders:

- **Blinspire commitment and action:** Energize others to create visions and solve problems. Create new alliances, partnerships, and forums. Bring people together, help them to work together constructively, and keep them at the table.

- **Lead as peer problem solver:** Promote commitment and involvement by the participants – creating a credible, open process in which participants have confidence. Facilitate ownership of the process among all participants. De-emphasize power and status among participants and help peers to solve problems.

- **Build broad-based involvement:** Make a conscious and disciplined effort to identify and bring together stakeholders who are necessary to define problems, create solutions, and get results. Take great pains to be inclusive, recognizing that many collaborative initiatives fail because the right people were not included.

- **Sustain hope and enthusiasm:** Sustain confidence by promoting and protecting a process in which participants believe. Help to set incremental and obtainable goals and encourage celebrations of achievement along the way. Help people to do hard work when it would be easier to just quit.

<sup>1</sup> Collaborative Leadership, 1994. David Chrislip and Carl Larson, Jossey-Bass Inc., San Francisco, CA.

#### Sample Agenda Regional Environmental Centre for the Caucasus Kick-off City Conference on Local Environmental Action Plans Ararat, Armenia June 10, 2004 Agenda

12:30-13:00	Registration of Participants
13:00-13:10	Opening Remarks Welcoming Speech by Akop Tovmasian, Mayor of Ararat
13:10-13:30	Presentation of Local Environmental Action Plan – Keti Samadashvili, representative of the Regional Environmental Centre for the Caucasus
13:30-13:50	Implementation capabilities and legal framework for Local Environmental Action Plans – Larissa Kharatova, National Project Coordinator, Ministry of Nature Protection, RA
13:50-14:10	Presentation of Tbilisi Conference on Local Environmental Action Plans – Aikaz Gukasian, Local Coordinator
14:10-14:20	Project Implementation Outlooks – Hovanes Ghazaryan, REC Caucasus
	Role of public organisations of Ararat Marz in environmental issue resolution – Alina Lalaian, President, NGO Ararat Greens
14:20-14:40	Discussion
14:40-15:10	Establishment of Stakeholders' Committee
15:10-15:30	Working meeting with Group members
15:30	Closing the Conference

## Identify and Prioritize Environmental Problems



### 5.1 Assessment tools

An Environmental Assessment is a profile of environmental conditions in your community – as it exists today. It helps citizens to paint a portrait of the place where they live given the current environmental status of the air, water, and land. Assessment methodologies range in their level of sophistication, data needs, cost, and time requirements. Some communities undertake Environmental Assessments primarily as a means of inventorying environmental conditions, while other communities use assessments as a critical step toward setting environmental priorities. An Environmental Assessment:

- Provides a clear and shared analysis of the key environmental issues facing the community;
- Provides information about the environmental impacts from the activities of public and private institutions, and individuals, and what these institutions and individuals are doing (or not doing) to improve and protect the environment;
- Establishes a “baseline” of environmental conditions from which to measure the effectiveness of actions taken to improve environmental conditions;
- Raises public awareness of environmental issues, and potentially leads toward engaging citizens in improving the environment; and,
- Helps to build relationships and partnerships among stakeholders that can lead to new opportunities for action.

Environmental Assessments generally fall under two broad categories: participatory and expert assessments. Participatory assessments rely primarily on lay people to collect data and information about environmental problems in the community. Participatory assessment tools, such as a “Community Environmental Inventory,” involve gathering information from a variety of sources to determine the state of environmental conditions in the community. This often involves soliciting community residents and businesses on their knowledge, concerns, and insights into history and root causes of environmental problems. (See Figure 5.1.1: Assessment Tool #1 – “Community Environmental Inventory,” and Figure 5.1.2: Assessment Tool #2 – “Rapid Urban Environmental Assessment” below).

Expert assessments are more formalized methodologies that scientifically and statistically evaluate and document environmental conditions in the community. Expert assessments, such as “Risk Assessment,” require trained and experienced scientists or “risk assessors.” (See Figure 5.1.3: Assessment Tool #3 – “Risk Assessment,” and Figure 5.1.4: Assessment Tool #4 – “Comparative Risk Analysis” below.) Expert assessments generally require greater amounts of scientific knowledge, analytic expertise, access to valid data, and funding. It is important to note that many communities use a hybrid of these two approaches. For example, some communities start their assessment process by conducting public opinion surveys to determine what environmental problems to focus upon, and then use this information as the foundation for a more expert-based assessment.

Your Municipality may have recently prepared an assessment or may already have clearly defined environmental issues. Before you embark on an assessment, be sure to check on what information related to environmental conditions has already been compiled in your community.

Figure 5.1.1  
Assessment Tool #1 – “Community Environmental Inventory”\*

Community Environmental Inventories provide a tool for assembling large amounts of information on the status of a community’s environment, natural resources, economic activity and physical conditions. In general, this approach asks participants to assemble information on environmental conditions. A Community Environmental Inventory involves the following components:

- Identification of who is discharging pollutants into your community;
- Identification of what pollutants are being discharged in what quantities;
- Determination of whether those industries or individuals that are polluting are in compliance with environmental laws;
- An inventory of natural resources (such as parks and natural areas) in your community;
- Mapping environmental and natural resource information;
- Analysis of the possible impacts of pollutants on human health; and,
- Analysis of whether specific populations within the community, e.g. low income residents or particular ethnic groups, receive more pollution than others.

Community Environmental Inventories can be performed on:

**Environmental concerns:** identifies the types of environmental issues and who causes the pollution.

**Natural resources:** catalogues the natural features of the community, including those that are or are not protected. The inventory provides a means to begin assessing the natural features and determining their relative health or status.

**Facilities:** inventories specific environmental facilities within the community, such as individual industries and drinking water treatment facilities.

Community Environmental Inventories can help citizens and local governments to gain a better understanding of environmental problems facing their communities in an easy and accessible format. However, it will not necessarily help individuals to identify the relative scale and severity of issues that may be needed to rank environmental problems.

Source: Where We Live: A Citizen’s Guide to Conducting a Community Environmental Inventory, 1995. Donald Harker and Elizabeth Ungar Natter. Island Press, Washington DC

\* The results of Community Environmental Inventories can be used in compiling a “State of the Environment Report (SER).” SERs are typically structured around a number of environmental indicators for each topic that graphically illustrate how conditions or problems have changed over time. This provides a strong visual sense of possible future trends.

Figure 5.1.2  
Assessment Tool #2 – “Rapid Urban Environmental Assessment”

Rapid Urban Environmental Assessment (RUEA) is an environmental auditing methodology developed by the World Bank, United Nations Development Programme, and UNCHS Urban Management Programme. RUEA is designed to enable local experts to rapidly assess the state of the urban environment as input into a strategic urban environmental management process. The RUEA has three main components:

1) Environmental Data Questionnaire: The questionnaire is designed to provide a comprehensive picture of existing conditions and to rapidly collect data from existing sources. The questionnaire covers the following categories of information: baseline social and economic statistics, baseline housing conditions, baseline health conditions, the natural environment, land-use, urban transportation, urban energy use, air pollution, noise pollution, water resources, and solid/hazardous waste.

2) Urban Environmental Profile: Using data collected from the questionnaire, an Urban Environmental Profile is prepared to analyze the nature, trends, and factors that influence environmental quality in the city. The environmental profile provides background information on historical, geographical, and

socioeconomic aspects of urban development. The profile summarizes information on the quality of and key hazards to the air, water, and land. Another section of the profile includes an analysis of how development-oriented activities and services in the public and private sectors influence environmental quality and how environmental factors constrain or promote development.

3) Public Consultation: Following the completion of the environmental profile, a series of public consultations are organized to allow for public dialogue on environmental priorities and options as well as to partially validate the results of the questionnaire and profile through public discussion.

The RUEA has been found to be an efficient and relatively low-cost method of assessment. While this methodology does facilitate the collection of an extensive amount of data, it generates purely descriptive information and provides little foundation for setting priorities for action.

Source: Rapid Urban Environmental Assessment: Lessons from Cities in the Developing World, 1994. Joseph Leitman, World Bank, Washington, DC.

Figure 5.1.3  
Assessment Tool #3 – “Risk Assessment”

Risk Assessment is an assessment tool that is used to measure the probability of an adverse impact (risk) on human health, ecosystems, or quality of life. Risk is the probability of adverse effects. Health risk assessment is a tool for determining the probability of contracting illness, usually cancer, from exposure to a particular chemical, substance or activity. Adverse health effects are caused by exposure to harmful substances and can vary widely, ranging from lethal effects to more subtle biochemical, pathological, or physiological effects. Researchers employ sophisticated models based on human and laboratory animal exposures to chemicals to determine the chances from contracting cancer and non-cancer illnesses.

The traditional human health risk assessment process is comprised of four interrelated phases:

1) Hazard Identification -- Evaluates available evidence on the presence and hazards of substances likely to cause adverse effects.

2) Dose-Response Assessment -- Determines the likelihood that a substance will produce a given effect at different dose levels;

3) Exposure Assessment -- Estimates the magnitude, duration, and frequency of human exposure to pollutants of concern and the number of people; and

4) Risk Characterization -- Combines the information obtained from the hazard identification, dose-response assessment, and exposure assessment to estimate the risk associated with each exposure scenario considered. Effects are often characterized as “acute” – short-term immediate effects – and “chronic” or long-term effects.

Risk assessment can also be applied to natural ecological systems to assess the risks to natural systems from human activity. Ecological risk assessment is similar to the human health methodology, but differs in two distinct ways. First, ecological risk assessment evaluates negative impacts on a myriad of species’ interactions and ecological processes, instead of assessing impacts on only a single species (i.e., human beings). Second, whereas human health assessments focus on chemical stressors, physical stressors often adversely affect ecosystems. Thus, ecological risk analyses assess physical impacts, such as rivers that are dammed, wetlands that are drained, forests that are cut, and wildlife habitats that are eliminated.

Risk Assessments require individuals with adequate training, sufficient data, and funds. Further, some risk assessment critics believe risk assessment is a flawed methodology because it is based upon numerous assumptions and uncertainties.

Figure 5.1.4  
Assessment Tool #4 – “Comparative Risk Analysis”

Comparative risk analysis (CRA) is an analytic methodology for comparing environmental problems in a systematic way based upon the best available information about the relative risks these problems pose. CRA attempts to answer the question, “given what we know at this time, which environmental problems pose the greatest risks to our health, the natural environment, and the quality of our lives?” CRA provides a means for describing and comparing environmental problems. This technique has been used as a component for setting environmental priorities in the United States, Central and Eastern Europe, and other parts of the world.

Developed by the U.S. Environmental Protection Agency in the late 1980’s, CRA uses a framework for comparing issues based on extensive data preparation and standard risk assessment approaches. Using criteria such as health, ecological, and quality of life risks, participants determine the relative magnitude and severity of issues by comparing problems against one another. This information, generated through a risk ranking exercise, can lead directly into a priority

setting exercise in which risk information can then be integrated with other non-risk factors to establish “environmental priorities for action.”

Risk provides a common denominator for comparing different problems. For example, ranking environmental problems in terms of emission levels or violations of ambient concentration standards is insufficient. These indicators do not clearly reveal the likelihood of a negative health or ecological impact. However, a comparison of emission levels to health-based standards can be used to determine the associated health risks.

Many people believe that CRA does a disservice to communities due to its reliance on flawed risk assessments. Further, CRA can require large amounts of data and money to conduct a relatively rigorous analysis, often making it beyond the reach of many communi-

## 5.2 Prepare Assessment of Current Environmental Conditions

### 5.2.1 Select Environmental Assessment Methodology

Assessment tools range in the level of technical expertise required. Historically, experts in the United States and Western Europe have prepared assessments that provided detailed scientific analyses in technical language with minimal or no public involvement. As citizens became more interested in local environmental conditions, planners developed new tools to engage citizens in helping to conduct these assessments. These participatory assessment tools engaged citizens in defining and describing issues of importance to the community using non-scientific language and approaches.

There are several key questions to consider in choosing an assessment methodology. These questions include:

- How will the information generated from the assessment be used and by whom?
- Who is available to help to conduct the assessment?
- What is the availability of data, funds, and time?
- Do you intend to set environmental priorities for action?

These questions are discussed in more detail below.

- **How will the information generated from the assessment be used and by whom?** For example, will the information be used in a community dialogue on environmental priorities or will the Municipality use the information to help it make environmental

investment decisions? If the results are intended to change government policies, then the assessment will need to stand up to the scrutiny of government decision-makers. In such cases, the final results may be viewed more seriously if they are conducted or supported by recognized technical experts. On the other hand, if the assessment is intended primarily as a public information tool, then a less technical and more participatory assessment tool may be more appropriate.

- **Who is available to help to conduct the assessment?** Are there scientists or technical experts within the community who can help to conduct the assessment? Larger communities usually have a greater number of individuals to choose from whom can serve as technical experts either on the SC or Technical Advisory Committee. These volunteers can significantly reduce the costs of hiring outside expertise, and the availability of local experts may be a deciding factor in choosing your assessment methodology.
- **What is the availability of data, funds, and time?** Issues related to costs, data availability, and time will also determine your choice of an assessment tool. Generally, more expert-oriented assessments involve greater costs, more data, and longer timeframes to complete. However, expert assessments generally provide a greater understanding of the underlying causes associated with environmental problems and their impacts to human and ecological health compared to participatory assessment tools.
- **Do you intend to set environmental priorities**

**for action?** Another important factor to consider in choosing an assessment tool is whether or not your SC intends to rank environmental problems and set priorities. Most environmental assessment tools describe environmental conditions without drawing conclusions about their relative impacts on human beings and the natural environment. In order to effectively compare and rank environmental problems, you will need a common “denominator” that enables your SC to compare and rank problems. Comparative Risk Analysis is one of the few assessment tools that allows for this comparison by using “risk” as a common denominator for ranking environmental problems. (See Figure 5.3.4: “Assessment Tool #4 – Comparative Risk Analysis” below.)

Therefore, it is important for the SC to choose a model that you trust and to involve people you trust in the assessment process. Before you select an assessment tool, it is important that SC members have sufficient knowledge about various approaches and their relative advantages and disadvantages. You may want to contact participants from other projects to help to inform your choice about which assessment tool to use.

### 5.2.2 Determine Scope of Environmental Assessment

Your SC can save itself time and money by addressing issues related to scope at the outset of the assessment process, as described below.

#### What types of problems will be addressed in the assessment?

There are usually a number of factors to consider in determining which types of issues will be analyzed and which ones will not, including:

- Will the assessment address environmental issues that are traditionally regulated by public health agencies? For example, participants in the Trojan Environmental Action Project included cigarette smoking and worker exposure to toxic chemicals in their environmental assessment.
- Will the assessment address issues beyond purely environmental considerations? For example, the City of Elk, Poland used a process that placed environmental concerns into the broader economic context of sustainable development.
- Will the analysis examine certain global issues, such as ozone depletion, even though they may be beyond the community’s ability to control or influence these problems? Many communities have decided to include all environmental problems of concern in their assessment, while addressing the issue of the community’s ability to control and influence the problem during the priority setting process.

Generally, the more comprehensive the assessment – the more complex the assessment will be, and the greater will be the need to involve other relevant national,

regional, and local agencies and organisations.

#### What geographic area will be covered under the assessment?

Many Environmental Assessments confine themselves to the legal boundaries of the municipality; however, your SC may want to consider environmental issues beyond these geographic boundaries. For example, will your assessment address pollution that is generated outside the municipality, such as particulate emissions from a neighboring city that may result in adverse human and ecological health impacts to your community? Will your assessment address environmental problems that are generated within the municipality, such as the transfer and disposal of hazardous wastes, but are “exported” to other regions? Will your assessment include an entire watershed? Strictly adhering to political boundaries (e.g. borders of the Municipality) may be the easiest approach, but may not be the most appropriate approach from an environmental point of view, i.e. “pollution doesn’t stop at the border!”

The question of geographic scope also influences what institutions will be involved in the project. For example, if your SC decides to address cross-boundary issues (i.e. the transport of pollutants across political boundaries), then you will probably want to involve appropriate national or regional environmental officials in your efforts. It is important that your SC determine the geographic scope prior to actually conducting the assessment, and once the assessment has begun, to consistently use the same geographic scope in analyzing each environmental issue.

#### Will the assessment address future as well as current issues?

As you begin to shape your environmental assessment, you will probably want to consider whether your efforts will focus solely on issues facing your community today (a “snapshot” approach) – or will it also include threats that loom in the future? For example, should a community look at the future threat to underground drinking water supplies from existing solid waste landfills – even though current drinking water quality meets national standards? Taking the «snapshot» approach is analytically easier – it does not involve making future projections about contamination or exposures levels. However, it ignores one of the most important aspects of environmental problems: the changing magnitude of these problems over time. By examining potential future threats, the community might be able to take corrective or preventive actions today. Further, some environmental problems such as habitat and species loss may have irreversible consequences if actions are not taken in the near future to avert or minimize their adverse environmental impacts.

In practice, it may be difficult to assess future threats for all environmental issues. Some communities have assessed future threats for a few well-studied (and modeled) problems, such as global warming and



stratospheric ozone depletion. Alternatively, if your SC has limited capacity to examine future threats, but feels uncomfortable ignoring them altogether, a simplified approach might be to ask the question, «Is the problem likely to get better, worse, or staying the same over time?»

By systematically defining these scoping issues at the beginning of the Environmental Assessment, you can help to ensure that your data collection efforts will be well-tailored; that you will have the resources to complete the necessary steps, and that you will involve all key information agencies and organisations in the process.

### 5.2.3 Define Environmental Problems

Community residents offer a good starting point for defining environmental problems. Using a variety of outreach methods – such as surveys, focus groups, and public information meetings (e.g. Community Kick-Off Conference) – the SC can effectively solicit the views and concerns of community members. During this outreach effort, you might consider asking community residents to answer the questions, «what are the environmental problems facing the community and why do they cause us concern?» In this initial phase, it is important that the process be open-ended to encourage creative thinking.

In defining environmental problems, it is critical that your SC is clear about why specific environmental problems pose concerns. In other words, why are you concerned about a specific problem? What is being threatened that you value? For example, are you concerned about increased lung cancer rates from low-emission air pollution? Are you concerned about destruction of wildlife habitat from unsound logging practices? Are you concerned about reduced learning capabilities in young children from lead poisoning? By answering the question of why, you can help to target and focus your data collection efforts on these particular areas of concern. See Figure 5: Useful Terminology for Defining Environmental Problems.

Using the preliminary list of environmental problems generated by community members, the SC can begin to develop a finite list of and “define” environmental problems in the community. There are several approaches to helping to define environmental problems. One of the most useful is “Problem Tree Analysis” which involves identifying the main problems and establishing the cause-effect relationships among these problems. The key purpose of this analysis is to try and ensure that ‘root causes’ are identified and subsequently addressed in the project design, not just the symptoms of the problem(s).

A medical analogy can be used to explain the philosophy behind this method: If you have a chronic joint pain and take a pain-killer to treat it, you are treating the symptom, not the cause of the problem. The pain killer merely masks the indication (pain) of what could be a serious underlying health problem, which left

untreated may become worse. When pain-killer wears off, the problem returns. In addition, your body will slowly develop a resistance to the pain-killer. Over the time larger doses of a pain killer will be required to treat the same pain. Projects which only address the symptoms of problems, and not underlying causes, are therefore unlikely to bring about sustainable benefits.

A comprehensive and clear problem tree analysis provides a sound foundation for developing a set of relevant and focused project objectives during the next stages of the LEAP. An example of a problem tree is shown in Figure below. The simplified example shows only some selected causes and effects related to the core problem in order to illustrate the use of this tool. In practice, the problem trees are much more complex and include more complicated relationships among the problems. Therefore, it is often recommended to break problems into smaller components and develop individual problem trees for narrower problems.

It should be remembered that the Problem Tree Analysis is not a scientific method. It is based on reaching a consensus, a common understanding of problems, within a group of people. It should be remembered that people can collectively be wrong and therefore, it is advised to cross-check the problem tree with other sources of information about environmental problems (see Figure 5.2.3.1: Illustration of Problem Tree and Figure 5.2.3.2: Environmental Problem Lists from Caucasus Communities).

