

**LOCAL GOVERNMENT
IMPLEMENTATION
OF AGENDA 21**

I · C · L · E · I
International Council for
Local Environmental Initiatives

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ICLEI is the international environmental agency of local governments. Founded in 1990, the Council's mission is to build and serve a worldwide movement of local governments to achieve and monitor tangible improvements in global environmental conditions through cumulative local actions. It is a membership association whose members currently include more than 250 cities, towns, counties, and their associations around the world. ICLEI is formally associated with the International Union of Local Authorities (IULA) and serves as its environmental arm.

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TABLE OF CONTENTS

Executive Summary	1
A. Introduction	4
B. Progress on the Implementation of <i>Agenda 21</i> and Related United Nations Conferences and International Accords	6
1. The Local Agenda 21 Movement	6
2. Implementation of Chapters 2-22 of <i>Agenda 21</i> via the Statutory Functions of Local Government.	9
3. Programmes and Policies Related to International Accords	13
4. Municipal International Cooperation (Chapter 2).	14
C. Local Implementation of Sustainable Development — Lessons from the Field	15
1. Participation and the Sustainable Development Process — Local Agenda 21 in Cajamarca, Peru	15
2. The Use of Flexible Public Regulation to Promote Pollution Prevention — The Green Builder Program of Austin, U.S.A.	16
3. Building Local Government Capacity for Sustainable Development in Mexico City, Mexico and Quito, Ecuador.	17
4. Local Implementation of International Environmental Accords — The Case of Local Climate Action Planning in Hannover & Saarbrücken, Germany.	19
5. Protection of Biodiversity as a Local Management Challenge — Multi-Functional Park Design and Management in Durban, South Africa	20
D. Obstacles to the Local Implementation of Sustainable Development	22
E. Recommendations for Improved Local Performance for Sustainable Development.	24
Notes.	26

Because so many of the problems and solutions being addressed by *Agenda 21* have their roots in local activities, the participation and cooperation of local authorities will be a determining factor in fulfilling its objectives. Local authorities construct, operate and maintain economic, social and environmental infrastructure, oversee planning processes, establish local environmental policies and regulations, and assist in implementing national and subnational environmental policies. As the level of governance closest to the people, they play a vital role in educating, mobilizing and responding to the public to promote sustainable development.

Agenda 21, paragraph 28.1



We adopt the enabling strategy and the principles of partnership and participation as the most democratic and effective approach for the realization of our commitments. Recognising local authorities as our closest and essential partners in the implementation of the Habitat Agenda, we must, within the legal framework of each country, promote decentralisation through democratic local authorities and work to strengthen their financial and institutional capacities in accordance with the conditions of countries, while ensuring their transparency, accountability and responsiveness to the needs of people, which are key requirements for Governments at all levels.

The Istanbul Declaration, Article 12

EXECUTIVE SUMMARY

Local governments have demonstrated a deep commitment to the implementation of *Agenda 21*.

Since 1991, more than 1,800 local governments in 64 countries have established Local Agenda 21 planning processes to engage with their communities to implement *Agenda 21* at the local level. Local governments and their communities also have voluntarily assumed new responsibilities for global environmental problems, such as climate change, forest destruction, and pollution of the seas. They have established their own international programmes, in the context of international environmental conventions, to address these challenges. For example, 164 cities in 34 countries — and representing 4% of global carbon dioxide (CO₂) emissions — have joined a Cities for Climate Protection Campaign to reduce their greenhouse gas emissions by as much as 20%.

The growing role of local governments in the implementation of *Agenda 21* has been recognized by national governments and the United Nations system. However, this recognition has not been accompanied by realistic discussion of the ability of local governments and communities to implement their Local Agenda 21 action plans or other sustainable development responsibilities. Over the past ten years local governments in more than 60 countries have received increased responsibilities for environmental protection and social programmes as a result of national-level deregulation, decentralization, and “down loading” of traditional national- or state-level responsibilities. The institutional and financial capacity of local governments to fulfill these mandates, and the impacts of rapid decentralization upon the worldwide capacities of the public sector to implement sustainable development have not been sufficiently reviewed.

ICLEI's analysis of local government implementation of *Agenda 21* during the 1992-1996 period concludes that the greatest impacts of

local government actions have been in the areas of institutional development, public participation, and improved management systems. In thousands of cities and towns individual “best practice” projects also have produced concrete, positive impacts in specific areas of management. However, few local governments have yet demonstrated their capacity to achieve dramatic improvements in social and environmental trends except in certain key areas of local responsibility, such as solid waste management or water pollution control. This conclusion highlights the importance of the following critical issues to the successful, worldwide implementation of *Agenda 21*.