### 5.2.4 Collect Environmental Data

One of the most critical and time-consuming stages of the environmental assessment process is identifying appropriate information sources, collecting data, and putting the data into a usable form. Your SC can save itself considerable time and money by carefully identifying what kind of data and how much data it will need prior to starting its data collection efforts. For example, your SC might characterize one problem as “particulate matter and nitric oxides released from coal-burning power plants have a negative impact on human health-related illnesses, such as bronchitis and lung cancer. This characterization will help you to understand the need to collect data on particulate emissions and nitric oxides from the regional environmental inspectorate, and information on lung cancer and bronchitis incidences from the local hospitals and regional health inspectorate.

There is no magic answer to the question, “how much data is enough?” Ideally, the Technical Advisory Committee (TAC) should strive to collect enough data to provide a description of the threats to human health, natural environment, and other impacts associated with each problem. In reality, data is often incomplete, inaccurate, out-of-date, tangential, or in a form that is difficult to use. Thus, the TAC will find itself constantly balancing the need to collect enough data to describe the scope and magnitude of each environmental problems. It is important to remember that no matter how much data

Figure 5.2.3.1. Illustration of a Problem Tree

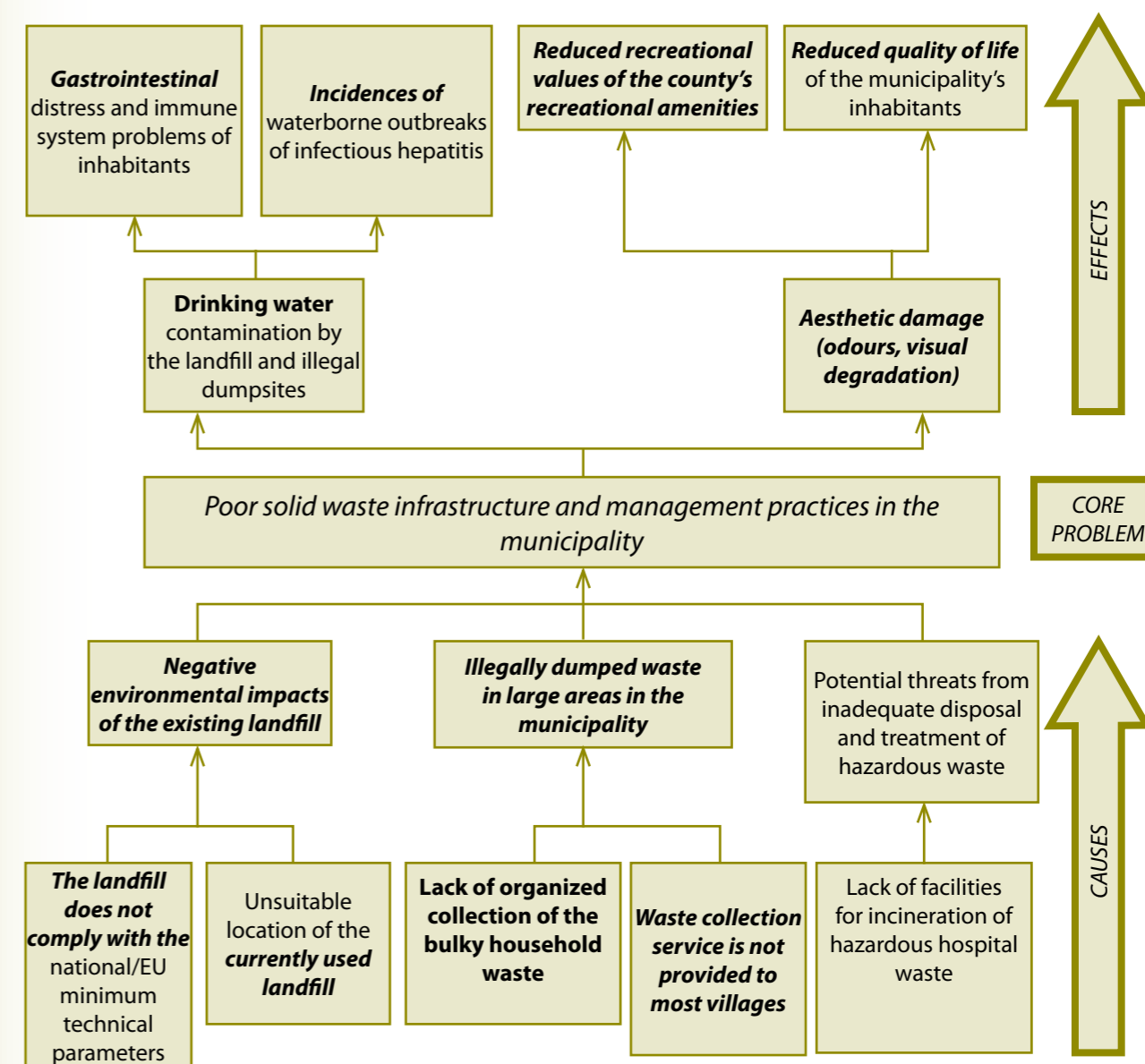


Figure 5.2.3.2 Environmental Problem Lists from LEAPs in the Caucasus

Ararat, Armenia	Ganja, Azerbaijan	Kutaisi, Georgia
<ul style="list-style-type: none"> <li>• Pollution of air basin;</li> <li>• Lack of green plantings and worn irrigational system;</li> <li>• Unsatisfactory condition of drinking water supply system and sewage system;</li> <li>• Low level of environmental awareness;</li> <li>• Unsatisfactory conditions in solid waste management.</li> </ul>	<ul style="list-style-type: none"> <li>• Pollution of air basin;</li> <li>• Ineffective solid household waste management;</li> <li>• Lack of green plantings;</li> <li>• Pollution of surface and groundwater;</li> <li>• Unsatisfactory hygiene, sanitary and epidemiological conditions;</li> <li>• Low level of environmental awareness.</li> </ul>	<ul style="list-style-type: none"> <li>• Unsatisfactory drinking water supplies in the city</li> <li>• Ineffective solid household waste management;</li> <li>• Pollution of air in the parts of the city with intensive traffic;</li> <li>• Pollution of water in river within the city limits;</li> <li>• Worsening condition of vegetation cover;</li> <li>• Low level of environmental culture in population.</li> </ul>

you collect, your assessment will always be a blend of data and judgment.

Your TAC should be sure to allocate sufficient time for collecting data. How much time you need depends largely on the geographic size of the assessment area, the number of issues being assessed, the technical nature of the assessment, and the degree of coordination among organisations managing different types of information. Data collection can be very time-consuming, particularly if multiple organisations have overlapping responsibilities. Thus, the SC will need to establish a time frame for collecting data activities, and then make sure the TAC adheres to the schedule to greatest degree possible.

In some cases, government agencies and private organisations may charge a fee for copying and other related costs. Caucasus countries have laws governing how government agencies should provide environmental information to the public and what information they must provide. These laws often expressly state that environmental information belongs to the public and should be provided free-of-charge<sup>1</sup>. Your TAC will want to review environmental information laws to be clear on its rights.

The following questions will help to guide your information gathering efforts:

- What steps can be taken when there is a lack of data?
- How reliable and accurate is the information?
- What are some key information sources?

These questions are addressed in further detail below.

#### What steps can be taken when there is a lack of data?

Most environmental assessments are based upon existing data. However, sometimes your TAC may identify data gaps that are so significant that your ability to assess a particular issue may be severely impeded. There are a variety of steps you can take to try to fill these information gaps, including:

- Collect data from other communities:** Consider obtaining data from other communities with comparable environmental conditions or health problems, and then interpolate this data for your own community. For example, you might obtain information on human health-related impacts from air pollution from communities with the same climate conditions and similar industries. You can then try to draw conclusions about the health impacts to your own community. As a cautionary note, this process

of “interpolation” is based upon numerous assumptions and has a large degree of uncertainty – but it may be better than no data at all. These limitations need to be expressly stated in your Environmental Assessment.

- On-site tours:** Pertinent information may be relevant through site tours and community surveys. TAC members can design their own methods for gathering and organising relevant information. For example, group members may visit a landfill and interview the staff and surrounding residents to learn more about the facility and its impacts.
- Monitoring:** Your TAC might consider initiating new monitoring activities. In the context of an Environmental Assessment, it is important to conduct new monitoring efforts only after careful consideration. Monitoring data is usually only valid if samples are taken over a period of time, and this time requirement might conflict with the schedule for the overall LEAP. Further, you will need to determine how much the monitoring will cost and how these costs will be paid for. Whether or not you choose to initiate new monitoring activities during the assessment, be sure to carefully document any data gaps you find and prepare recommendations for future data collection efforts.
- Public:** While technical experts can describe many aspects of environmental concerns, citizens remain one of the most valuable sources of information. Asking citizens about their concerns and what they know about particular issues will help your TAC to learn information that may not be recorded elsewhere. Previous LEAP participants have conducted surveys, held public meetings, and conducted focus groups to learn what community residents people knew about environmental issues.

#### 5.2.4 How reliable and accurate is the information?

The TAC will need to take special care in checking the reliability and accuracy of the data it uses. First, you will want to thoroughly understand the origins of any data, when the data was collected, and how frequently samples were taken. Second, it will be important to understand the sources, collection methods, and original purpose of the data to help to determine whether the information is useful and accurate. You may want to ask specific information sources about the sampling and analytical methods they used in collecting the data to determine whether the data is reliable and representative. If there are various sources for the same type of information, you will need to determine the best information source to use.

#### What are some key information sources?

Sources of data for an Environmental Assessment depend greatly on the study area. You can assemble relatively basic but sufficient information from a variety of sources. In Central and Eastern Europe, key informa-

tion sources include the regional environmental and health inspectorates; national Ministries of Environment, Health, Agriculture, and Regional Planning, universities and academic institutions, and your municipality. Other information sources include:

- Hospitals and health clinics
- Libraries
- International organisations and non-governmental organisations (World Health Organisation, United Nations Environment Programme, US EPA, World Bank, etc.)
- Private enterprises and companies
- Individual citizens
- Community groups (environmental NGOs, historical societies, etc.)
- Experts (health risk assessors, ecologists, economists, planners, etc.)
- Individuals from similar projects in your country or region
- Internet

The organisations possessing environmental information for the Caucasus countries – Armenia, Azerbaijan, Georgia – can be sought in the Directory ‘Environment and State Agencies’ published by REC Caucasus.

Your TAC might consider initiating a dialogue with key information providers by sending them information request letters. These letters can include a description of the LEAP, what information you need, and an explanation of how you will use the information. You might then meet with these sources to more fully explain your request, solicit their cooperation, and collect the information. (See Figure: “Sample Information Request Letter” below). This type of cooperative approach can help to facilitate data collection and analysis, improve the completeness and accuracy of the assessment, and lay the groundwork for future cooperative activities with these agencies and organisations.

#### 5.2.5 Prepare Environmental Assessment Report

The Environmental Assessment Report includes a summary of the findings and conclusions, baseline data about relevant conditions, and a description of the quality and sources of data used. Furthermore, it is important to prepare a summarized version of the report in non-technical jargon that can be easily understood by the Stakeholder Committee and the public.

Ideally, the Environmental Assessment Report explicitly addresses areas of uncertainty and areas where professional judgment has been used. Uncertainties cannot be avoided when reporting on environmental conditions.

By clearly acknowledging these uncertainties, the TAC will improve the credibility of the reports because readers will have a clearer understanding of the strengths and limitations upon which you have drawn your conclusions. Whether this uncertainty is related to a lack of data on pollution levels or on exposure levels to a particular chemical, it is important that the TAC identify these uncertainties and how they affect the conclusions.

In preparing the Environmental Assessment Report, consider the following factors:

- Audiences:** Your audience will probably be a range of readers with different technical abilities. You might consider preparing a technical version of the assessments for the SC and a non-technical summary document for the general public.
- Attractive presentations:** The use of tables, maps, and illustrations and captions can help to illustrate concepts and describe impacts in ways that help people to understand the reports. If the information will be used during a problem ranking session or public meeting, you might consider developing large-scale displays, slide shows, or other visual ways to make the findings engaging.
- Document and define:** Carefully document and reference all data sources and assumptions, and define any technical terminology used

#### 5.3 Select Priority Environmental Problems

Priority setting will enable your Municipality to focus its limited financial and human resources on the most critical issues, and thus allow you to achieve the biggest improvements in environmental and public health. It can also help to identify the “ripest” opportunities for environmental improvements, i.e. those areas where improvements can be most easily achieved. If you decide to select priority environmental problems, your SC will find itself faced with many challenging questions, such as:

- Should an environmental problem that results in cancer that kills a few people each year outweigh gastro-intestinal illnesses that create short-term discomfort for a large percentage of a given population?
- Should depletion of groundwater supplies that will affect everyone’s drinking water in the future take precedent over extinction of local fauna from unmanaged industrial practices occurring today?
- Should the SC focus on issues that its members recognize as a major environmental threat, but which few community members care about?
- How should the community address serious human and environmental health threats that are linked directly to the major source of employment for the community?

Setting priorities forces the SC to grapple with the hard choices facing the community. When SC members and

<sup>1</sup> Manual on Public Participation in Environmental Decision-Making: Current Practice and Future Possibilities in Central and Eastern Europe, 1994. Edited by Magdolna Tóth Nagy et. al. Regional Environmental Centre, Szentendre, Hungary.

the public agree on the relative degree of harm from environmental problems, they have a solid foundation for deciding the top priority issues for taking corrective action.

### 5.3.1 Criteria to Consider in Selecting Priority Problem

Communities consider a number of criteria in setting environmental priorities. These include:

- **Impact on human and ecological health:** Based upon the environmental assessment report, how severe is a particularly environmental problem in terms of its impact on human and ecological health?
- **Public preferences:** what do community members consider to be the most serious issues facing the community?
- **Municipal authority to control:** does the local government have the authority or legal jurisdiction over the issue or problem?
- **Community ability to influence:** does the community have the ability to significantly address or influence the problem, such as global environmental issues?
- **Legal requirements:** do national laws or regulations require the local government to achieve specific national standards by a certain date? Where does the problem stand in relationship to national environmental policy directions, such as the National Environmental Action Programme?

Many communities have first ranked environmental problems based upon their relative severity, and then used this information as the foundation for selecting overall environmental priorities by incorporating the factors described above.

### 5.3.2 Prepare for the Priority Setting Meeting

The Stakeholder Committee will want to consider a number of factors in preparing for the meeting where it selects priority environmental problems:

- **Decide on decision-making processes:** The SC will need to decide what decision-making process it will use, such as consensus or majority voting. Most SCs strive toward achieving consensus during the ranking session, and if consensus can't be achieved, they resort to a large majority (80% or more) vote. If you decide to vote, be clear whether the balloting will be secret or open.
- **Determine role of the public:** Carefully consider what role the public will play during the ranking session. For example, will the session be open to the public? Will the public be allowed to speak at certain points? Most communities open their ranking sessions to the public in order to legitimize the process. Some SCs provide designated times for community members to share their views.

- **Familiarize Stakeholder Committee with ranking approach:** SC members will be asked to consider large amounts of information and make judgments about environmental priorities. Thus, it is critical that they fully understand and feel comfortable with the ranking methodology. At a minimum, it is important for each SC member to receive copies of the Environmental Assessment before the priority setting session begins. Your TAC might also consider holding a briefing session for SC members to explain information in the reports and answer questions.

- **Consider hiring a professional facilitator:** A facilitator can help to assure that the ranking session is open and unbiased, and that all SC members are given ample opportunity to express their views.

- **Prepare an agenda and document results:** You will want to establish an agenda with a set time schedule. Then, try your best to adhere to the schedule! Be sure to allocate ample time to ensure a meaningful ranking process. Also, consider asking individuals to serve as recorders during the priority setting sessions to ensure that careful written record has been maintained that explains what took place during the ranking.

The following group process suggestions are provided to help to guide the priority setting session:

- One person speaks at a time. Everyone has a turn to speak. Facilitator will recognize participants in order.
- Respect everyone's opinion and integrity. Focus discussion on content, not person.
- Listen with an open mind. Be willing to change your mind.
- Speak and listen as individuals, not as representatives of a group or institution.
- Keep comments brief and on topic.
- Strive for consensus. If you cannot reach consensus, set the proposal aside for later consideration.
- Be prepared to substantiate your views.
- Notify facilitator if something is not working for you.

### 5.3.3 Proposed Process for Selecting Priority Environmental Problems

**Rank environmental problems based upon their relative severity and magnitude**

1. **Present oral summaries:** TAC members summarize the basic information and conclusions of the Environmental Assessments.
2. **Fill in matrices:** Prepare flipcharts in advance that include a matrix for visually seeing how different problems compare to each other. Each individual marks a spot (using a marker or round sticker) for each environmental issue on selected matrices to identify the relative threats. These charts can be prepared for threats to ecosystems and quality of life. (See Figure 5.3.3.1: "Sample Matrix for Examining Relative Health Threats" above)
3. **Conduct relative problem rankings:** Each Stakeholder Committee member individually develops a relative ranking based upon the matrices. Your SC can assign numerical values to each problem (e.g. 1-5) to determine relative rankings or use categories such as high, medium, and low.
4. **Identify easy highs and lows:** The Stakeholder Committee collectively identifies which problems are easily considered to pose relatively high threats and which ones are easily considered to pose relatively low threats.
5. **Discuss rationale for relative rankings:** Stakeholder Committee members discuss relative ranking for easy highs and lows.
6. **Present proposals for rankings:** For environmental issues that have not been ranked, one Stakeholder Committee member makes a proposal about whether a particular problem should receive a high, medium or low ranking.
7. **Discuss and decide on ranking:** SC members discuss and decide how the problem should be ranked. This process continues until all the problems have been ranked.
8. **Review and finalize problem-ranking list:** After all the problems have been ranked, the Stakeholder Committee reviews the relative rankings and makes any necessary changes.

### Incorporate Other Criteria in Selecting Priority Problems

- a) **Review additional criteria:** The SC reviews additional criteria, such as public preferences, national legal requirements, and municipal authority to control.
- b) **Discuss problems in light of criteria:** SC members discuss each problem in light of the criteria.
- c) **Select priority environmental problems:** The SC incorporates the results of the problem ranking and other selected criteria by assigning relative scorings to set priorities for action. These scorings can have numerical values (e.g. 1-5) or "high-medium-low" values assigned for each problem according to the selected criteria. (See Figure 5.3.3.2: "Sample Table for Setting Environmental Priorities" below).

### Conclusion

Undertaking Environmental Assessments and establishing environmental priorities is a powerful means for engaging citizens and government officials in discussions about the future of your community. LEAPs have demonstrated the ability of the Caucasus communities to engage in democratic evaluation and decision-making. The environment priorities identified during this phase of the LEAP provide a solid foundation for developing a plan of action for the priority environmental issues facing your community.

Figure 5.3.3.2: Sample Table for Setting Environmental Priorities

Environmental Issues	Criteria				Priorities for Action
	Problem Ranking Results	Municipality's Ability to Control	National Legal Requirements	Public Preferences	
1					
2					
3					
4					
5					
6					
7					

Figure 5.3.3.1. Sample Matrix for Examining Relative Health Threats SEVERITY AND PERSISTENCY OF HEALTH THREAT

% of population affected	Low	Medium	High
1%			
10%			
50%			
90%			

## Preparation of LEAP



## INTRODUCTION

The Environmental Action Plan (EAP) is the heart of a Local Environmental Action Programme. The core of the EAP is the goals, objectives, and actions for addressing the top environmental problems. Preparing the EAP involves examining your community's existing environmental management practices, identifying evaluation criteria, and conducting specific economic, engineering, and other types of analyses to provide a solid foundation for selecting preferred actions. The EAP builds upon the previous work of the Stakeholder Committee (SC), in preparing Environmental Assessments and selecting priority environmental problems.

Essentially, the EAP can be seen as a multi-stakeholder agreement on the best ways to solve environmental problems in the community. Thus, a successful process to develop an EAP will ensure that the views of all individuals either directly or indirectly affected by proposed actions are solicited and given serious consideration. Further, it is important that the general public is kept informed throughout the development of the EAP to ensure that proposed actions reflect their priorities. An effective public outreach effort can help to educate community members about the costs and benefits of proposed actions and solicit their views of the most appropriate solutions.

Ideally, the Municipal Council approves the EAP to emphasize its support for the EAP. To maximize the effectiveness of the EAP, it is critical that recommendations from the EAP be linked with statutory planning processes of the Municipality, such as the development or land-use plan, capital infrastructure plan, and annual budgets. The EAP then serves as a long-term guide for environmental actions in the community.

### 6.1 Develop Community Vision

One of the most important actions you can undertake as a SC is to create a Community Vision. A Community Vision is a shared concept or picture of what residents want the community to be like in ten or twenty years. The Community Vision provides an opportunity for the SC and residents to step outside their immediate and most pressing problems and to look toward the future. A Community Vision:

- Provides a common framework and an agreed upon direction for your work,
- Promotes bold, creative, and imaginative thinking that can lead to fundamental change,
- Provides continuity and consistency as people come and go from the LEAP planning process, and,
- Offers an excellent opportunity for engaging people in the community.

Vision serves as guiding principle in setting goals and

objectives for resolution of priority environmental problems. In LEAPs development process, SC shall always refer to such Vision.

Vision can be formulated briefly and figuratively. For instance: 'green city', 'clean environment', 'healthy city', etc. So, the Vision for pilot city of Kutaisi was formulated by the SC the following way: "Clean Environment – Healthy City".

### 6.2 Set Environmental Goals and Objectives, and Select Indicators

Prior to identification of environmental goals, SC members shall define what their vision is for the future of their city or settlement or, in other words, what do they want to achieve

The EAP process begins with the development of environmental goals, objectives, and indicators. Environmental goals provide strategic direction for your long-term efforts to solve environmental problems and an opportunity to build consensus among stakeholders on what you hope to accomplish over a set period of time, e.g. three-five years. Objectives are measurable commitments to be realized within a specified time frame and are used in evaluating and measuring progress in implementing the EAP, while indicators measure whether environmental goals and objectives are being achieved and whether these outcomes are improving the lives of people in the community.

#### 6.2.1 Establish Environmental Goals

Goal development begins with a review of the Environmental Assessments. Each Environmental Assessment ideally describes why a particular problem poses a concern and describes the negative impacts from human activities. Goals rephrase the problem in an affirmative, forward-looking manner that express the kinds of milestones you want to accomplish over a period of time. For example, consider the following description for solid waste: "Toxic and organic materials disposed in unlined and uncovered landfills from industry and households are causing groundwater pollution which pose health and ecological threats, while landfill space is rapidly diminishing because trash generation has increased significantly."

Two goals articulated for this problem area might be:

- Goal #1: To reduce groundwater pollution associated with solid waste; and
- Goal #2: To reduce the amount of solid waste disposed in the landfill.

It is important to note that the problem description above actually identifies two distinct problems: 1) pollution to groundwater; and, 2) diminishing landfill space due to large quantities of trash being generated. These two problems have distinct but related goals. In turn, each goal will dictate different actions. For example,

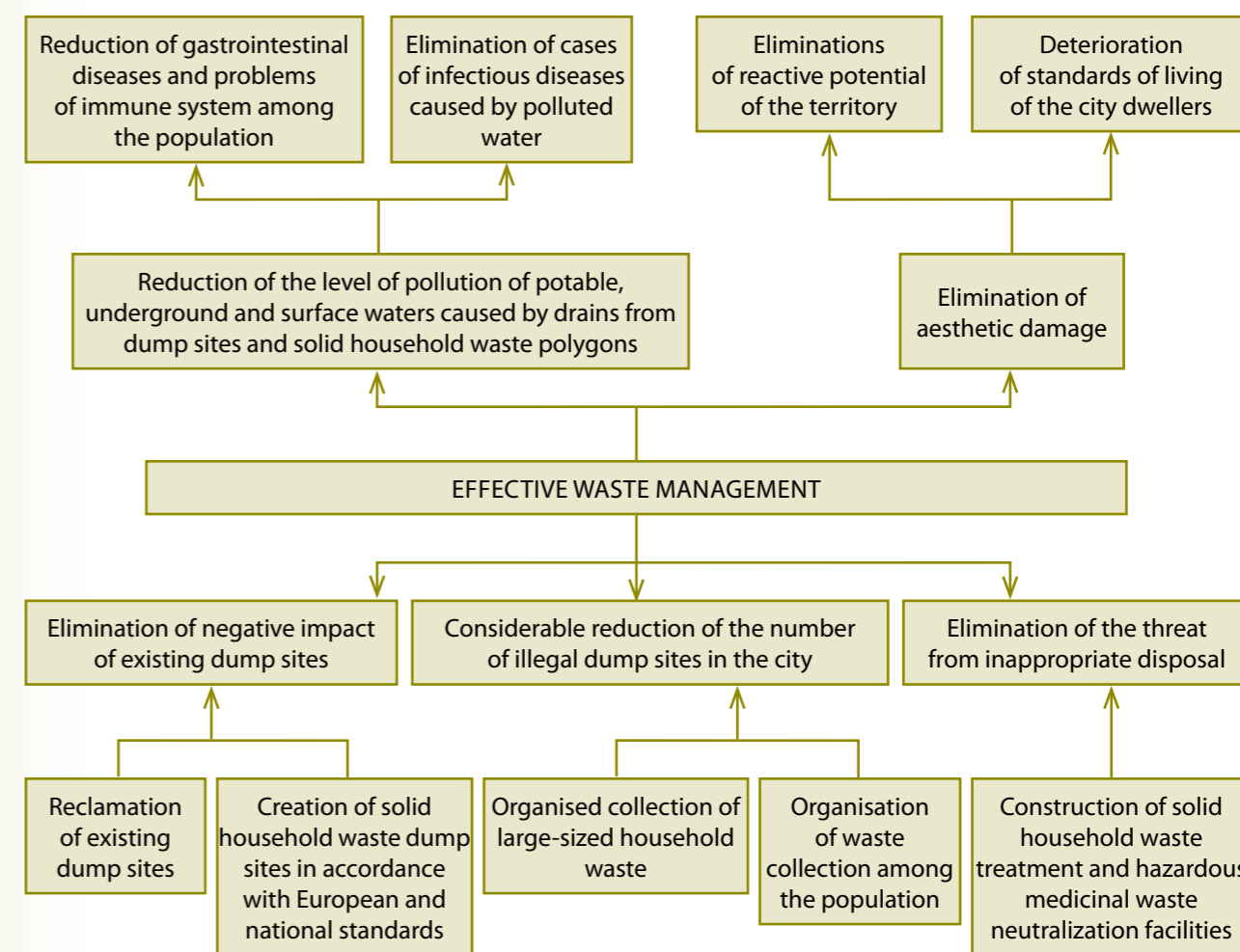
reducing groundwater pollution may involve building lined landfills and installing collection systems for rainwater that percolates through the waste. Reducing the amount of solid waste involve implementing programmes such as recycling collection and waste reduction initiatives. Thus, it is important to dissect each environmental problem to identify discrete components of the problem – especially since these discrete components may require different solutions. There is no set formula for determining how many goals you should establish for each problem. The key is to establish enough goals that sufficiently describe what you hope to accomplish over time, but not too many as to make each goal indistinguishable from another.

ally the products of negotiation.<sup>1</sup> One guiding role for developing objectives is the acronym, "SMART" --- that is that objectives should be "Specific, Measurable, Achievable, Relevant, and Timed. This description may be used as a kind of a cross-check/cross-reference to ensure that LEAP's specific objectives meet basic methodological requirements.

Some questions that a SC may wish to discuss in formulating objectives include:

- Are there specific environmental objectives or requirements mandated under national laws or regulations? For example, do national laws require that

#### OBJECTIVE TREE



#### 6.2.2 Establish Environmental Objectives

Once your SC has agreed upon a set of goals, it is vital that you develop concrete objectives for each goal. An objective is a measurable commitment to be realized within a specified time frame. Objectives focus resources and guide the selection of actions. They are used in evaluating and measuring progress in implementing the EAP. Objectives imply very concrete actions and behavior changes by different stakeholders; thus, they are usu-

ally the products of negotiation.<sup>1</sup> One guiding role for developing objectives is the acronym, "SMART" --- that is that objectives should be "Specific, Measurable, Achievable, Relevant, and Timed. This description may be used as a kind of a cross-check/cross-reference to ensure that LEAP's specific objectives meet basic methodological requirements.

- Are there local, environmental goals and objectives already? If so, what changes need to be made?
- Do you have the baseline information necessary to evaluate changes over time?
- Can the proposed objective level be achieved with-

<sup>1</sup>The Local Agenda 21 Planning Guide, 1996. International Council for Local Environmental Initiatives, Toronto, Canada.

in a realistic timeframe? On the other hand, are the objectives sufficient to achieve the desired level of environmental improvement?

Some specific objectives related to the solid waste problem described above might be:

- **Goal #1:** To reduce groundwater pollution associated with solid waste.
  - **Objective #1:** To reduce groundwater pollution associated with solid waste disposal by 75% over the next 5 years.
- **Goal #2:** To reduce the amount of solid waste disposed in the landfill.
  - **Objective #1:** To reduce the amount of solid waste requiring disposal by 50% within five years.

One method for setting strategic goals and specific objectives is the Objective Tree Analysis. In simple words, it is a continuation of the Problem Tree Analysis, following an assumption that when we find causes of problems and try to cure them, we will solve the problems themselves. Therefore we start from rephrasing problems, causes and effects into positive statements receiving in this way a positive tree. This provides the basis for defining goals and objectives according to the rules described above, and if the problem tree is well developed, also the basis for determination of some actions. (See Figure: Illustration of an Objective Tree).

### 6.2.3 Select Indicators

Indicators<sup>1</sup>, help you to understand where you are and how far you are from where you want to be. They provide a mechanism for community members to identify what they value – drawn from the Community Vision. Indicators measure whether environmental goals and objectives are being achieved, and whether these outcomes are improving the lives of people in the community. Finally, indicators provide a means for holding implementing agencies accountable for achieving desired results. (See Figure: “Sample Environmental Indicators” below.)

Good environmental indicators:

- **Results oriented:** measure actual results, i.e. reduction in lead levels in ambient air, rather than efforts to address a particular problem, i.e. amount of money spent on lead reduction;
- **Reliable:** are based upon statistically valid and quantifiable data, and data that is available at the level of aggregation and frequency desired;
- **Measurable:** can be quantifiably measured;
- **Simple:** are easy to understand, but as precise as possible; and,

<sup>1</sup> Adopted, in part from, Sustainable Community Indicators: Guideposts for Local Planning, 1995. Community Environmental Council, Santa Barbara, CA.

- **Cost-effective:** relatively inexpensive to monitor without diminishing the effectiveness or quality of the data.

It is important to consider the following factors when developing and utilizing indicators:

- **Involving stakeholders:** It is important that indicators are developed based upon broad support among various concerned groups and reflect the values of many constituencies. Without this level of involvement, indicators will not receive widespread acceptance, and important indicators will be ignored.
- **Develop clearly defined planning goals and objectives:** Indicators should be based upon and directly linked to clearly define planning goals and objectives. For example, if the goal is to decrease the amount of fossil fuels consumed, then relevant indicators might include fossil fuel consumption per capita and the percentage of energy provided from non-fossil fuel sources.
- **Create action from indicators:** Indicators should be tied directly to the implementation of specific actions and should be used to measure progress toward achieving stated planning goals. Implement-

#### Examples of Environmental Indicators for Pilot City of Ararat

Below you can find some simple indicators, along with the respective goals and objectives:

##### Water supply

Goal: Improve water supply infrastructure  
Objective: Water supply control  
Indicators: 1) quality of water within MAC limits;  
2) volumes of economized water (l).

##### Green zones of the city

Goal: Extension of vegetation cover  
Objective: Creation of new vegetation areas  
Indicators: 1) existence of project documentation,  
2) number of planted trees,  
3) total area of newly created green territories

ing agencies can then incorporate this information into their decision-making processes.

- **Establish a monitoring, reporting and evaluation system:** Once indicators have been selected, it is important to establish a system for standardizing data collection procedures and reporting results on a regular basis. This data can be used to evaluate

what is working well and what is not and to identify recommended improvements that need to be made. Recommendations can then be incorporated into programme design.

### 6.2.4 Identify Potential Actions

The next step of the EAP process is to identify specific actions. While the Community Vision provides the overall framework, the environmental goals and objectives serve as guideposts in identifying actions, i.e. how can a particular action move us toward achieving our goals and objectives? Your SC might begin the process of identifying potential actions by conducting a brainstorming session. Consider convening a group of stakeholders associated with each specific environmental problem and brainstorming a list of possible actions. This approach will help to ensure that you identify the broadest possible set of actions by tapping into the expertise and knowledge of those individuals and businesses directly affected by or involved with the problem.

Five types of actions are identified below:

- **Public Education and Training:** Public education programmes play a crucial role in educating residents and businesses on how to comply with new environmental requirements and can build public support for environmental programmes. Public education activities include: preparing and distributing brochures, writing newspaper articles and conducting radio/TV interviews, conducting contests, reaching out to school-age children, and holding public information meetings. (See Appendix A: “Conducting a Public Outreach Campaign” for more details). Training programmes can often be essential in improving staff expertise of local and regional government staff, non-government organisations, and other institutions on how to effectively implement environmental programmes or operate new facilities.
- **Economic Incentives:** Economic incentives alter polluters’ behavior by increasing the costs of continuing to pollute or waste. Unlike regulatory approaches, these incentive-based policies influence rather than dictate the actions of individuals and firms, and allow them to find the most efficient means of reducing pollution in order to reduce their costs<sup>1</sup>. Some of the most common economic incentives used by local governments are user fees, emission fees, and fines. User fees provide a positive economic incentive to individuals and businesses by requiring them to pay for the cost of environmental services system based upon how much they use or how much waste they generate. Emission fees are financial charges for the release of pollutants to the environment

<sup>1</sup> A Guidebook to Comparing Risks and Setting Environmental Priorities, September 1993. US Environmental Protection Agency.

within admissible limits, while fines are negative incentives applied to businesses or individuals that pollute above allowable limits or violate other regulatory requirements.

- **Community Programmes:** Community programmes are activities that involve either collective or individual actions by community members to address environmental problems, such as curbside recycling collection programmes, community tree plantings, and community-wide distribution of low-flow showerheads. These programmes can be managed either by the Municipality, utility company, non-government organisation, or private contractor.
- **Technological Measures:** These actions involve the design, construction, and operation of environmental facilities, such as wastewater treatment plants and sanitary landfills. They also include installing pollution devices or making process modifications in industrial facilities. An emerging and promising area of technological opportunities is known as “pollution prevention” -- or preventing pollution before it occurs.
- **Regulatory/ Legal Action:** Regulatory actions require businesses and residents to comply with specific environmental regulations and to implement measures to reduce environmental pollution. For example, these actions include municipal ordinances to require industries to pre-treat their wastewater prior to discharging to the municipal treatment plant, or requiring residents to install water meters to reduce water consumption.

### 6.2.5 Identify Evaluation Criteria

During selection and application of the criteria, the following shall be considered:

- Apply criteria corresponding to the each type of activity; some criteria cannot be applied to all kinds of measures. While selecting the criteria, you should consider all types of the activities (i.e. raising public awareness, introducing economical incentives, etc.) and make the decision on appropriateness of the criteria.
- Criteria are not always equal: your SC might consider some criteria having bigger significance, then the others. For instance, most of the territorial communities pay more attention to “cost efficiency”, i.e. which activity will provide for better results for the cost unit. Therefore, SC can be willing to ‘weigh’ the evaluation criteria based on their relevant importance.

Several criteria are identified below. Your SC will want to review this list, consider other potential criteria, and agree upon a set of criteria for evaluating actions. This list is intended to provide a starting point for your discussion. Evaluation criteria include, among others:

- **Cost-effectiveness:** what are the relative costs for achieving a measured improvement in environ-

**Figure 6.2.5.1.**

**Evaluating Cost-Effectiveness of Alternative Actions**

Cost-effectiveness is one of the most important criteria for evaluating alternative actions. It answers the question, “how can we achieve the greatest level of environmental improvement for a given amount of money.” Cost-effectiveness involves standardizing or normalizing project costs by dividing costs by a common environmental indicator, such as tons of waste abated/reduced or reductions in ambient air concentrations of specific pollutants. Some care must be taken when using cost-effectiveness analysis to compare only control or reduction actions that provide environmental improvements that are sufficiently similar.<sup>1</sup>

When conducting cost-effectiveness analysis, keep three key issues in mind. First, existing studies may supply the necessary information on pollution control effectiveness, thus, avoiding the need for original research. Second, the objective of the cost-effectiveness analysis is to arrive at a ranking of possible actions. Precise measurement of cost-effectiveness is often not necessary. In many cases, the pollution control achieved by different actions may be so great as to preclude the need for extensive engineering analysis or even research of secondary literature sources. Finally, it is important to focus on pollutant releases and other outcomes that can be easily measured and are relevant to your goals.<sup>2</sup>

**The basic steps in conducting cost-effectiveness analysis include:**

1. Analyze project costs: estimate total capital (i.e. construction and equipment) and operating maintenance and replacement costs over the life of the facility or project.
2. Conduct life cycle cost analysis. Life-cycle costs are the sum total of all costs associated with a particular project over a particular period of time (typically considered to be the expected useful life of the capital asset). Since life-cycle costs are incurred over an extended period of time, the analysis usually includes consideration of how the value of money changes over time due to factors such as inflation and interest rates.
3. Spread out project costs on an annual basis: determine the amount of money needed each year to pay for the project.
4. Analyze cost-effectiveness by standardizing cost measures: determine the costs per unit of pollution control achieved by dividing the annual costs by the annual pollution reduction expected to be achieved.

<sup>1</sup> Financial Capability Guidebook, March 1984. U.S. Environmental Protection Agency, Office of Water, Washington DC, USA.  
<sup>2</sup> “Evaluating Cost-Effectiveness”, 1996. Memorandum from Industrial Economics to Institute for Sustainable Communities, Boston, MA.

- mental protection compared to other actions? (See Figure: “Evaluating Cost-Effectiveness of Alternative Actions” below).
- **Technical feasibility:** has the technology been successfully used elsewhere and does it have a proven record?
  - **Effectiveness:** how well does the action achieve environmental goals and objectives? How effective is the action in reducing or preventing an associated public health or ecological threat?
  - **Financial Impact:** What will the financial impact on community members be to pay for the total capital and operating costs associated with the project over its lifetime?
  - **Statutory authority:** Does the local government or do other implementing agencies have the statutory authority to implement the action?
  - **Equity:** how evenly are the benefits and costs of the action distributed among affected individuals and the community? Are certain segments of the population disproportionately affected by the impacts of the proposed action, e.g. setting an environmental facility near a low-income residential neighborhood?
  - **Flexibility:** can the action be modified after a period of time to accommodate changes in demographic, economic, environmental, or legal circumstances?
  - **Implementation time:** how much time will it take for the action to be implemented?
  - **Acceptability/supportability:** is the proposed action acceptable to the public or Municipal Council? Do stakeholders support the action?

- **Employment impacts:** will the action result in new jobs in the community? Will employment be reduced as a result of a particular action?
- **Environmental impact:** are there environmental impacts from construction or operation of the action? If so, how significant are these impacts?

Your SC may want to limit the number of criteria it uses to make the selection process more manageable. Once you have selected your evaluation criteria – its time to start the information and data collection process.

**6.3 Gather Information, Analyse and Select Actions**

**6.3.1 Gather Information**

SC shall be collecting materials on resolution of the specific problems by various territorial communities. Measures taken in the other countries shall be modified and adapted to the specific local situation. The information on environmental management measures taken in the region shall be prepared using various available sources, including Internet.

Analyses and selection of the activities represent the basis for decision-making process. SC makes decisions on the most appropriate and reasonable activities to be carried out, in order to achieve the environmental goals and objectives. Here, the two-stage process directed towards shortlisting the initial list elaborated at brainstorming session and final selection of the specific activities shall take place: a) draw up the ranking list of the measures; b) select the activities based on the specificities of the particular community.

**6.3.2 Action analysis**

The first step in the action selection process is to develop a preferred list of actions, which is then subjected to

more rigorous and detailed analysis. The SC can develop the preferred list of actions by applying the evaluation criteria to the brainstorm list of actions. To start this process, it is important that the SC engage in a vigorous and open discussion on the relative advantages and disadvantages of each action. The SC might consider a series of questions to help to stimulate discussion, such as, “based upon the information compiled to date, which actions appear to be the most effective in achieving our environmental goals and objectives?”