1. During the past five years, the sustainable development strategies and projects of local governments have generally been isolated from overall municipal budgeting, local development planning, land-use control, and economic development activities. As a result, sustainable development strategies, such as Local Agenda 21, have only resulted in significant changes in urban development trends in a limited number of cases.
2. During the same period, many national governments have “down loaded” environmental protection and social development responsibilities to local governments in order to address national fiscal problems. This trend rarely have been accompanied by new revenue generating powers or by transfers of the revenues that were traditionally available for their execution. The resulting increase in financial burdens upon local governments is undermining their ability to implement Local Agenda 21 strategies.
3. At the same time, reduced or poor national-level regulation of economic activities is weakening the ability of local governments to hold local businesses and other institutions (including themselves) accountable for the negative environmental and social impacts of their activities.

4. National, subnational, and local governments continue to maintain policies, subsidies, and fiscal frameworks that inhibit efficient resource use and development control at the local level.
5. Minimal incentives exist for transnational corporations and multi-lateral development institutions to be accountable and committed to local development strategies. Local governments have limited control over the toxicities, resource efficiencies, and packaging of the consumer products that are sold, used, and disposed within their jurisdictions.

On this basis, the International Council for Local Environmental Initiatives (ICLEI) makes the following recommendations to the United Nations system, national governments, the non-governmental community, and local government organizations.

**Recommendation 1 —
Strengthen and support the Local
Agenda 21 movement.**

The Local Agenda 21 movement is one of the most extensive follow-up activities to the Earth Summit. To expand this movement, national governments, NGOs, and donor institutions are encouraged to support the establishment of national Local Agenda 21 campaigns. To intensify the implementation of Local Agenda 21 action plans, local governments are strongly urged to formally link Local Agenda 21 planning activities with the annual budgeting and statutory planning activities of the municipality. It is further recommended that national and international investment programmes actively factor the strategies and targets of Local Agenda 21 action plans in the selection and design of projects for their support.

**Recommendation 2 —
Harmonize public sector policies
and approaches.**

Within each country, establish a partnership between national, state, and local levels of government — perhaps within the framework of National Councils for Sustainable Development — to identify and review policies, legal frameworks, and fiscal frameworks that inhibit sustainable resource management and social development. It is further recommended that the UNCSO request a preliminary review report on this topic to be prepared by the UNDP/WHO and ICLEI for its sixth session.

**Recommendation 3 —
Increase local government financial
capacities.**

Establish a global partnership of national governments, local government organizations, and multilateral and private lending institutions to devise and recommend local government revenue enhancement strategies to accompany national decentralization programmes or “down loading” initiatives. Focus municipal development programme assistance on capacity-building in municipal finance.

**Recommendation 4 —
Establish flexible regulatory frameworks
for all areas of Agenda 21.**

The role of regulation in achieving sustainable development needs to be refined. However regulatory frameworks should be designed to consist of two integrated elements: minimum enforceable standards and a framework for flexible compliance using innovative voluntary agreements and programmes.

**Recommendation 5 —
Increase private sector accountability
to Local Agendas 21.**

Establish cooperation agreements between LGOs and international business organizations on a sector-by-sector basis to encourage all businesses and, in specific, transnational corporations to respect and support the Local Agenda 21 strategies of the communities in which they invest and maintain their operations.

**Recommendation 6 —
Organize local government purchasing
powers for sustainable development.**

Establish international protocols among local governments on an international basis to use their purchasing and legal powers to persuade consumer products manufacturers and retailers to achieve minimum efficiency and waste reduction standards in product design and packaging.

**FIGURE 1. LOCAL GOVERNMENT IMPLEMENTATION OF AGENDA 21 —
HIGHLIGHTS FROM THE 1991-1996 PERIOD.**

Local Agenda 21

- Local Agenda 21 planning activity is widespread.
 - > 1,812 local governments from 64 countries are now involved.
 - > 933 municipalities from 43 countries have Local Agenda 21 planning underway.
 - > 879 municipalities are just starting to establish the process.
- Most Local Agenda 21 activity is taking place in countries with national campaigns.
 - > 1,487 (82%) are from 11 countries where national campaigns are underway.
 - > 117 (6%) are in 9 countries where national campaigns are just starting.
 - > 208 are in 44 countries where there is no national campaign.