After you have allowed ample time for discussion, SC members can select actions for the preferred list. One useful tool for structuring this process is to use a matrix with actions on one-axis and evaluation criteria on the other. Each SC member receives a set number of votes that they can be placed anywhere on the matrix. The actions receiving the top number of votes are considered for further investigation. For each environmental problem, consider developing a matrix for each category of action, i.e. one matrix for education programmes, one matrix for economic incentives, etc. (See Figure 6.3.2.1: “Sample Matrix for Technological Measures for Increasing Potable Water Supplies” below).

It is important to note that this selection process is not based on “in-depth” analysis, but rather, on existing information from other communities’ experiences. This screening process can save your community time and money in conducting more these in-depth analyses by focusing on the most promising actions. The final selection of actions is then based on more rigorous analyses.

Once you have developed your screened list of actions for each priority problem, be sure to share these results with the community. The action selection process will be more relevant and credible to your Municipal Council

**Figure 6.3.2.1**  
**Sample Matrix of Technological Measures for Increasing Potable Water Supplies**

Environmental Objective:	Increase the amount of potable water by 30% in the next five years.					
Action Category:	Technological Measures					
	EVALUATION CRITERIA					
Potential Actions	Cost-Effectiveness	Effectiveness in Achieving Goals	Economic Benefits	Implementation Time	Flexibility	Total Score
a. Repair Underground Water Main						
b. Build new reservoir						
c. Install low-flow showerheads to residences						
d. Control industrial water consumption						

if it reflects the broad perspectives of community members, has used appropriate criteria, and has been reported clearly and persuasively.<sup>1</sup>

### 6.3.3. Select Actions

Once you have developed a relatively manageable list of actions, the next step is to conduct community-specific analyses that will provide you with the foundation for making the final list of priority actions. The types of analysis you will need will depend on which actions you are investigating. The types of analyses to consider include:

- **Economic:** identifies the most cost-effective option for achieving a desired goal or result. It examines total capital and operating costs, the life-cycle costs over the life of the project, the annualized costs, and then standardizes these costs based upon the amount of pollution control or reduction achieved, e.g. cost per ton or per liter.
- **Engineering:** helps to determine the technical feasibility and effectiveness of particular actions. This analysis can evaluate the effectiveness of different facilities or process designs in reducing pollution or a particular pollutant.
- **Legal:** examines municipal jurisdiction and authority pertaining to certain environmental provisions. This analysis is especially critical in light of the decentralization of environmental responsibilities in Central and Eastern Europe and jurisdictional issues that may arise among different governmental agencies.

- **Financial:** answers the question of whether or not you can afford a particular action. This analysis looks at potential sources and methods to finance a particular action, the costs of borrowing funds, and methods to raise revenues to repay loans and cover operating expenses.
- **Environmental:** Environmental analysis measures the relative environmental impacts of different actions designed to achieve the same environmental goal. A typical methodology for evaluating environmental impacts is Environmental Impact Assessment (EIA). EIAs are required in many Central and Eastern European countries for any new, large industrial or manufacturing facility. EIAs are designed to incorporate environmental planning into the earliest stages of development projects in order to prevent or reduce as much as possible the harmful environmental impacts of those activities.

These analyses require specific expertise that can often-times be costly. Whenever possible, it is important that the SC find experts within the community who might be willing to donate their time or reduce their consulting fees for projects that benefit the community. University students and faculty might be able provide valuable assistance for little or no cost. You may need to hire consultants to conduct certain analyses that are beyond the abilities of the municipal staff or SC members. If your SC decides to hire consultants, consider preparing a "Request-for-Proposal" (RFP) to assure that you get the most qualified expert at the lowest possible cost.

After your analyses are complete, reexamine the preferred action list in light of your evaluation criteria. You might want to repeat the matrix approach described ear-

<sup>1</sup> "Strategic Planning and Financial Resource Development Workshop," 1993. Prepared by Progressive Actions for World Wildlife Foundation, Washington DC, USA; and "Introduction to Organisational Management," 1993. Institute for Sustainable Communities, Montpelier, Vermont, USA.

### FIGURE

#### LEAPs Format for City of Ararat

- Letter of Support from Ararat Authorities
- Legal Provisions Promoting Programme Implementation
- Main Environmental Articles of Constitution of Republic of Armenia
- Environmental Provisions of Aarhus Convention
- Introduction
- Step-by-step
- Identification of Priority Environmental Problems
- Pollution of Air Basin
- Unsatisfactory Condition of Irrigational System and Limited Green Territories
- Unsatisfactory Conditions of Water Supply and Water Discharge Systems
- Improper Solid Waste Management
- Low Level of Environmental Education and Access to Information
- Setting Strategic Goals
- Setting Priority Measures
- Priority Environmental Measures for City of Ararat
- Annexes

lier to help to select the most appropriate action or mix of actions. Alternatively, information generated from the analyses might clearly point out the advantages of one particular option over another.

### 6.4 Prepare Environmental Action Plan

LEAP is the framework document identifying the responsibilities of various organisations and stakeholders in implementation of certain activities and represents the long-term guideline on resolution of the environmental problems faced by the community.

Public participation is especially important at this stage, since it allows identifying and thoroughly studying all the aspects causing concerns in relation to the recommended measures. Hence, your SC must ensure dissemination of LEAPs Project among the community representatives, members of municipality, Mayor's Office and local authorities and NGOs. Various methods of public involvement shall be considered, including publication of the articles, placing interviews on radio, financing the activities of working groups and conducting public hearings. Besides this, it would be reasonable to publish

### FIGURE

#### Decision of Kutaisi Sakrebulo SAKREBULO OF CITY OF KUTAISI DECISION № 332

August 3, 2005

#### "On Local Environmental Action Plan for City of Kutaisi"

For the first time in Georgia, under the framework of State Initiatives for City of Kutaisi Programme, Regional Environmental Centre for the Caucasus developed the Local Environmental Action Plan. Along with the qualified experts, the community representatives actively participated in Programme development.

During the LEAPs process, based on investigation and analyses of local environmental status and in consideration of the results of expert evaluation and public survey, the most important environmental issues of the city were identified. Expert evaluation has been carried out by ecological scientists, employees of environmental agencies and utility infrastructure services, members of LEAPs Stakeholders' Committee.

The most important environmental issues existing in the city are: unsatisfactory status of quality drinking water supplies, ineffective solid waste management, air pollution in the parts with heavy traffic, pollution of the river water within the city limits, worsening of vegetation conditions, low level of environmental culture of the population.

In order to achieve improvement of environmental status in the city, the Local Environmental Action Plan for 2005-2025 has been developed. The specific recommendations directed towards resolution of existing environmental problems and achievement of the effective results have been issued; the priority issues requiring resolution within the next five years were identified.

Supporting the LEAP developed by REC Caucasus, Kutaisi Sakrebulo believes this document will significantly contribute in development of environmental planning in the city.

Based on the above, Kutaisi Sakrebulo decides:

- Approve Local Environmental Action Plan for Kutaisi (attached);
- In their activities directed towards improvement of environmental status in the city, the respective services of the local self-governance shall be guided by the mentioned document;
- In 2006 and in the consequent years, the maximal implementation of measures planned under LEAP shall be ensured;
- It is reasonable to consider the mentioned LEAP while elaborating the short- and long-term socio-economical development programmes for Kutaisi;
- The Government of Kutaisi shall ensure implementation of the most important activities planned under LEAP, through selecting by the contest the local and international organisations;
- The Government of Kutaisi shall use this document for the purposes of attracting local and foreign investors;
- The control over implementation of this decision shall be carried out by M. Chitaishvili, the Head of Machinery and I. Zhorzholiani, Secretary of Sakrebulo.

Chairman of Sakrebulo GELA KATAMADZE



**Figure – LEAP Action Plan for pilot city of Kutaisi**  
**Strategic Goal: Providing the population of the city with quality drinking water**

Goal	Objective	Activities	Implementing organisation	Cost, GEL	Implementation period
1. Ensure safety of water resources	1.1. Rehabilitating and improving water intake facilities	1.1.1. Carrying out inventory of headworks	Kutvodokanal	5000	2005
		1.1.2. Cleaning and processing territories of the headworks	Kutvodokanal	50 000	2005
		1.1.3. Fencing sanitary-protective zones	Mayor's Office, Kutvodokanal	1 mln.	2005-2006
		1.1.4. Metering the water volumes. Installing the meters	Mayor's Office, Kutvodokanal	100 000	2005-2006
		1.1.5. Ensuring lighting of the territory	Mayor's Office, Kutvodokanal	100 000	2005-2006
		1.1.6. Rehabilitating access roads	Mayor's Office, Kutvodokanal	200 000	2006-2007
		1.1.7. Rehabilitating wells. Installing pumps.	Mayor's Office, Kutvodokanal	1 mln.	2005-2007
	1.2. Ensuring safety of water sites	1.2.1. Ensuring armed guarding of the headworks, reservoirs, secondary pumping stations.	Mayor's Office	200 000	2005-2007
2. Achieve rational water consumption	2.1. Rehabilitating and developing water network	2.1.1. Drawing up design for rehabilitation of city networks	Mayor's Office	50 000	2006-2007
		Replacing pipes at especially damaged segments (Solomon the 1-St, Tkibuli, Meskhi, Bukhaidze streets, Youth Avenue, Vazha-Pshavela St., Lane 6 of Tsereteli St. from Chavchavadze Ave. till bread-receiver and meat-packing plant, Paliashvili St., Lanes 1 and 2 of Paliashvili St., Lermontov, Kldiashvili and Gelati Streets)	Mayor's Office, Kutvodokanal	500 000	2005-2010
		2.1.3. Applying modern materials in replacement and laying pipelines	Mayor's Office, Kutvodokanal	3 mln.	2006-2008
	2.2. Reducing water losses	2.2.1. Installing water meters	Mayor's Office, Kutvodokanal	1 mln.	2007-2010
		2.2.2. Promoting rational water use among population	Mayor's Office, NGOs, media	300/annum	2005-2010
		2.2.3. Installing regulating control mechanisms at public use places, residential sector, enterprises.	Mayor's Office	200 000	2006-2007
		2.2.4. Strictly observing water supply schedule	Kutvodokanal		2005-2025
		2.2.5. Creating special groups for location and liquidation of damages in network	Kutvodokanal	100 000	2006
		2.2.6. Ensuring installation of water meters in buildings under construction	Architectural Service, Kutvodokanal		2005-2025

3. Observe water treatment conditions	3.1. Ensuring uninterrupted chlorination of drinking water	3.1.1. Repairing and procuring equipment. Installing chlorinating plant	Kutvodokanal	50 000	2005
		3.1.2. Procuring batchers	Kutvodokanal	4000	2006
		3.1.3. Creating the long-term chlorine reserve stock	Kutvodokanal	30 000	2005-2008
	3.2. Ensuring water quality monitoring	3.2.1. Renewing equipment in sanitary inspection and introducing express-methods of bacteriological analyses of the water	Mayor's Office, Sanitary Inspection	100 000	2007-2008
		3.2.2. Renewing equipment in Kutvodokanal laboratory	Mayor's Office, Kutvodokanal	50 000	2006-2008
		3.2.3. Ensuring permanent radiation control of water	Sanitary Inspection	40 000	2010
		3.2.3. Equipping Kutvodokanal with mobile laboratory	Mayor's Office, Kutvodokanal	50 000	2006
	3.3. Introducing modern water safety systems	3.3.1. Introducing the water ozonation method	Mayor's Office, Kutvodokanal	1 mln.	2008-2015
	3.4. Applying individual methods for improving drinking water quality	3.4.1. Introducing the individual ozonating devices	Mayor's Office, Kutvodokanal, NGOs, media	2 mln.	2008-2015
	3.5. Protecting population against use of poor quality drinking water	3.5.1. Accomplishing construction of water collector reservoir and networks in Chakhata District	Mayor's Office, Kutvodokanal,	100 000	2006-2007
		3.5.2. Creating water quality warning system. Installing informational stand in the crowded places. Issuing informational bulletins. Creating the corresponding rubrics in the newspapers. Posting information in Internet. Creating water quality early warning system for population.	Mayor's Office, Kutvodokanal, NGOs, media	10000	2006
		3.5.3. Stopping use of artesian water for drinking purposes. Informing population on hazards related to use of artesian waters for drinking purposes.	Sanitary Inspection, Kutvodokanal, NGOs, media		2005-2025
		3.5.4. Conducting «Water Week»	Sakrebulo, Mayor's Office	4000/ annum	2006-2025
		3.5.5. Introducing population to the rules of care for special water collection reservoirs	Kutvodokanal, NGOs, media, higher schools	2500/ annum	2005-2007

4. Ensure uninterrupted drinking water supply	4.1. Seeking the alternative water supply sources	4.1.1. Extending Gumat headworks	Mayor's Office	100 000	2005-2006
		4.1.2. Studying river water resources forming at Askhi Mountain, for the purposes of ensuring water supply in Kutaisi, with consequent project development.	Mayor's Office	1 mln.	2006-2007
	4.2. Ensuring uninterrupted energy supply	4.2.1. Taking measures for ensuring water sites with necessary energy resources	Mayor's Office, Kutvodokanal	100 000	2006-2008
5. Improve system of water economy management	5.1. Introducing new management in JSC Kutvodokanal	5.1.1. Optimizing management structure	Kutvodokanal	5 000	2006
		5.1.2. Capacity building among professionals	Kutvodokanal, higher schools	30 000	2006-2025
		5.1.3. Creating automatic control system	Mayor's Office, Kutvodokanal	1 mln.	2008-2010
	5.2. Technical reequipping of Kutvodokanal	5.2.1. Equipping respective services with	Mayor's Office, Kutvodokanal	1 mln.	2010-2015

LEAPs Project as a small brochure and disseminate it among the wide strata of population. SC shall also seriously consider issue of organising presentation for the municipal council (see example – Proposed LEAPs Format for City of Ararat).

#### 6.4.1 Adopt Action Plan

It is important that the SC allow sufficient time to receive both written and oral comments on the draft EAP, and then review these comments to determine what changes need to be made. You may even consider meeting with individuals who have raised significant points. You might consider preparing a "Comment Response Summary" which summarizes all comments received on the EAP, how these comments are reflected or not reflected in the final EAP, and a rationale for those suggestions that are not included.

After these changes have been incorporated, the SC will want to approve the EAP and submit it to the Municipal Council for formal adoption. Because many of the recommended actions in the EAP will require approval by the Municipal Council, their formal endorsement will help to improve the chances that specific recommended actions will actually be implemented. Further, as noted earlier, it is critical the Municipality "institutionalize" the EAP recommendations into its formal planning processes, such as the preparation of its land-use plan and annual budget.

While the Municipality and other agencies will have primary responsibility for implementation, the SC can con-

tinue to play an active role in monitoring and overseeing EAP implementation. For example, the SC can provide a forum for all implementing agencies to report on their progress toward achieving the goals of the EAP. Further, the SC can continue to implement citizen-based initiatives, such as tree plantings and river clean-ups, and provide a sounding board for the municipal government on how to most effectively solve environmental problems.

The EAP provides a long-term road map for addressing environmental problems in your community. Technologies and priorities will change over time, and this will require periodic revisions to the EAP to assure that environmental priorities are still reflecting community concerns. The EAP will need to be revised periodically – ideally every 3-5 years – to reflect new information, technological advances, and new environmental requirements.

#### Conclusion

The EAP provides a framework for addressing the top environmental problems and a long-term blueprint for environmental investments and programmes in the community. Ideally, the EAP serves as a multi-stakeholder agreement on environmental priorities for the community. The process of developing the EAP provides a unique opportunity for incorporating public views and preferences, and thus, a forum for improving public support of environmental programmes. It provides a document by which to monitor and evaluate the effectiveness of implementation activities. Thus, an EAP can be an extremely useful document for furthering environmental protection in the community.

## STRATEGIC GOAL: EFFECTIVE WASTE MANAGEMENT

Goals	Objectives	Measures	Responsible organisations	Terms	Cost, \$	Indicators
1	2	3	4	5	6	7
1. Organisation of effective collection and disposal of SHW	1.1. Strengthen the performance of communal services involved in collection and disposal of SHW	1.1.1. Conducting inventory of all dumps existing at the city territory	Department of municipal service, Department Chistota	2005	1000	Inventory statements
		1.1.2. Identification of specific places for SHW accumulation, in accordance with the sanitary norms.		2005	1000	Number of opened dumps
		1.1.3. Arranging fencing around the SHW accumulation points		2005	10000	Number of fenced dumps
		1.1.4. Installation of sufficient number of bunkers in SHW accumulation points.	Department Chistota	2005	10000	Number of installed bunkers
		1.1.5. Liquidation of illegal dumps existing in the cities.	Department of municipal service, Centre of hygiene and epidemiology	2005	1000	Number of liquidated illegal dumps
		1.1.6. Applying penalty sanctions to organisations, enterprises and natural persons disposing the SHW at the illegal dumps.	Regional Department of the Ministry of environment and natural resources, Centre of hygiene and epidemiology	Regularly	-	Number of penalised violators
1.2. Organisation of separate collection of SHW		1.2.1. Installation of various colour bunkers for various waste types (food wastes, synthetic materials, paper waste, glass, medical wastes, construction wastes, etc.)	Department of municipal service, Department Chistota	2005	35000	1000 of installed bunkers
		1.2.2. Informing population on advantages and effectiveness of separated waste disposal.	Informational department of EA, Department of municipal service	Regularly	1500	Number of informed persons (based on the poll results)
1.3. Improving centralised disposal of SHW from collection points to the city polygon.		1.3.1. Carrying out inventory and repairing existing machinery for disposing SHW to the city polygon.	Department of municipal service, Department Chistota	2005	10000	Number of repaired vehicles
		1.3.2. Taking into consideration the size of the city and lack of special equipment, procure new, modern mechanisms for disposal of the SHW to city polygon. Involve the stakeholders into procurement process (applying the allowances, etc.)	Executive Authorities, Ministry of Municipal Economy, Department of municipal service	2005-2006	300000	30 procured vehicles
		1.3.3. Organise timely disposal of the SHW throughout entire city. Increase the number of employees in the department.	Department Chistota	Regularly	1000	Volume of disposed SHW
		1.3.4. Strengthen control of timely and regular disposal SHW from the accumulation sites and practices of penalising the violators by environmental organisations.	Regional Department of the Ministry of environment and natural resources, Centre of hygiene and epidemiology	Regularly	-	Number of penalised persons. Reduced number overloaded accumulation points

## Implement Actions

2. Improving condition of city polygon	2.1. Ensuring more effective performance of city polygon	2.1.1. Implement sorting SHW delivered to the polygon.	Department Chistota	Regularly	-	Number of identified SHW types
		2.1.2. Arrange the places for separated receiving and storage of SHW.		2005	10000	Number of identified places
		2.1.3. Arrange burial of the SHW into the concrete burial grounds	Department of municipal service, Department Chistota	Regularly	20000	Volume of buried SHW
		2.1.4. Organise regular sanitary processing of the respective parts of the polygon.	Centre of hygiene and epidemiology		15000	Number of processed sites
		2.1.5. Install water-protecting sheds over the SHW storage places.	Department Chistota	2006	20000	Number of installed sheds
	2.2. Creating sanitary-protection zone around the city SHW polygon	2.2.1. Arrange fencing around the city polygon	Department of municipal service, Department Chistota	2005-2006	100000	Existence of fencing around the polygon
		2.2.2. Protect the sanitary-protection zone (SPZ) around the polygon.	Centre of hygiene and epidemiology, Department Chistota	2005	500	Existence of sanitary-protection zone
		2.2.3. Plant vegetation on the territory of SPZ.	Department Chistota, Department Ozelenenie	2005-2006	5000	Number of planted trees
		2.2.4. Liquidate sites keeping the domestic animals around the polygon.	Centre of hygiene and epidemiology, Department Chistota	2005	1000	Number of liquidated sites
	3. Secondary utilisation of SHW	3.1. Reducing volumes of SHW subject to burial, through their utilisation	3.1.1. Build the plant for utilisation and processing SHW	Executive Authorities, Ministry of Municipal Economy,	2006-2007	5000000
3.1.2. Involve all the interested enterprises, organisations and private sector for financing utilisation and processing plant				2006	-	-
3.1.3. Through the local radio and TV stations inform everybody on necessity of constructing the abovementioned plant.			Informational department of Executive Authorities	Regularly	1000	Number of informed persons
3.1.4. In the future, apply allowances for the enterprises participating in the construction of plant, through releasing from payment for SHW utilisation.			Executive Authorities, Department of municipal service	-	-	Number of enterprises subject to allowances
3.1.5. Interest organisations and enterprises in secondary use of the SHW. Applying allowances to such organisations and enterprises through releasing from or discounting for utility payments.			Executive Authorities, Department of municipal service	Regularly	15000	Volume of reused SHW and number of enterprises subject to allowances
3.1.6. Organising processing SHW into forms acceptable for the enterprises and organisations for their secondary utilisation. Involve farmers in utilising SHW after processing in the form of fertilisers, etc.			Department of municipal service, Department Chistota, Executive Body	Regularly	50000	Volumes of processed SHW and number involved farmers



## INTRODUCTION

Now that you have completed your Environmental Action Plan (EAP), the next step is to put your plan into action. All the planning efforts of your Stakeholder Committee (SC) to this point – developing a vision, assessing issues, establishing priorities, and developing an EAP – lead to implementation. The environmental planning process helps to ensure that your community is targeting its scarce financial and human resources toward the most pressing problems and that you are receiving the greatest environmental benefits for your money.

While successful completion of the EAP may be a laudable achievement, the real measure of your success will be how well the recommendations in the EAP are converted into action. The SC does not have primary responsibility for implementing actions; most of these responsibilities reside with various institutions, such as the municipality, regional government, utility companies, and individual industries. However, the SC – or a reconfigured form of the SC – can play a vital role in helping to ensure that the recommendations in the EAP are fully integrated into municipal statutory planning processes and implemented by other institutions.

The EAP provides a menu of recommended actions for addressing the top priority problems facing the community. It will not be possible to pursue all actions identified in the EAP immediately; thus, the municipality and other implementing institutions will need to focus their efforts on a finite number of actions. In determining which actions to focus upon, implementing institutions will want to take into account the following considerations:

- Pursue a mixture of actions that achieve both short-term and long-term results;
- Select actions that are complementary, and if pursued concurrently, will help to improve your chances of successfully achieving your goals; and,
- Start with small, achievable projects that have a strong chance of success. This will give you experience in project implementation, and these successes can then provide momentum for pursuing more complex and longer-term actions.

One of the major questions you will need to address is “who” will be responsible for overseeing and monitoring implementation. It is important to note that the implementation phase of the LEAP is very distinct from the planning phases. While planning involves the SC jointly preparing an EAP to address a range of issues, implementation requires that various institutions take individual responsibility to implement these actions. Thus, implementation requires developing agreements among implementing institutions and developing some type of oversight and monitoring body to ensure that the goals and targets of the EAP are being achieved. This will require establishing a new organisational structure

and new agreements – distinct from the SC – to ensure that your efforts are successful.

### 7.1 Identify Potential Implementing Institutions and Organisations<sup>1</sup>

Implementation will require the active participation and involvement of numerous institutions. (Ideally, the SC will have involved these institutions early in the preparation of the EAP to build support for action implementation.) Your SC can play a critical role in identifying and bringing together key institutions to help to ensure they are involved at the outset of the implementation phase. These institutions include.

- **Municipalities:** Your municipality will have primary responsibility for implementing the vast majority of recommendations in the EAP. In the Caucasus countries, Municipalities are responsible for managing and overseeing a wide range of environmental problems, including: managing wastewater, collecting and disposing of solid waste, providing safe and adequate drinking water supplies, and maintaining green areas. Your Municipal Council will have a crucial role to play in approving budgets, adopting ordinances, and seeking funding. If your Municipal Council has an Environmental Committee, you will want to work closely with its members, seek their input on the project design, and keep them apprised of your implementation efforts.
- **Municipal enterprises:** Municipal enterprises play a pivotal role in project implementation. Municipal enterprises are directly responsible for offering specific services such as providing drinking water, managing wastewater, and collecting and treating solid waste. Depending upon the community, these companies may be owned by the municipality, may be a quasi-independent municipal company with some type of joint private-public ownership structure, or may be an independent private company.
- **Regional Government:** Some Caucasus countries have regional governments composed of representatives from surrounding municipalities. Regional governments can potentially provide forums for solving problems that extend beyond the jurisdiction of one municipality. For example, your regional government might be able to help to facilitate an agreement among several municipalities for managing a regional environmental service or facility, such as a solid waste landfill. Depending on the legal framework, regional governments may also have certain regulatory responsibilities.

<sup>1</sup> Adapted in part from Environmental Planning for Small Communities: A Guide for Local Decision Makers, draft, November 1993. Prepared by Eastern Research Group for US Environmental Protection Agency, Cincinnati, Ohio, USA.

- **National Government:** The national government establishes environmental policies that provide the legal framework for managing environmental problems. For example, the Ministries of Environment in the Caucasus countries are usually responsible for establishing regulatory standards that set specific pollution abatement levels. Environmental Ministries are also sources of technical and financial assistance. Depending on your country's regulatory framework, other ministries may share some environmental responsibilities. For example, in many CEE countries, the Ministry of Health oversees and enforces numerous health standards, such as drinking water quality and indoor air quality in the workplace. Many CEE countries have regional inspectorates that serve as the regional representatives for national ministries, such as Regional Environmental Inspectorates and Health Inspectorates. These inspectorates will probably have direct responsibility for implementing specific components of the EAP, such as overseeing enforcement actions against environmental violators.
- **Private Sector:** Municipalities can hire private companies to fulfill public services, such as the collection and management of solid waste. Municipalities can contract and oversee private sector activities, while the private sector can design, construct, and operate environmental facilities. (See Section B) “Evaluate Opportunities for Working with the Private Sector” below.)
- **Non-Governmental Organisations:** Non-governmental organisations (NGOs) can play an important role in implementing a diverse range of activities related to environmental protection. NGOs are involved in conducting environmental education programmes, implementing citizen-based environmental monitoring programs, conducting energy and environmental audits, overseeing wildlife protection areas, and installing environmental equipment and devices. NGOs can be valuable partners in your implementation efforts. (See Section C) “Evaluate Opportunities for Working with NGO Sector” below.)
- **Industries:** Your EAP will probably identify several industries – both private and government-owned – that will have specific responsibilities for reducing pollution levels. Your municipality and regional inspectorates will need to work closely with these industries to bring them into compliance with any new environmental standards and programs.

Your community's implementation efforts will probably involve a mixture of these government, non-government, and private institutions. The SC, in cooperation with the municipality, can play an important role iden-

tifying appropriate institutions, agencies, organisations, and individuals to seek their participation in the implementation phase.

### 7.2 Working with Private Sector<sup>1</sup>

There are five types of public-private relationships that are generally recognized. These relationships can be characterized by the roles played by both public and private sectors:

- **Contract services.** The municipality contracts with the private sector to provide a specific municipal service, such as solid waste collection, or to maintain and operate a facility, such as a wastewater treatment plant. The facility is owned by the public sector.
- **“Turnkey” facility.** A turnkey facility involves the private sector designing, constructing, and operating an environmental facility that is owned by the public sector (i.e. the public sector is presented with the keys to turn the facility.) While the public sector generally assumes the financial risk, the private partner usually assumes the performance risk for minimum levels of service and/or compliance.
- **Developer financing.** In this type of arrangement, the private sector finances the construction or expansion of an environmental facility in return for the right to build residences, stores, or industrial facilities.
- **Privatization.** In privatization, the private sector owns, builds, and operates a facility. They also partially or totally finance the facility.
- **Merchant facility.** In this type of arrangement, not only does the private sector own and operate the facility, as with privatization, but also they decide to provide an environmental service to a community on their own initiative.

#### 7.2.1 What are the Advantages of Working with the Private Sector?

There are five basic reasons to consider working with private sector:

- **Potential access to more sophisticated technology.** Private companies often have greater technical and design expertise that enables them to assess opportunities for using more advanced technologies and making knowledgeable predictions of cost and performance benefits. For this reason, they may be more willing to undertake the risk of using new technologies.
- **Cost-effective design, construction, and/or operation.** Working with the private sector can lead to cost savings in several ways. First, since a private partner

<sup>1</sup> Adopted from Public-Private Partnerships for Environmental Facilities: A Self-Help Guide for Local Governments, July 1991. Office of Administration and Resources Management, U.S. Environmental Protection Agency, Washington DC.

- often operates similar facilities within the same geographical area, costs for operation and maintenance can be reduced because the private company can buy supplies in bulk and centralize administration. In many cases, the private company has a larger number of employees. This allows the private company to perform a greater number of repairs and maintenance procedures by moving highly trained staff from site-to-site. This can result in cost savings through reduced labor and repair costs.
- **Turnkey arrangements provide communities with a second option for saving money.** By consolidating responsibility for designing, constructing, and operating a facility into one contractual agreement rather than two or three, many of the delays associated with the procurement process can be avoided. As a result, you can reduce interest costs and achieve compliance goals more quickly. The costs to your community can be more predictable when one private company is responsible for all phases of construction and operation.
  - **Flexible financing.** Sometimes private companies can bring private funding to help to finance public facilities. For example, a private developer may contribute the initial capital and operate the leased facility under the public entity's overview. The developer contributes funds in exchange for the rights to use the new facility and/or receive future income from user fees. Thus, the developer finances the new capacity, thus shifting the burden away from individuals who are already using the environmental facility or system. The weakness in developer financing, as well as other types of private investment financing, is that the public sector takes the risk of the private developer possibly withdrawing or altering development decisions. Further, the developer is seeking to make a profit on the construction and financing of the public facilities.
  - **Delegation of responsibility and risk.** Your municipality may not want the day-to-day burden of managing technologically complex facilities, and/or may lack the experience of raising large amounts of capital. If so, working with the private sector offers a way for your municipality to carry out its responsibilities without the burden of managing the service or facility. The risks involved in providing environmental services can be significant. Risks include design and construction delays, plant performance and environmental compliance, financial and tax liabilities, and labor instability. In working with the private sector, you can transfer certain risks to, and elicit guarantees from, the private sector. However, the private sector, if willing to assume these risks, will increase its prices accordingly.
  - **Guaranteed cost.** A partnership between your municipality and a private company can provide certain benefits to a community through guaranteed costs. Guaranteed costs allow your community to accurately budget for an environmental service over a set period of time. This simplifies the budget process since the community no longer needs to make adjustments to provide for contingencies during the budget year.
- ### 7.2.2 What Are the Disadvantages of Working with the Private Sector?
- There are two potential major disadvantages of working with the private sector: loss of local control and financial risks.
- **Loss of local control.** The argument most often heard against privatizing environmental services is that the municipality loses control over the financing, construction, and operation and maintenance of the facilities. By relinquishing ownership, the municipality also loses "hands on" control of the operation and maintenance of the system. That is, even though the municipality can hold the private partner accountable for performance, on a daily basis the private partner controls the method of service, compliance with treatment standards, discharge levels, etc. However, the municipality can specify performance standards and hold the private owner/operator accountable for meeting these standards.
- While loss of local control may raise some concerns, a partnership between the public and private sectors can be structured to provide the municipality with oversight and control of a privately financed and owned facility. With a privately-operated facility, the municipality can still retain control in the:
- developing and implementing a user fee system,
  - maintaining primary contact and interaction with users of the facilities,
  - controlling growth within the service area,
  - maintaining responsibility for determining whether the facility will be expanded and under what conditions it can occur,
  - keeping responsibility for connections and disconnections,
  - preserving the right to inspect the facilities and to perform fiscal, management, and/or operational audits, and,
  - sharing any operational savings with the private sector through incentive programmes.
  - **Financial risk:** Another potential disadvantage of privatizing environmental services is the financial risk associated with a long-term contract. This is especially true if the private company faces financial

problems or decides to withdraw from the project. In this case, the municipality could potentially assume unexpected financial risks and potentially face costly litigation. Proper allocation of risks is of great importance, and it is essential that the community protect itself by hiring qualified legal, financial, and technical advisors to assist in the structuring of the service agreement and overall implementation of the privatization transaction.

Working with the private sector can offer real benefits, but your municipality must weigh the benefits with the risks. If you decide to use a private company to implement part of your EAP, choose that company carefully. You will want to identify companies that have experience working with similar problems and technologies. Ask the company for municipal references and then ask these municipal officials about their experiences with the company to make sure the company has a good record.

Hiring private companies to provide public services requires a carefully designed purchasing system to ensure that the selection process is fair and that your municipality uses taxpayer money in the most efficient and cost-effective way possible. (See Attachment 4.A: "Process for Competitively Purchasing Equipment and Services.") Some Caucasus countries have enacted public procurement laws that regulate how public entities such as municipalities must go about purchasing equipment and services. Your municipality will want to be sure to check on any legal requirements pertaining to preparing bids or request-for-proposals.

### 7.3 Evaluate Opportunities for Working with the NGO Sector<sup>1</sup>

Traditionally, the relationship between government and non-government organisations (NGOs) has been characterized by mutual skepticism, adversity, and, at times, even acrimony. Increasingly though, both national and local governments and NGOs are recognizing their mutual interests in working cooperatively. Prompted by the enormity of the common challenges they face and the obvious limitations on the resources available to meet those challenges, local and national government agencies and NGOs are increasingly viewing partnerships as appropriate, useful, and even necessary.

#### 7.3.1 How Can the Public and Non-government Sectors Work Together?

There is a wide range of possible partnerships between government institutions and NGOs. Examples of some

<sup>1</sup> Memorandum from Steve Nicholas to Paul Markowitz on "Evaluating Opportunities for Working with NGO Sector," 1999. Steve Nicholas, ISC Consultant, Montpelier, Vermont, USA.

of the more common partnerships include:

- **Coalition-building:** Governments and NGOs can form powerful, effective coalitions that bolster each institution's ability to solve problems or raise money. For example, a government institution seeking funding from an international organisation for environmental improvements is more likely to be successful if it is in partnership with NGOs. This partnership can help to demonstrate the local government's commitment to public participation and democratic decision-making.
  - **Outreach assistance:** One of the main strengths and strategic advantages of NGOs is that they often have access to large networks of volunteers and citizens. Thus, NGOs can be well suited to help to government institutions "reach out" to the public during the development or implementation of specific policies or programmes, raising public awareness, and soliciting valuable public input.
  - **Implementation assistance:** Government institutions sometimes do not have the experience or the resources necessary to implement programmes. Increasingly, NGOs are able to fulfill that role because they may have more specialized expertise, access to funding (e.g., grants specifically for NGOs), or because they have a greater ability to augment funding with volunteer time and energy. (See Figure 7.3.1.1.)
- ### 7.3.2. What are the Advantages of Working with the NGO Sector?
- There are several reasons for considering government-NGO partnerships, including the following:
- **Making more democratic decisions:** NGOs typically have expansive networks of members and volunteers. By forming partnerships with NGOs, government agencies can take advantage of these networks to increase public awareness of government policies and activities, and to more meaningfully involve larger numbers of citizens in decision-making, policy-making, and implementation.
  - **Making better decisions:** By definition, decisions that involve NGOs incorporate a wider array of the community's values and perspectives. Decisions that incorporate a broader range of perspectives are usually better, more durable decisions. In addition, NGOs often have members with experience and expertise that can complement or even exceed the experience or expertise that exists within government agencies. By forming partnerships with NGOs, government agencies can improve the overall quality of the decisions they make and the services they provide.

- **Bolstering resources:** Competition for limited public resources, particularly in CEE countries, is intense. NGOs can help to bolster those resources and alleviate that competition through their often-substantial reservoirs of volunteer time, energy, enthusiasm, and expertise. By forming partnerships with NGOs, government agencies can augment their own resources and thereby their own capacity to develop and implement policies and programmes and solve problems.
- **Building public trust:** NGOs often enjoy more public trust than government agencies, as they are often perceived as more in tune with the values and interests of the citizenry. By forming partnerships with NGOs, governments can “piggy back” on that public trust, and over time, build more public trust in public sector institutions.

### 7.3.3 What are the Disadvantages of Working with the NGO Sector?

There are potentially several disadvantages to working with the NGO sector as well. They include the following:

- **Longer, more difficult decision-making:** While broader-based decision-making may yield better, more durable decisions, it also may take more time and be more complicated. The more interests, values, and perspectives you are seeking to balance and incorporate into your decision-making process, the more time-consuming and arduous that process is likely to be.
- **Questions about readiness:** In some CEE countries, many NGOs are new and relatively inexperienced. Like government agencies themselves, many NGOs are “in transition”—working to make their institutions more professional, effective, and transparent. Before forming partnerships with NGOs, government agencies should ask some basic questions, such as: “Is this NGO ready for partnership?” “Is it working well?” “Is the NGO using its current funding efficiently and effectively?” “Is it functioning in a democratic, transparent way?”

Working with the NGO sector can offer real benefits, but your municipality must weigh the benefits with the risks. If you decide to use a NGO to implement part of your EAP, choose that NGO carefully. You will want to choose NGOs that have demonstrated their experience in implementing similar programmes. Ask the NGO for references and then ask these references about their experiences with the NGO to make sure it has a good record.

### 7.4 Secure Participation of Implementing Institutions and Organisations

The Stakeholder Committee can continue to play an im-

portant role to help to ensure that recommendations in the EAP are fully implemented. Ideally, the municipality will give the SC a new mandate or “official directive” to facilitate, oversee, and monitor implementation efforts. The SC can be responsible for the following tasks related to implementation:

- facilitating and securing the participating of institutions with implementation responsibilities,
- collecting data on appropriate indicators,
- monitoring and evaluating implementation efforts,
- conducting educational activities,
- facilitating citizen participation, and,
- advising the municipality or municipal council on environmental issues.

As the SC starts to take on new responsibilities related to implementation, it might be appropriate to consider reconfiguring its membership, as some institutions might be more interested in the LEAP planning phase versus implementation phase. The reconfigured SC could consider continuing to serve in an advisory capacity to the municipality or could even consider incorporating as a non-governmental organisation.

The SC can play a critical role in bringing together different institutions with implementation responsibilities associated with each priority problem. One approach ensuring coordination among these different institutions is to form separate Implementation Groups associated with each problem. Each Implementation Group would be composed of representatives from institutions with diverse implementation responsibilities, including investing in pollution control/reduction, enforcing against environmental polluters, undertaking education programmes, and conducting research. You will find that many of the institutions represented on the SC will probably be also represented on each Implementation Group, including the municipality, regional inspectorates, industries, research/academic institutions, and environmental non-government organisations. Further, it will be valuable to have a representative from each Implementation Group serve on the SC to ensure effective coordination.

The SC can help to secure the commitment of these institutions through an “Implementation Agreement” wherein each member of the Implementation Group agrees to undertake specific tasks. The Implementation Agreement can include the overall purpose, goals, and functions of the Implementation Group, as well as the specific responsibilities and resource commitments of each institution. In addition, the Agreement can include a summary of the specific tasks agreed by each institution, along with a detailed time schedule.

The SC will need to meet periodically to review the progress of each Implementation Group toward achieving the goals and targets in the EAP. Each Implementa-

tion Group will ideally provide regular progress reports to the SC, and the SC can provide a forum for sharing information among different Implementation Groups. Finally, it is critical that the SC provides regular updates to the Municipal Council on the status of implementation efforts.

### 7.5 Prepare Project Implementation Plan

The Project Implementation Plan seeks to integrate the actions for each priority issue into one overall, comprehensive strategy – helping to ensure that all of the actions work synergistically toward achieving the goals and targets. It is important that the Implementation Plan in-

clude the goals and targets established in the EAP; these goals and targets serve as benchmarks to measure the effectiveness of your actions. The Implementation Plan helps to assure that all tasks necessary for implementing each action are clearly identified and responsibilities clearly defined. It identifies specific tasks that need to be undertaken to implement each action, assigns a time schedule for completing each task, determines who will be responsible for completing each task, and identifies associated costs for each task. The Implementation Plan also provides a starting point for identifying cost items that are used in preparing the budget. (See Figure 7.5.1.1.: “Case Study of Municipality of Ararat, Armenia: Implementation Plan” above.)

Figure 7.5.1.1.: Case Study of Municipality of Ararat, Armenia: Implementation Plan

2. Extension of green plantations	2.1. Creating new green lines	2.1.1. Specifying boundaries of green plantations according to the city’s plan	Municipality, JSC Ararat	January, 2006		Project Documentation
		2.1.2. Investigation of the local area by respective specialists	Municipality, independent specialists	October-November, 2005	120,000 drams	Experts Report
		2.1.3. Development of planning-estimated documentations	Municipality, Planning Institution	September-October, 2005	Depending on the estimated percentage of the planned costs	Prepared planning-estimated package of documents
		2.1.4. Construction of new deep wells and installation of new deep pumps	Municipality, construction companies	March-June, 2006	3,5 mln. drams	2 deep wells and 2 new deep pumps
		2.1.5. Creation of new green lines/purchase of nurseries, development of forestlands, creation of new plantation system/	Municipality, JSC Ararat housing maintenance and utilities	March-June, 2006	6,7 mln. drams	Extended green plantations
2.2. Preservation of existing green territories		2.2.1. Irrigation and control of green plantations	Municipality, JSC Ararat housing maintenance and utilities	From April, 2006	250,000 drams	Area of green plantations
		2.2.2. Enriching soil and providing with hygienical necessities	Municipality, JSC Ararat housing maintenance and utilities, JSC Ararat Hygienic-Epidemiological Inspection	From April, 2006	2,3 mln. drams	Fertile lands
		2.2.3. Environmental education of education	Educational Institutions, NGOs, media, REC Caucasus	Current	300,000 drams	High level of environmental awareness among population

The first step in developing an Implementation Plan is to bring together implementing institutions, SC members, and other interested individuals. With a focus on one priority issue, this group can first reviews the set of actions identified in the EAP and brainstorms a list of specific tasks that are necessary to implement each action. After completing the brainstorm, you can re-arrange the list of tasks according to their relative chronological order. Next, determine when you would like the action to be implemented, and then develop a time schedule for each task that helps you to meet that deadline. After developing time schedule, clarify and assign responsibilities for undertaking each task and then identify any associated costs. You can complete a similar process for each action until you develop a comprehensive Imple-

mentation Plan for each priority issue. (See Figures: "Proposed Formats for Project Implementation Plan.")

### 7.6 Prepare Implementation Budget and Establish Accounting Procedures

A critical component of implementation is the creation of a system for accurately keeping track of project costs and revenues. This involves the creation of a budget and reliable accounting procedure.

#### 7.6.1 Prepare Implementation Budget

Implementation budgets are financial plans that state how much money you will need and how much money

Figure 7.5.1.1: PROPOSED FORMAT FOR PROJECT IMPLEMENTATION PLAN

Description of Selected Actions:			
Goals and Targets:			
Strategy #1:			
Goal/Targets:	Schedule	Responsible Groups/Individuals:	Costs
Goal 1			
Goal 2			
Goal 3			
Goal 4			
Goal 5			
Goal 6			

Figure 7.5.2 ALTERNATIVE PROPOSED FORMAT FOR PROJECT IMPLEMENTATION PLAN

Goal/Targets:													
Strategy #1:													
Responsible Groups/Individuals:													
Associated Costs:													
Tasks	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	
Task 1													
Task 2													
Task 3													

you anticipate receiving. They provide a mechanism for overseeing the expenditure of project funds and help with monitoring implementation activities. A budget also identifies planned revenue sources necessary to cover both capital and operating costs. Budgets can be used to clarify the availability and timing of the receipt of funds. A sound project budget, in combination with effective accounting procedures:

- assigns a monetary value to specific activities;
- guides expenditures so that monies are spent only on activities that directly support stated goals and targets;
- identifies necessary resources and specifies when those resources need to be expended;
- enables examination of the actual costs of specific activities;
- clarifies the relationship between project costs and the administrative and operating expenses necessary to sustain the project; and,
- provides information on potential cash-flow problems before they arrive so that necessary actions can be undertaken.

Two major budget categories are expenses (costs) and revenues (income). Cost estimates flow directly from the cost items identified in the Implementation Plan. It is important that all expenditures necessary to implement a particular action are identified and included in the budget. Budget cost items include salaries, social insurance/salaries, consultants, travel, communications, office supplies, equipment, capital construction costs, operation and maintenance, rent, and, miscellaneous. The project budget also identifies various revenue sources (e.g. municipality, local/regional utility, national government, and international financial institutions) and the expected amount from each source. These revenues can come in the form of grants or loans, user fees and other charges.

#### 7.6.2 Establish Accounting Procedures

In order to monitor project expenditures and revenues, it will be important to establish effective accounting procedures. These procedures include the preparation of a monthly transaction report (or expense log) that keeps an accurate accounting of all receipts and related internal financial records. Receipts are legal documents that are kept for all expenditures, including the date of transaction, name of firm or business, description of product or service, and the amount paid or payable. The monthly transaction reports go hand-in-hand with the monthly financial statement that summarizes the budgeted amount for each line item (e.g. office supplies, salaries), how much has been expended during the month, the total expenses to date (cumulative expenditures), and the balance for each budget line item. By comparing budgeted amounts with actual expenditures, financial statements provide valuable tools for helping to ensure

that money is being spent in such a way that sufficient funds will be available for planned activities. (See Figure 7.6.2.1: "Sample Monthly Financial Statement" below.)

### 7.7 Secure Project Financing

#### Introduction

Your EAP will contain a mixture of actions that will have a range of costs associated with them. For example, adopting a municipal ordinance requires very little or no expenditures on behalf of the municipality, public education programmes require moderate expenditure levels, and building a wastewater treatment facility requires a large capital investment. Your municipality or other implementing institution will need to secure adequate financing for each action identified in the Implementation Plan.

Raising capital for large environmental facilities will be one of your municipality's most serious implementation challenges. Traditionally, in many Caucasus countries, money for large environmental facilities have been allocated on an annual basis from national budgets – usually in the form of grants to municipalities. Due to cyclical economic fluctuations, shifting political tides, or the short-term flow of funds – these projects have often taken 10-20 years to build. Oftentimes, many projects have been permanently halted before construction was completed.

In the United States, Western Europe, and now in some Central and Eastern European countries, financing for major environmental facilities is secured prior to starting the construction of these facilities. Funding is provided through a combination of national grants and loans, municipal bonds, and other sources. Municipalities usually cannot afford to pay their share of the capital costs in a single year because of the significant financial burden this would impose on its citizens. Thus, they borrow funds to pay for their share of the facilities, and then repay these borrowed funds over a period of years. Annual repayments, known as annual debt service, consist of both the principal, i.e. the original amount of the borrowed money, and the interest payments on this amount. By borrowing funds, municipalities can help to ensure that funds to cover all capital costs are secured before the first brick is laid.

#### 7.7.1 Evaluate Sources of Capital<sup>1</sup>

The following is a list two potential sources of capital: loans and grants. These are described in greater detail below.

- **Loans:** Long-term loans enable communities to pay for those capital costs that require a large one-time investment. Lending institutions – whether

<sup>1</sup> IBID

FIGURE 7.6.2.1: SAMPLE MONTHLY FINANCIAL STATEMENT

Budget Categories	Original Budget	Current Expenditures	Cumulative Expenditures	Balance
Staff Salaries				
Social insurance/taxes				
Consultants				
Travel				
Communications (i.e. telephone, fax)				
Copying/ printing				
Office Supplies				
Equipment				
Operation and maintenance				
Capital construction costs				
Debt Service (repayment of loan)				
Office overhead/rent				
Miscellaneous				
TOTAL				

they are commercial banks or national governments – require that borrowers provide adequate collateral for the loan, i.e. property of equivalent or greater value to the loan. This collateral provides the lender with the financial security they need in the unlikely event that the municipality is unable to repay the loan.

Some Caucasus countries have established National Environmental Protection Funds that provide loans (and grants) for environmental facilities. In addition, international financing institutions, such as the World Bank and the European Bank for Reconstruction and Development, often provide loans for local environmental projects – usually through financial arrangements with national governments.

- **Grants:** Grants are funds that are set aside by the national government or another organisation to pay for special projects. In the United States, federal and state governments have traditionally covered a large portion of the costs associated with major environmental facilities. In providing these funds, the federal and state governments establish a set of stringent requirements and standards that must be followed by municipalities in order to receive these funds.

### 7.7.2 Evaluate Potential Revenue Sources

Municipalities use a variety of mechanisms to raise revenues to annually pay for capital and operating costs of environmental facilities. Your municipality will need to carefully consider and evaluate these options to see which revenue sources are most appropriate given its legal authority and local political considerations.

Potential revenue sources include:

- **User Fees:** User fees require that individuals and businesses who receive the benefit of an environmental facility pay for the costs of the facility based upon how much they use (i.e. water or energy) or how much waste they generate. Municipalities in the United States and Western Europe have found that user fees provide the fairest and most equitable revenue source to pay for specific services, such as environmental improvements. User fees promote conservation of resources because people have a direct incentive to reduce their use or waste. User fees also provide a steady flow of funds to finance capital and operating costs. For example, many communities require water users to install meters that measure the amount of water consumed – monthly bills are then based directly on this amount. In some communities, user fees may be politically unacceptable as individuals and businesses that generate large quantities of waste will undoubtedly oppose them.
- **Emission Fees:** Emission fees are financial charges for the release of pollutants to the environment within admissible limits. Fees are based on the premise that certain human activities, such as manufacturing or driving a car, cause pollution regardless of emission control requirements, and thus they impose costs (i.e. pollution) that must be born by all of society. Emission fees provide a mechanism for internalizing these costs into the price of a product. Permit fees for construction of new buildings or industries can also be a valuable revenue source.
- **Fines/Penalties:** Fines or penalties are applied to

those individuals or industries that pollute above allowable limits or violate other regulatory requirements. Fines are mostly designed to provide financial incentives to polluters to comply with environmental laws. Fine amounts need to be set high enough to encourage polluters to make the necessary investments in pollution prevention or control equipment. Fines can not be relied upon as a steady revenue source.

- **Property Taxes:** In general, property taxes are one of the primary revenue mechanisms for providing basic municipal government services, improvements, and administration. The salaries of the mayor and staff, and the general operating costs of various departments, such as police, fire, and sanitation, are usually funded out of general property taxes. In the United States, most municipalities have decided that large-scale environmental projects such as wastewater treatment facilities and drinking water systems should not be paid for out of general property taxes.

### 7.7.3 Prepare Project Financing Plan

A Project Financing Plan addresses all aspects of raising the necessary capital to construct a large environmental facility or system. (A “system” consists of all the components for adequately delivering an environmental service, such as the treatment facility and pipe collection network for wastewater.) It describes the technical aspects of the project, how much the project is expected to cost, and how the borrower expects to repay borrowed funds to the lender. Preparing a Project Financing Plan provides a systematic process for helping to answer a wide range of questions that financial institutions will need before they will be willing to loan your municipality money.

These questions include<sup>1</sup>:

- **Technical Aspects of the Project**
  - What environmental improvements will be achieved as a result of the project?
  - What analysis was conducted to verify that the selected technology will achieve the desired level of environmental improvement?
  - Is the project required to meet national laws or regulations?
  - How does the project compare to alternative solutions? Does the project represent the most cost-effective solution?
  - Does the project use a proven and demonstrated technology?

- What criteria were used to select the proposed project?
- Are the environmental impacts fully understood and mitigated as appropriate?

- **Strength and Capacity of the Borrower**
  - Does the borrower have sufficient assets to secure the loan?
  - Does the borrower have a reliable source of revenue to repay the loan? What are the annual revenue projections over the life of the project?
  - Does the borrower have sufficient experience and capacity to manage the project from a technical and financial point of view?
  - Is the financial management system of the borrower adequate to ensure effective management of financial resources?
  - What will the financial impact upon residents and businesses be from the new facility or system? Can they afford the rate increases that will be necessary to pay for the technology?

- **Project Financing Needs**
  - What are the key cost assumptions and total financing requirements of the project?
  - What are the sources of revenue for the project? Are the revenue projections reasonable and sufficient to cover all capital, operating, and maintenance costs?
  - What are the terms and conditions of all borrowed sources of financing?

It is important to note that preparing a Project Financing Plan is a highly specialized field, and will in all likelihood, require hiring qualified consultants. Your municipality will need to tailor its financing application to the specific requirements of each financial institution from which it seeks funds. Each of the questions identified above will require extensive analysis and documentation to provide assurances to lending institutions that your project is technically feasible and that your municipality or utility company can provide a reasonable assurance of repaying borrowed funds (see Attachment 7.A: Requirements for Financing Plan for Municipal Environmental Projects.)

### 7.8 Work with State Institutions and Local Authorities on Budgetary Issues and Other Statutory Requirements

The EAP can only provide effective direction to the municipality’s (and other implementing agencies) most fundamental decisions if it is linked with state and local “statutory” planning processes. These statutory processes include the annual budgeting processes, preparation of municipal development plans, capital infrastructure

<sup>1</sup> Developing a Financing Plan for Municipal Environmental Projects, 1995. Institute for Sustainable Communities, Montpelier, Vermont, USA.



planning processes, and general land-use plan reviews<sup>1</sup>. (Ideally, your SC has established these linkages with these statutory planning processes at the early stages of the planning effort, thus increasing the chances that these recommendations will actually be incorporated.) Some examples of how recommendations from the EAP might be incorporated into these statutory planning processes include:

- If your EAP recommends the construction of a new wastewater treatment plant, SC members can work with the budget committee or infrastructure planning committee of the municipal council to help to ensure that adequate funds are allocated for the treatment facility.
- If your EAP recommends protecting undeveloped lands surrounding the urban core of the City, SC members can work with municipal staff in identifying and mapping areas of the community. This information can then be incorporated into the preparation of the next land-use or development plan.
- If your EAP recommends a new local ordinance requiring residents to source separate recyclable materials from solid waste, SC members can work with mayor's office and municipal council to craft legal language and push for passage of the ordinance.

<sup>1</sup> The Local Agenda 21 Planning Guide, IBID.

Your SC might also consider integrating EAP recommendations into various regulatory processes to provide adequate enforcement mechanisms. For example, your SC could work with the regional environmental inspectorate to ensure that pollution reduction agreements and resource commitments identified in the Implementation Agreement are reflected in their actions. Ideally, the enforcement agency would be represented on the SC to ensure consistency.

Integrating EAP recommendations into the existing statutory planning and regulatory processes at the local and regional levels is critical to successful implementation.

### Conclusion

Successful project implementation may be the biggest challenge to your LEAP. Your community's efforts will ultimately be evaluated by how well various institutions implement the recommended actions in the EAP and by the improvements in environmental quality. Your municipality and other implementing institutions will face numerous challenges as they implement environmental actions, including securing the participation of relevant institutions, raising sufficient funds to finance large environmental investments, and ensuring that each institution with implementation responsibilities follows through on its commitment.

## Requirements for a Financing Plan for Municipal Environmental Projects<sup>1</sup>

The questions below provide a framework to help your municipality to develop a Project Financing Plan. The questions address basic information requirements that financial lending institutions will need prior to loaning fund. The amount of information required will vary with the lending institution. You will want to seek the specific loan application requirements for each lender. (See Figure: "Worksheets for Developing a Project Financing Plan" below.)

### A. PROJECT SUMMARY

#### 1. Description of Environmental Project

- A brief narrative description of the proposed project

#### 2. Environmental Problem

- What is the environmental problem being addressed?
- What are the negative health and ecological impacts caused by the problem?
- What percentage of the population and local or regional ecosystem is affected by the problem and how severe are the impacts?

#### 3. Project Benefits

- What environmental improvements will be achieved as a result of this project? Provide any quantitative information available that documents the anticipated level of environmental improvements.
- What other benefits will accrue as a result of this project? For example, will the project result in the creation of new jobs or energy savings?
- Does the project plan include staff training?

#### 4. Basis for Project Selection

- What process was used to set environmental priorities? Is the proposed project part of a long-term action to improve the physical infrastructure?
- Have alternatives to the project been fully examined? Have opportunities for pollution prevention and resource conservation been fully explored? Describe what alternatives have been examined.
- What criteria have been used to select the proposed project, e.g., cost-effectiveness analysis, implementation time, flexibility, public acceptability? What was the basis for selecting the proposed project?
- Does the project represent the least-cost alternative? Has a life-cycle cost analysis been undertaken that examines both capital and operating/maintenance costs over the life of the project? Were the projected operational and maintenance costs discounted (i.e. taking into account the time value of money) to provide a summary of life-cycle costs analysis conducted?
- What complementary actions are planned to ensure effective implementation of the proposed project, e.g., public education and training, economic incentives, and regulatory/legal actions?
- What is the allocation of costs between engineering/design, construction, equipment, land, permanent working capital, and start-up expenses?

#### 5. Project Sponsors

- What primary organisation or agency is sponsoring the project? What is the legal structure of the primary sponsor and its primary authority/responsibilities? Who are the primary management personnel and what are their positions?
- What is the financial management system of the primary sponsor? Provide adequate documentation verifying that the primary sponsor has an adequate system for ensuring effective management of financial resources, including information on the process for planning and budgeting, revenue estimation, purchasing, accounting, debt management, and auditing and reporting. Provide biographical information on the financial management team.
- What experience and capacity does the primary sponsor have to manage the construction and operation of the project from both a technical and financial point of view? If there is no experience, what arrangements have been made to provide this resource?

<sup>1</sup> Developing a Financing Plan for Municipal Environmental Projects, 1995. Institute for Sustainable Communities, Montpelier, Vermont, USA.

- Are there any project co-sponsors or other organisations and agencies that will be integrally involved in project management, operations, or oversight, e.g., municipality or utility companies? Please describe who they are and what their relationship to the project is.
- What role does the private sector play in the project? To what degree will private companies participate in the project, e.g., design only, design and build, and operate? Identify and include information on the experience and qualifications of any consultants or private companies that have been or will be involved in the project and the method for determining how they will be selected.

#### **6. Community Support**

- Does the project have the support of the local community or region? Describe the basis for your assessment of community support.
- What types of activities have been undertaken to inform community members and solicit their views and support regarding the proposed project? Were efforts to secure community support undertaken throughout the project development? Describe efforts to involve the public and a schedule of activities undertaken.
- Have all necessary regulations and legal approvals been received by public entities, e.g., votes of municipal council, voter approval?

### **Project description**

#### **1. Description of Proposed Technology**

- Describe the proposed technology in detail, including the engineering analysis and specifications.
- Describe to what degree the proposed project requires construction of new facilities versus modernization of pre-existing facilities.
- What analysis was conducted to verify that the selected technology would achieve the desired level of environmental improvement?
- Is the proposed project a proven and demonstrated technology? Provide documentation about the proven effectiveness and dependability of the technology.
- Please identify which manufacturers and companies will provide the selected technologies. What type of assistance will the technology supplier provide, i.e., training for operational staff?

#### **2. Description of Environmentally Related Issues**

- Have environmental impacts of the proposed project been examined? Describe them.
- Has an environmental assessment been conducted for the proposed project? What were the results? Are any environmentally mitigating actions proposed as a result of the assessment?
- Are any environmental controls proposed? Describe them.
- Describe the historical and current environmental status of any land used for the project.

#### **3. Compliance with Laws and Regulations**

- Have all necessary national, regional, and local permits been obtained? Provide documentation.

### **C. PROJECT FINANCING COMPONENTS**

#### **1. Structure of Project Financing**

- What are the sources of financing for the proposed project? Describe all sources of financing, including loans, grants, and reserves.
- Is the combined financing from these sources sufficient to cover all capital costs, planning and design costs, and other fees?
- What are the terms and conditions of borrowed sources of financing? Describe the following:
  - What is the interest rate? Is it variable or fixed?
  - What is the payment term, i.e., the period over which the loan must be repaid?
  - Is there a project grace period (i.e. time period in which no payments are required)? How long is it?
  - Are interest costs capitalized?
  - What is the repayment plan? Is the principal portion of the payment level over the course of the loan or does it decline?
  - Are there any up-front fees?
  - What are the annual debt service (principal plus interest) and the total debt service over the life of the loan?
- What types of collateral (property, equipment) or other guarantees can the primary sponsor offer to secure the loan?

#### **2. Financial Overview**

- What are the key cost assumptions for the proposed project, i.e., operational and maintenance expenses, debt service, capital expenditures, and working capital? Provide documentation of cost estimates and projections.
- What revenue sources will be used to cover project costs? How reliable are these sources of revenue? Are the revenue projections reasonable and sufficient to cover expected costs? Provide documentation.
- If user fees are anticipated as a source of revenue, what is the proposed rate structure? Does the rate structure encourage resource conservation, i.e. increasing rates for greater usage? Describe the proposed rate structure.
- If user fees are proposed, have rate impacts been analyzed for both residential and industrial customers? What percentage of annual income of residential customers will proposed costs of the project comprise? Provide documentation.
- Has a cash flow projection analysis been conducted for the proposed project? Are the projected revenues or sources of cash flow over the term of the loan adequate to
  - provide all the capital required to build, operate, and maintain the project;
  - service the debt; and,
  - make required replacements and renovations.
- Provide a description of how revenue calculations were developed, along with adequate documentation.

## Monitor and Evaluate Results



## INTRODUCTION

Monitoring and evaluation<sup>1</sup> is perhaps one of the most often overlooked and under-emphasized elements of action implementation – despite its importance in tracking whether or not the EAP is achieving its intended goals. An effective monitoring and evaluation provides ongoing, systematic information that strengthens project implementation. The monitoring and evaluation process provides an opportunity to:

- A) compare your implementation efforts with your original goals and objectives,
- B) determine whether you are making sufficient progress toward achieving expected results, and,
- C) determine whether you are adhering to the project time schedule.

Monitoring and evaluation is not an «event» that occurs at the end of a project, but is an ongoing process that helps decision-makers better understand the effectiveness of the action or project. An effective monitoring and evaluation programme requires collecting and analyzing important data on a periodic basis throughout the life of a project. This process often involves collecting baseline data on existing conditions, reporting on progress toward environmental improvements, making connections between actions and intended outcomes, and making mid-course changes in programme design. A good monitoring and evaluation process engages all stakeholders and is useful to those ultimately responsible for improving the project. Evaluation can be viewed as a learning tool for managers and project participants, as well as an important public awareness and educational tool.

To get the monitoring and evaluation efforts off the ground, the Stakeholder Committee (SC) can assemble a Monitoring and Evaluation Team (MET) to help to design the evaluation approach and to evaluate project results. The MET can be composed of individuals with specific expertise in project evaluation, agencies responsible for providing environmental data, and implementing institutions, such as industries, with specific environmental requirements. For example, if your proposed implementation action involves undertaking a residential water conservation programme, the MET could consist of representatives from the water utility, municipality, housing association, environmental group, and local university.

Evaluations cost money, and your SC will need to address the issue of “who pays.” Possible funding sources include the Municipal Environmental Fund, municipal budgets, or the National Environmental Protection Fund.

### 8.1 Review Environmental Objectives and Indicators

In preparing your EAP, your Stakeholder Committee has hopefully developed environmental goals, objectives, and indicators for environmental issues. (Environmental objectives are measurable commitments (e.g. 20% reduction in pollution levels) to be realized within a specified time frame (i.e. within 5 years). Thus, they provide a framework for measuring your progress in implementing actions. Indicators measure whether these environmental objectives are being achieved.

The first step in preparing your evaluation approach is to review environmental objectives and indicators established in the EAP and consider the following questions:

- Since the EAP was prepared have you received new information about the expected impacts from implementing selected actions?
- Are the objectives realistic and the proposed time-frames reasonable?
- Are the indicators valid measures of selected objectives?

For example, in preparing the Implementation Plan, you may have received new information that the planned reduction levels of a specific pollutant (i.e. target) were unrealistic given budgetary limitations. Since these objectives were ideally reached through an agreement of the Stakeholder Committee, the MET will want to have any proposed changes in objectives reviewed and approved by the SC.

### 8.2 Establish Reporting System

An effective reporting system records the performance of all institutions with implementation responsibilities. This reporting system, in effect, provides a system of accountability for all responsible parties on how well they are achieving the goals and objectives established in the EAP. An effective reporting system ideally includes the following elements:<sup>2</sup>

- Clearly articulated environmental objectives and a set of indicators to measure performance (as described above);
- A schedule and set of guidelines for all responsible parties to report to each other;
- An opportunity for responsible parties and stakeholders to periodically meet to coordinate actions and to review each others’ performance; and,
- A link between the evaluation reports and relevant

<sup>2</sup> Adapted from The Local Agenda 21 Planning Guide, 1996. International Council for Local Environmental Initiatives, Toronto, Canada.

statutory planning cycles of the municipality, such as annual budgeting and capital planning, so that the municipality can adjust its plans based on the actions taken by other sectors.

The MET may want to consider preparing a standardized report form to facilitate the collection and compilation of data. Each institution submits information to the MET, which in turn compiles this information into a status report. These status reports are ideally circulated to a variety of audiences, including the municipal council, mayor's office and staff, community members, and SC members. The language and style of reports may change depending on the audience; however, the information conveyed needs to be consistent and accurate.

### 8.3 Collect Data on Baseline Conditions and Project Results

Ideally, most evaluations include collecting both quantitative and qualitative data. Quantitative data is information that can be counted and measured. Quantitative environmental data focuses on actual environmental improvements, such as the amount of waste reduced or energy saved. Mechanisms for collecting quantitative environmental data are usually programme-specific, such as using water meters to measure actual water consumption. On the other hand, qualitative data is a more difficult measurement of programme success. It includes assessments of problems encountered, consumer satisfaction, and unanticipated benefits. Qualitative data can give a real understanding of the actual impact your project is making on people’s lives. It is usually collected through instruments such as surveys and personal interviews.

You can provide your community with a better understanding of the project successes and challenges by collecting both types of data. For example, to address persistent water shortages, a town might decide to implement a pilot water conservation programme to install low-flow showerheads in residences. A quantitative data collection effort would focus on how much water has actually been saved, while qualitative data would reveal how satisfied consumers were with the performance of the new showerheads. Both types of information are imperative to determine whether the programme was successful.

As you collect data, considering the following questions:

- Which indicators are data currently being collected for?
- What are some key information sources? Are rep-

resentatives from these information sources currently represented on the MET?

- How valid and accurate is the data?
- Is the data easily accessible and available?
- Are there any costs associated with acquiring the data?
- For those indicators where no data currently exists, what steps are involved in collecting new data? How expensive would a new data collection effort be?

Be sure to collect data on your environmental indicators prior to beginning implementation. This will provide you with baseline data on existing environmental conditions that will serve as the basis from which the impacts of implementing selected actions.

In collecting data, it is important to distinguish between compliance monitoring versus effectiveness monitoring - both types of monitoring are important. Compliance monitoring measures whether the implementing institution did what it said it was going to do (e.g. install 5,000 low-flow showerheads), while effectiveness monitoring measures whether the actions achieved their intended result (e.g. reducing water usage by 20% per household). Of course, the real measure of success is effectiveness, i.e. how well environmental conditions are improving. However, compliance monitoring is a critical piece of the evaluation process to help to determine whether implementing agencies have fulfilled their resource commitments.

### 8.4 Evaluate Results<sup>1</sup>

Once you have agreed upon your objectives and indicators, established your reporting system, and collected your data, you are ready to conduct your project evaluation. The evaluation process involves comparing your actual results to the objectives identified in the EAP and Implementation Plan, including whether the results were achieved within the designated timeframe. It is important that the evaluation occur periodically throughout the life of the project and at project completion. The evaluation report includes a summary of major activities, results achieved, and the direct impact on project beneficiaries. It identifies lessons learned in order to improve existing and future projects and any needed modifications in project design.

As you prepare your evaluation, consider the following questions:

<sup>1</sup> Adapted from Strategic Planning and Financial Resource Development Workshop, 1993. Progressive Strategies, Washington, DC, and “Introduction to Organisational Management, 1993. Institute for Sustainable Communities.

**Figure 8.4.1.1: Sample project evaluation form**

Summary of Results	
Project Description	Overview of project history, participating institutions, evaluation team, goals, and objectives.
Data Collection Information	Selected indicators, reporting requirements, and data collection methods
Results	<ul style="list-style-type: none"> <li>Quantitative Impacts: how well objectives were achieved, actual environmental improvements achieved, how well objectives were achieved within specified timeframe, and whether costs were consistent with budgeted amounts.</li> <li>Qualitative Impacts: satisfaction level of project beneficiaries, unforeseen benefits beyond original goals.</li> <li>Educational Impacts: knowledge acquired, skills developed, attitudes altered or reinforced.</li> </ul>
Difficulties Encountered	Problems encountered in implementing actions caused by both internal factors (i.e. internal to the implementing institutions) and external factors; response to problems encountered.
Lessons Learned	Analysis of what knowledge has been gained as a result of the project and recommendations for future implementation efforts.

- Was the action effective in achieving its intended effect?
- Was the Implementation Plan sufficiently clear in specifying who was supposed to do what actions by when? If not, what responsibilities and timeframes were not clear?
- Did each of the steps in the project occur as planned? If not, what mid-course corrections are warranted?
- Were the costs consistent with what had been budgeted?
- Did you accurately predict your ability to manage factors within your control and to address factors beyond your control? If not, why not?
- Has the experience of implementing the project taught you how to improve future projects? If so, what are suggestions for improvement?

internal evaluator may have more access to organisational resources and informal feedback from project stakeholders, but may lack the outside perspective and technical skills of an external evaluator.<sup>1</sup>

The MET needs to think about how the evaluation results will be used at the outset of the evaluation process. Implementing institutions are more likely to use information generated from an evaluation if they understand, participate, and have ownership over the evaluation process. Therefore, the more people who have been actively consulted in the process – the easier it will be to use the results for project improvement.<sup>2</sup>

Some key questions to consider in utilizing evaluation results include:

- What are the “triggers”? In other words, at what point do you make changes to policies or programmes based on evaluation results?
- Who decides whether to make these changes?
- Who holds implementing entities accountable for making those changes? Who “enforces” the situation?
- When are changes made? On an on-going basis? Every five years? Every 10 years?

One of the most important aspects of an evaluation process is that it actually provides usable results to project implementers – information that can be utilized by project managers and staff to improve results. Useful evaluation results inform decisions and provide

<sup>1</sup> IBID, Evaluation Handbook.

<sup>2</sup> IBID

information on how to improve project performance. Thus, if you failed to meet a certain environmental target within a specified timeframe, evaluation results can provide critical information in helping to revise your actions. For example, suppose that your municipality established a target to reduce solid waste 10% annually for each of the next five years. At the end of the first year, the municipality discovered that waste disposal had been reduced by only 5%. Further, the evaluation revealed widespread confusion among residents on when and how to recycle. This information strongly indicates the need to significantly improve the educational component of the programme in order to achieve target levels. (See Figure 8.5.1.1: “Sample Project Evaluation Form” below.)

### 8.5 Communicate Results to the Community

It is important that the SC keep the community informed of its progress toward achieving the EAP and Implementation Plan goals and objectives. Community members need to be informed about the status of environmental conditions in the community, what improvements have made in these conditions, and what action individuals can undertake to help to achieve the community’s environmental goals. This will require an effective communication programme to provide regular information to community members and to report their reactions to implementing agencies.

When communicating with the public about your evaluation findings, be sure to use a variety of techniques such as visual displays, oral presentations, summary statements, interim reports, and informal conversations. Additional ideas include:<sup>1</sup>

<sup>1</sup> IBID

- Write separate executive summaries and popular articles using evaluation findings, targeted at specific audiences or stakeholder groups.
- Write a carefully worded press release and have a prestigious office or public figure deliver it to the media.
- Hold a press conference in conjunction with the press release.
- Make verbal presentations to selected groups; include demonstration exercises that actively involve participants in analysis and interpretations.
- Construct professionally designed graphics, charts, and displays for use in reporting sessions.
- Make a short video presenting the results for use in analysis sessions and discussions.
- Stage a debate or advocate-adversary analysis of the findings in which opposing points of view can be fully aired.

### Conclusion

An effective monitoring and evaluation system can help to ensure that the actions you have selected are achieving your environmental goals and objectives. Indicators provide a basis for measuring results, and are ideally directly linked to your environmental goals and objectives. The Monitoring and Evaluation Team collects data from each implementing institution, and this information is used as the basis for evaluating the effectiveness of your implementation efforts. The monitoring and evaluation process provides an important process for determining whether environmental objectives are being achieved, why or why not, and what modifications are necessary to keep efforts on track. As a critical feedback loop, it is then important to share programme results with community members, municipal council, and other stakeholders.

## Conduct a Public Outreach Campaign



## INTRODUCTION<sup>1</sup>

Public outreach involves both informing and seeking the views of community members. For a LEAP, public outreach means educating the public about the scope and goals of a LEAP, information on the severity of environmental problems, and the type of implementation actions your Stakeholder Committee (SC) is considering. It also involves providing residents with information on what they can do as individuals and collectively to improve environmental quality in the community – such as how to recycle or reduce water consumption.

Successful public outreach efforts require two-way communication. Thus, it is important that your SC seeks the ideas, concerns, and opinions of citizens to help to ensure that the priorities and solutions you have developed reflect those of the community as a whole. To effectively participate, citizens will need easily accessible opportunities to contribute. They will need to be kept informed about how their views are reflected in the final decisions. Effective public outreach efforts ultimately help to «build community» by informing people and getting them involved in issues that affect their lives. Educating the public is not an ends in itself – but rather a means toward increasing citizens' voices in the decision-making process.

Effective public outreach means providing people with consistent, clear, and accurate information. This message is delivered in partnership with numerous information sources connected to your target audiences and utilizes a variety of outreach methods to reach that audience. Effective public outreach campaigns require reaching individuals in the places where they live, work, and recreate through a decentralized and diverse communications outreach strategy.

Why is it important to inform and seek the views of the public? The benefits of conducting a public information outreach campaign include:

- Informed and involved citizens are much more likely to support specific environmental programmes. Public education can help citizens to gain a greater understanding of the problems facing the community and the limited resources available to solve these problems. When citizens' views are sought and their input reflected in local government decisions, they are much more likely to support proposed community improvements. This support can mean either financially supporting new environmental investments or participating in new programmes to save natural resources.

<sup>1</sup> Portions of this chapter were adapted from materials developed by the Radon Division, U.S. Environmental Protection Agency, Washington, DC and by Gwendolyn Hallsmith, Community Action Director, Institutional Capacity Building, Institute for Sustainable Communities, Montpelier, Vermont, USA.

- Citizens are a diverse and knowledgeable source of information on the major issues facing the community and on appropriate solutions. Citizens can play an important role in providing information, monitoring compliance with laws and regulations, formulating innovative solutions, and even pressuring the government to act if rules are not being enforced.
- Many community improvements require citizens to modify their behavior, such as saving energy or disposing of litter properly. Public outreach campaigns can help to raise people's awareness about the severity of specific environmental problems and expose them to new ideas about what they can do to improve the situation.

### 9.1 Clarify Purpose and Set Goals

#### “What is the main aim of your campaign?”

The first step in developing an environmental public outreach campaign is to develop a clear and unifying purpose. This purpose succinctly summarizes the overall aim of your public outreach efforts. While public outreach campaigns usually have a primary purpose, you will also find it useful to identify several goals that relate directly to the main purpose. The goal setting process can help to ensure that the campaign is developed in a consistent and coherent manner.

Goals describe how you propose to achieve your purpose. They express what you hope to accomplish in terms of seeking public opinion, educating the public, and involving the public in addressing environmental problems. Goals can help to assure that a coherent and consistent set of public outreach activities is formulated and implemented.

For example, the purpose and goals of your public outreach effort for your LEAP might be:

- Purpose: Involve citizens in the decision-making process on how to best address environmental problems within the community.  
*Goal #1: Inform the public about the activities and results of the SC.*  
*Goal #2: To engage citizens in actively improving the local environment*  
*Goal #3: To seek a wide range of views among community residents.*

Your public outreach efforts could be focused on a specific environmental problem. For example, if you choose to focus your outreach efforts on solid waste, your purpose and goals might be:

- Purpose: To reduce the negative environmental impacts of improper disposal of hazardous components of the waste stream.  
*Goal #1: Educate residents on the hazardous compo-*

*nents of the waste stream and proper methods for disposal of these waste products.*

*Goal #2: Inform residents and encourage them to purchase, non-hazardous alternative products.*

A clear and concise purpose and set of goals is critical to a well-designed public outreach campaign.

### 9.2 Identify Target Audiences

#### “Who are the people you are trying to reach?”

The target audience is the people you are trying to reach with your public outreach efforts and is directly linked to the purpose and goals. The broadest definition of the «public» is everyone living or working within the community. However, you can enhance your public outreach efforts by identifying and working with specific groups or organisations within your community. People participate in organisations because they share a common interest, and you can convey your message better by appealing directly to each organisation's specific interests.

The following questions can help you more clearly to define who your target audience is for a LEAP:

- Who is affected by environmental problems? Depending on your LEAP and the types of environmental problems you are trying to address, the target audience could be as small as a group of landowners around a landfill whose drinking water supply is threatened or your audience may be as large as the whole community. Some groups of people will feel the impact more than others, e.g., parents with small children may be especially concerned about environmental problems related to children's health.
- Who is affected by requirements to reduce pollution? People who own or manage industrial enterprises or entities that pollute the water, land, or air will be very important constituencies. By involving these individuals at the early stages of your efforts, you can help to avoid adversarial situations later on.
- How do community members group themselves and what are their interests? Your community can start to seem more manageable once you start to think about how people organize themselves. Schools, labor unions, business groups, social clubs, religious organisations, and sporting groups are just a few of the types of organized groups that might be in your community. By understanding what each group values in terms of specific environmental concerns, such as clean air, places to swim, or wildlife habitat, you can target your message to each group in terms of how a particular environmental problem relates directly to them. The

more you know about the interests and concerns of a particular group, the more easily you can convey your message about the need for environmental improvements.

Identifying areas of common concern is a good first step in this process. For example, a school organisation might be most interested in the health impact that pollution has on school children, while a hunting club might be most interested in how environmental problems adversely affect wildlife and habitat. Keep in mind that oftentimes the interests of various groups within the community are complementary to environmental protection – although this connection might not always be evident at first. And remember to always have a list of upcoming activities on hand and invite your audience to attend!

### 9.3 Develop Partnerships with Key Information Sources Connected to Target Audiences

#### “Who does your target audience look to for reliable information?”

Information sources are those institutions, associations, government entities, organisations, and businesses that can influence your target audiences. (Many of these sources may already be members of your Stakeholder Committee.) They are those individuals and organisations that your target audiences look to for reliable information. For example, if you were trying to reach parents of school-age children, the public schools would be good “sources” for disseminating information. If you are trying to reach people who value natural areas, a local non-government environmental organisation would be a good information source.

Information sources can be instrumental in helping you define your message – since they are working with your target audiences on a regular basis. They can help to identify what outreach methods are most appropriate for reaching the target audiences. In addition, information sources will play a key role in implementing specific outreach programmes. Thus, it is important to consider sources as partners in developing and implementing the campaign.

Using the solid waste example, if you are trying to encourage consumers to use less packaging, supermarkets and retail storeowners would be a primary source. To encourage automobile owners and repair businesses to properly dispose of waste motor oil, a key source would be motor oil manufacturers and distributors. In addition, non-governmental organisations often have the public “ear” on environmental issues and can be helpful in getting your message out.

Once you have identified key information sources, consider developing cooperative alliances or partnerships

with these sources. You may want to develop written agreements defining respective responsibilities and establishing a timeframe for implementing specific outreach programmes. Developing partnership with key information sources offers an effective, decentralized approach to deliver your message to your target audiences.

#### 9.4 Create Effective Message

##### “What do you want to say?”

##### 9.4.1 Design the message

Your public outreach campaign needs to have a clear, understandable, and consistent message. It is important that the primary message is derived directly from the purpose, and secondary messages derived from the goals. The message needs to be easy to understand and appealing. You need to convince people that what you have to say is relevant to their lives. Remember, people will need to hear that same message numerous times before they will start to pay attention!

Your message will change over the course of the LEAP as you achieve various project milestones. At the start of the LEAP, you will want to inform the public about what the goals and phases of the LEAP and to seek their participation. Your message at the beginning of a LEAP might look something like the following:

*We are a group of concerned citizens working in partnership with our local government to develop appropriate solutions to the most serious environmental problems facing the community. We want to hear from you about which environmental problems and other challenges facing the community you are most concerned about. We welcome your suggestions and participation over the next two years as we work together to develop an appropriate course of action to make our community more environmentally and economically sustainable.*

As the LEAP progresses, your message will need to be modified to correspond to the specific phases of the LEAP. For example, after you have done a preliminary ranking of environmental problems, your message might be to ask citizens whether the environmental priorities for actions of the group's reflects their priorities – and if not – what would their priorities be and why.

Public outreach is an on-going and continuous process, and it will be important to inform the public and seek their views as frequently as possible throughout the LEAP. Consider conducting outreach activities before the completion of the following LEAP milestones:

- Forming the SC
- Developing the Community Vision statement;
- Identifying environmental issues facing the community;
- Setting priorities for action;
- Identifying and selecting proposed actions for addressing the top priority issues;
- Reviewing the complete environmental action plan; and,
- Implementing priority actions.

If your campaign focuses on a specific environmental problem, it is important that the message explain why the selected problem poses a concern (e.g. polluting groundwater), and what citizens can do to reduce environmental pollution (e.g. buy safe alternatives). To be effective, your message will need to be written in non-technical jargon and easy for the average citizen to understand. Using the solid waste example from before, a sample message might be:

*Solid waste is a serious environmental problem in our community. Every year the amount of solid waste increases. Solid waste pollutes our groundwater. Our landfills are overflowing, and we are running out of safe places to build new landfills. People can reduce the amount of waste disposed in landfills by recycling and reducing waste. Citizens can reduce the negative impacts on groundwater pollution by buying safe alternatives, and where feasible, and properly disposing of hazardous waste materials.*

##### 9.4.2 Get feedback on your message

You can help to ensure that your work reflects the environmental priorities of the community by seeking public opinion at various steps throughout the LEAP. Community members can be instrumental in identifying concerns or information sources unknown to your SC, identifying risks associated with specific environmental problems, and developing alternative implementation actions.

Getting your message across and getting feedback to your message can often occur simultaneously. For example, if you are distributing an informational brochure describing the goals and scope of the LEAP, you can also include a public survey about environmental problems facing the community. Alternatively, a public information meeting provides a forum for both informing the public about your activities and seeking their views about environmental priorities.

Educating the public and seeking people's opinions and information can be viewed as a cycle. It is important that your SC inform community members about how it has incorporated (or not incorporated) the public's opinions and information. For example,

suppose a public opinion survey revealed that community ranked solid waste as a very serious problem, while your SC determined that solid waste posed a low risk to the community. In this situation, it is imperative that the SC inform the public about this discrepancy and explain why. This «inform and comment» cycle can help to assure that the SC's work reflects the public's concerns (see Attachment B: Sample Public Information Survey).

#### 9.5 Identify, Evaluate, and Select Outreach Method

##### “What is the best way to reach people?”

A method is a vehicle for delivering a message – it is how the message gets from the information source to the target audience. An effective public outreach campaign requires taking your message to the people rather than expecting the people to come to you. Members of your community have a wide range of knowledge and interests, and you will need to use a variety of approaches to reach these different audiences. In some instances, you will actually need to be entertaining, such as holding an environmental fair with games and prizes. Also, you can often reach adults through their children – getting young people involved is often the best way to reach their parents.

It will be important to choose outreach methods that reflect how your information sources communicate with their customers or clients (your target audience). Thus, information sources are instrumental in identifying and selecting specific outreach methods that they will be responsible for implementing. For example, if your information source is a student environmental group, they can be effective in conducting door-to-door surveys on environmental problems in the community. If your information source is the association of oil distributors and you want to inform people about proper waste oil management, you might develop a brochure on the negative environmental impacts of improperly managed waste oil and how to properly manage it.

A list of possible outreach methods to get your message out to the public is described below.

- **Media:** Local television, newspaper, and radio coverage of LEAP events and results is absolutely critical. Consider the following approaches to working with the media:
  1. meet with newspaper editors or reporters to inform them about the LEAP;
  2. conduct a newsworthy event, e.g., hold a press conference at a polluted site;
  3. provide the media with regular news releases and information updates; and
  4. include members of the media in your SC. (see Attachment C: Tips for Working with the Media).

- **Survey of town residents:** Consider surveying town residents either through the mail, phone, or directly in public places or at meetings. You might consider offering incentives to survey respondents, such as a lottery drawing for products or services donated by local businesses. (See Attachment B: Sample Public Information Survey).

- **Newsletters, brochures, and publications:** It is useful to prepare regular publications or newsletters on your goals, the LEAP scope, and your progress. Be sure to write up any results of your work and make it available to the public. Provide copies to your media contacts and post announcements of events and important meetings in public places.

- **Meetings and hearings:** Public information meetings offer an excellent opportunity to both inform the public and seek their opinions on your activities. Your SC will also want to consider making all of your meetings open to the public and publishing notices in the local paper announcing the time and place of your meetings. (See Attachment A.1: “Holding Public Information Meetings.”)

- **Special phone number:** A number of local governments and citizen groups offer citizens a number to call to receive information on community programmes and services, report environmental violations, or to learn how to participate in upcoming events.

- **Publicity merchandise:** One popular way to raise public awareness is to sell T-shirts, bumper stickers, coffee mugs and other items with your LEAP logo. This helps to build awareness about the LEAP while also raising funds for specific activities.

- **Community Environmental Initiatives:** A community environmental initiative is any activity that gets citizens involved in improving the quality of life in the community. This can include collecting trash along a stream bank, planting trees on Earth Day, or even painting a mural on a prominent building. Education and active citizen participation go hand-in-hand. (See Attachment A.2: “How to Organize a Community Environmental Initiative.”)

- **Special events:** People like to enjoy themselves! Promoting environmental awareness and protection are complementary through events such as fairs, outdoor activities, dances, and community actions. You might consider holding contests for school children, such as a recycled art competition, or sponsoring a contest for all residents to develop a logo for your LEAP.



- **Speakers' list:** You can recruit prominent and/or articulate members of the community to speak at public events. These events include church groups and union meetings, community dinners, school meetings and assemblies, and business groups and club gatherings.
- **Advocacy campaigns:** Your SC could organize a letter writing or telephone campaign to encourage public officials to undertake certain actions. This helps to raise awareness about the issues and offers citizens a chance to participate.

Once you have identified a range of outreach methods suitable to various sources and particular target audiences, the next step is to evaluate and select the priority outreach methods. Consider using the following criteria, among others, to help in the selection process:

- cost,
- ease of implementation,
- potential to utilize existing resources,
- number of people that can be reached,
- personnel requirements,
- time frame required to implement,
- flexibility,
- adaptability of method for other groups or sector of the community, and
- life time of usefulness (how long before it becomes dated).

Once you decide on what criteria are important, you can apply these criteria to the identified outreach methods and select those methods that rank the highest.

### 9.6 Identify Resource Needs and Opportunities

#### “What do you need to get the job done?”

Once you have selected the outreach methods, you are ready to identify your resource needs and opportunities. How much money will it cost to get your message out?

Who do you need to help to implement the campaign? Many individuals may be willing to contribute their time in a campaign that benefits the entire community. Consider the following questions to help to identify potential resources:

- What expertise is available? Are there journalists who can write brochures? Are there local radio stations available to conduct on-the-street interviews? Can college students help in tabulating survey results?
- What financial resources or in-kind resources are available? Are radio or TV stations willing to offer public service announcements free-of-charge? Are newspapers willing to offer advertising space without charge? Will printing/publication companies prepare materials at reduced charges?

Be sure to work closely with your information sources in identifying resource needs and opportunities – perhaps they would be willing to use their own resources to contribute to the effort. The most successful and cost-efficient campaigns utilize outreach methods already being used by information sources.

### 9.7 Develop Workplan, Implement Outreach Actions, and Evaluate Results

#### “Have you answered the questions of ‘what,’ ‘when,’ ‘who,’ and ‘how much?’”

#### “How will you know whether your public outreach campaign is successful?”

Prior to implementing your public outreach activities, meet with your information sources to develop a public outreach work plan. The work plan identifies what specific steps need to be taken, who will be responsible for implementing these steps, when those steps will be implemented, and how much each step/outreach method will cost. The workplan can help you to monitor how

Figure 9.7.1. Sample Work plan for Conducting a Public Information Survey

Goals	1. Seek public opinion on environmental priorities and solutions. 2. Incorporate public opinions into the decisions of the SC.
Target Audience	General population
Message	We are a group of concerned citizens working in partnership with our local government to identify and develop appropriate solutions to the most serious environmental problems facing the community. We want to hear from the public about which environmental problems and other challenges facing the community you are most concerned about.
Source Partner	Student environmental group at local college
Selected Outreach Method	Develop and distribute a survey that assesses the public's opinion of the most serious environmental problems facing the community.

well each task is being completed and whether these tasks are being completed on time. (See Figure 9.8.1.1: “Sample Work plan for Conducting a Public Information Survey” below.)

How will you know whether your outreach efforts are successful? One measure of success is – have you achieved the desired behavioral change or raised the awareness level of your target audiences? In order to evaluate this properly, you will need to have accurate baseline data prior to implementing your outreach efforts. You will need measurable indicators of success that are derived directly from the campaign purpose/goals and message.

For example, if one of the primary goals of your outreach campaign is to raise citizen awareness about environmental problems, then a measurable indicator might be “an increase in the number of people who know about a specific environmental problem (e.g. pollution from a local industrial facility).” This will require surveying people prior to and after your outreach campaign to measure your impact. If the primary purpose of your campaign is to increase recycling, then a measurable indicator might be “the increase in the amount of materials being recycled,” and this will require collecting information on

quantities of materials recycled before and after initiating your efforts.

Evaluations can help to ensure that campaign results are consistent with expectations. They can be used to refine, and when necessary, revise a campaign to better reflect reality and thus develop a more effective campaign. Monitoring and evaluation should be an ongoing process throughout the life of any public outreach campaign.

#### Conclusion

A well-formed citizenry has many benefits. Informed citizens are more likely to support environmental investments, better able to modify their behavior to improve the environment, and more likely to be active members of their communities. Citizens also are a wealth of information on environmental problems and solutions. Developing an effective public outreach effort requires a systematic and well-integrated approach. It requires a clear purpose and set of goals, defined target audiences, identified information sources, a well-defined message, and appropriate outreach actions suited to your information sources and target audiences. A well-designed public outreach campaign can be an effective means of getting your message across and learning from the people you are trying to reach.

### HOW TO CONDUCT A PUBLIC INFORMATION MEETING

#### 1. Why Hold Public Information Meetings?

A public information meeting is both an information giving and information gathering process. It is designed to educate the community on a particular issue as well as to increase public awareness. Further, public meetings provide an opportunity to collect information through people's opinions and suggestions about the problems and possible solutions. A public information meeting is like a discussion. The organisation or government agency conducting the meeting explains its activities and asks the public for information related to the issues. People ask questions about these activities and express their views on the information presented.

In the United States, there is a clear distinction between a public meeting and a public hearing. The main reason for a public hearing is to formally hear and record the comments of the public on the proposal at hand. There is discussion only to clarify and understand the comments being given. There is less interactive discussion at a public hearing. This section focuses on how to conduct less formal public information meetings.

#### 2. Setting Up and Holding a Public Meeting

The keys to holding an effective public information meeting are to:

- Define the purpose;
- Prepare adequately;
- Use proper procedures and good communication skills; and,
- Conduct follow-up activities

##### A. Define the Purpose

Being clear on the specific purpose of your public meeting can make your job much easier. Each meeting is usually focused on a specific subject. With regard to a LEAP, there are a variety of reasons to hold a public meeting, such as gathering information from the public on what environmental problems they perceive as most threatening, presenting a draft Environmental Action Plan, or explaining the cost implications of a specific action.

## **B. Prepare Adequately**

The following steps will help you to prepare for a public information meeting:

- 1) **Identify the audience for the meeting.** Who will be affected by your efforts, who will be interested, who has information to offer that will be helpful in your efforts? Develop mailing lists of potentially interested individuals and organisations.
- 2) **Develop informational materials for the public to be handed out at the meeting or distributed in advance.** These materials may include a brief summary of the LEAP or a specific activity you are undertaking, a summary of the information collected to date on the resources and problems of the community, or a summary of the laws and regulations that govern environmental activities.
- 3) **Locate and reserve a place for the meeting that is convenient and accessible for people in the community.** Make sure that the room suits your purposes, including adequate size, lighting, and capacity for audio-visual or presentation equipment. Be sure to select a meeting time and day that will allow the greatest number of people to attend, for example during the week and at night are usually more convenient times for citizens to meet.
- 4) **Notify the public.** Public notification is usually done by either publishing a notice in a newspaper generally circulated in the area, posting notices, putting up posters, or using radio announcements. Notices are published several weeks in advance of the meeting, including the meeting agenda. You may also send an announcement to those on your mailing list of interested individuals and organisations.
- 5) **Provide information before the meeting:** It is important to make any information materials that are lengthy or large in volume available to the public to study and review before the meeting. These materials can be placed in libraries, community governmental offices, or other convenient places. Be sure to inform the public about the availability and location of these materials.
- 6) **Prepare your agenda and materials for the meeting.** Meeting agendas typically include the following items, with a time allocation indicated for each item:
  - Welcome and introduction of yourself and colleagues;
  - Explanation of purpose of the meeting;
  - Items that will be discussed and who will lead the discussion;
  - Questions from the public;
  - Questions by the agency to the public (this can be a series of questions related to what information you want from the public);
  - Thanking persons attending for their interest and help; and,
  - Adjournment.

Consider providing time before and after the meeting for people to review maps and other materials, and to ask questions in an informal setting. This may help those who are less likely to speak up in front of a group. Materials for the meeting include those items that will be helpful in presenting the information, such as flipcharts, slides, and summary handout sheets.

- 7) **Do a practice of the meeting.** Consider rehearsing the meeting using colleagues as an audience to make sure that all the important items will be covered and that all the materials are available.
- 8) **Arrive at the meeting place early to set up the room (chairs, materials, slide projector, etc.).** Prepare a sign-up sheet for attendees so you have addresses and phone numbers for future mailings of information or notices.

## **C. Use Proper Procedures and Good Communication Skills**

At the beginning of the meeting, lay out the ground rules, especially if there are many new participants. Describe how the meeting will proceed, introduce the person who will be acting as moderator (and any dignitaries or group members present), and explain the process for audience participation. This procedure may be as simple as raising hands and being recognized by the moderator, or in large public meetings, submitting written requests to speak at the beginning of the meeting. If the issue is controversial, explain that the moderator has the right to ask a participant to stop speaking if they make personal attacks or go beyond their allotted time.

It is important to follow the agenda to accomplish your purpose but also to be flexible and open to new information you did not anticipate. People will be more willing to attend meetings regularly if they feel

that they can predict how long the meeting will take. Meetings that go on and on aimlessly will quickly discourage public participation. If necessary, be ready to schedule additional meetings to make sure everyone who has something to say is heard.

Be fair and neutral in selecting people to speak. The idea behind any public participation effort is to hear all sides of an issue. It is important to make sure that when you are calling on people to speak that you don't overlook those with whom you know will disagree. Also, keep and circulate minutes of the meeting. Minutes serve as a public record and are often used to settle disputes about what was said or agreed upon.

If you are in charge of holding a public meeting, here are some practical things to do and not to do that will help you to make the meeting more effective:

### **To Do**

- Convey to the audience that you are there to listen and learn, as well as to provide information.
- Encourage others to talk.
- Give everyone a chance to talk (let everyone speak once before the same person speaks again).
- Avoid using jargon and unnecessary technical language.
- Pause before responding to a question and repeat a summarized version of what was said to let the person know he or she has been understood.
- If the question is not clear, ask that it be repeated (a clear question gets a better response).
- If the information being given is not clear, ask the person to clarify it for you.
- Be clear, calm, and polite.
- Be willing to hear the emotional message of the public and acknowledge it.
- Answer questions on the same level as asked, neither too simple nor too technical.
- In the beginning of the meeting, let people know when the meeting will end, and honor that time.
- Follow up on promises made at meetings (for example, for data and information that you are unable to provide at the meeting).

### **Not to Do**

- Don't go to a meeting with a "script" of how things should go (but do have an agenda to accomplish your purpose and be flexible within that purpose).
- Don't talk too much or too long (you only learn by listening).
- Don't get into debates with individuals in the audience (if this occurs, remind the group of the original purpose of the meeting).
- Don't allow individuals at the meeting to get into debates among themselves (if this happens, remind them of the purpose of the meeting).
- Don't be selective in answering questions; deal with them as they come.
- Don't answer a question if you don't know; just say you don't know and that you will find the information or answer later (be sure to get the person's name and phone number so you can follow up).
- Don't make excuses to the public if people criticize your work, such as telling them you are overworked, understaffed, or don't have time to work on what they are interested in).
- Don't try to impress the audience with how much you know.

## **D. Conduct Follow-up Activities**

It is important to follow up a public meeting with the activities listed below:

- Evaluate with your colleagues how the meeting went and how to improve the next meeting.
- Write up a summary of the points made at the meeting, the follow-up actions needed, and who will be responsible for undertaking these actions.
- Respond to those persons who asked questions for which you couldn't provide an answer or requested information that you didn't have at the meeting. Do this by telephone or letter.
- Incorporate what you learned at the meeting into your planning activities to improve your project or proposal. At the next meeting many of the same people will be present and you can explain how the information they provided helped in the community effort.

### Sample Public Information Survey

The (Community name) Environmental Action Project has been established to address environmental problems facing the community. The (Community name) Citizen Environmental Committee, in partnership with the Municipality, has been formed to develop a community vision, set environmental priorities, develop an environmental action plan that identifies specific actions to address the most serious problems; and implement, with the help of the municipal government, the top priority actions.

One of our goals is to determine what members of the public think are the most serious problems facing the community and how these problems are affecting them. We would appreciate a few moments of your time to complete the survey below. The survey results will provide us with invaluable input about where we should focus our efforts. Your individual response will be kept confidential. The survey results also will be published in the local paper. Please return your completed survey to: (name, address).

1. What aspects of the environment are most important to you?				
2. What do you regard as some of the community's most important environmental assets (e.g. local river, wetlands, mountain, fresh air)?				
3. Do you think that environmental problems in (community name) are: (please circle the most applicable answer)				
Very Severe	Severe	Moderate	Insignificant	Don't Know
4. How have environmental problems adversely affected your life? (Please, check all that apply.)				
<input type="checkbox"/> Health of you and your family		<input type="checkbox"/> Natural environment		
<input type="checkbox"/> Economically		<input type="checkbox"/> Future generations		
<input type="checkbox"/> Sense of belonging to the community		<input type="checkbox"/> Visually		
<input type="checkbox"/> Other? (please specify)				
5. Which environmental problems do you think are the most serious: (please list your top 10 priorities by placing the number «1» next to the problem you think is most serious, a «2» next to the problem you think is the second most serious, etc.)				
<input type="checkbox"/> Solid waste from households		<input type="checkbox"/> Drinking water quality		
<input type="checkbox"/> Solid waste from industries		<input type="checkbox"/> Drinking water quantity		
<input type="checkbox"/> Sewage waters from households		<input type="checkbox"/> Tobacco smoking		
<input type="checkbox"/> Sewage from industry		<input type="checkbox"/> Loss of wildlife		
<input type="checkbox"/> Air pollution: automobiles, households and industry		<input type="checkbox"/> Indoor air pollution for households (i.e. from radon, manufactured products, etc.)		
<input type="checkbox"/> Toxic hazards in the work place		<input type="checkbox"/> Loss/degradation of forests and flora		
<input type="checkbox"/> Soil erosion and contamination		<input type="checkbox"/> Noise pollution (all sources)		
<input type="checkbox"/> Food safety and poor nutrition		<input type="checkbox"/> Depletion of ozone layer		
<input type="checkbox"/> Other (please identify)				
6. Would you be willing to volunteer time to help the Citizen Environmental Committee to address environmental problems?				
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Unclear		
6a) If yes, how would you be able to help? (please check all that apply)				

<input type="checkbox"/> Handing out information on how individuals can help the environment	
<input type="checkbox"/> Making phone calls to encourage people to attend specific events	
<input type="checkbox"/> Helping to organize a local environmental initiative, such as a river clean-up or citizen monitoring of water quality	
<input type="checkbox"/> Writing articles for the local paper on environmental problems or other topics facing the community	
<input type="checkbox"/> Speaking to groups about how they can become more involved in helping to improve the environment	
<input type="checkbox"/> Other? (please specify in the space below)	
6b) Please provide your name, address, and telephone number in the space below if you are interested in helping.	
Surname _____	Tel _____
Address _____	Age _____
_____	Education _____
_____	Sex _____
_____	Profession _____

FOR NOTES

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## GUIDELINE FOR LOCAL ENVIRONMENTAL ACTION PROGRAMMES IN THE CAUCASUS

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[www.rec-caucasus.org](http://www.rec-caucasus.org)