Other Key Activities

- Health and the environment. The World Health Organization's Healthy Cities Programme now involves more than 1,000 municipalities and 17 national campaigns.
- Climate and rain forest protection. The ICLEI Cities for Climate Protection Campaign — focusing on greenhouse gas emissions — includes 164 cities from 34 countries. The European Climate Alliance — additionally focusing on rain forest protection — includes 650 cities from 10 countries.
- Land-based pollution of the seas. City networks have been established to support municipal anti-pollution efforts related to specific seas, such as the Union of Baltic Cities, Environment North Sea, and the UTDA Medcities Project.
- Municipal international cooperation. Numerous North-South and East-West inter-municipal development assistance programmes have been implemented under the auspices of national and international associations of local government. These programmes have involved many hundreds of cities and towns.

A. INTRODUCTION

Since the beginnings of the modern environmental and public health movements, cities have been viewed as centers of the social and environmental ills of the industrialized world. This anti-urban bias was still observable on the eve of the 1992 United Nations Conference on Environment and Development (Earth Summit). At that time, most international development assistance was allocated to rural development projects. Environmentalists still focused primarily upon nature protection, and the “brown agenda” was a new idea. The desire to stop migration to cities was a regular topic of debate in the UNCED preparatory process.

Since 1992, a revolution of opinion has occurred with regards to the role and importance of cities in the achievement of sustainable development. While few still appreciate the tremendous ecological benefits of urbanization¹, cities now are viewed as centers of social and economic creativity. By the time of the Second United Nations Conference on Human Settlements, the city had come to be recognized as the locus of sustainable development at the national and global levels. This recognition has been accompanied by a dramatic shift in international development assistance and national government and private foundation resources to urban programmes. In turn, UN agencies, national governments, and the NGO community have been rapidly establishing new urban-oriented projects.

Parallel to this transformation of opinion about urban development, the international community, national governments, and NGOs have also been reviewing their long-held biases against local governments. For decades, local governments generally have been viewed as the poor cousin in the public sector. They were more likely to be referred to in policy debates as incompetent, corrupt, and unaccountable than as critical partners for sustainable development.

Prior to the Earth Summit, international institutions rarely involved local governments in their discussions and programmes. Within the United Nations system they were not even recognized as governmental institutions. International development programmes commonly ignored local governments and sometimes encouraged their replacement by parastatal bodies. As the most accessible level of government, NGOs often singled out local government for their harshest criticisms, or ignored them altogether.

Five years after the Earth Summit, the international community has recognized that major responsibilities for sustainable urban development are in local government hands. Indeed, during this period, national governments in more than 60 countries have been decentralizing and “down loading” public sector responsibilities for environmental protection and social development to local governments.²

Local governments construct, operate, and maintain economic, social, and environmental infrastructure, oversee land use and development planning processes, establish local environmental policies and regulations, and assist in implementing national and subnational environmental policies. They annually procure tens of billions of dollars worth of goods and can use their economic clout to influence markets. They play a vital role in educating and mobilizing the public to promote sustainable development.

Local governments have been working steadily since the late 19th century to address the issues raised in *Agenda 21*, overseeing three successive cycles in public investment, involving trillions of dollars.

In the first instance, local governments financed, constructed and maintained much of the world’s basic infrastructure for public health and economic development — sewerage systems, solid waste management systems,

roads and public transit systems, and public health systems. As these systems removed wastes and pollutants from urban living spaces and disposed them into rivers, seas, soils and air, local governments — often under pressure from environmentalists — undertook a second cycle of investments, adding sewerage treatment facilities, pollution monitoring and control programmes, and engineered landfills to their sustainable development infrastructure. In the 1970s and 1980s, as economic growth and consumption overwhelmed these controls and facilities, local governments started to implement a third cycle of investments. This time their investments focused on pollution prevention, source reduction, and demand-side management programmes, including solid waste recycling programmes, water and energy efficiency programmes, and transportation demand management strategies.

Since the Earth Summit, local governments have accelerated their investments in these three generations of infrastructure. At the same time, they have enthusiastically led a global Local Agenda 21 movement that presently involves more than 1,800 local governments in 64 countries. Local governments have also established new international campaigns to contribute to the implementation of international development assistance objectives and international environmental accords. A summary of some of these activities is presented in this report.

The efforts of local governments to implement *Agenda 21* have received increasing recognition and praise from the UN system, national governments and the NGO community. However, local government organizations (LGOs) are concerned that support for local government efforts does not stop at public recognition.

LGOs know that the recent investments and efforts of local governments are not sufficient to reverse global trends in resource depletion, impoverishment, and economic dislocation caused by rapid economic growth and change. At the same time, they are keenly aware that

growing national mandates and public expectations upon local governments are not being accompanied by the resources and powers required to fulfill them. Furthermore, in important ways, local governments still do not have formal status in key sustainable development institutions, including the UN Commission on Sustainable Development and the National Councils for Sustainable Development.

For this reason, this report reviews some of the key lessons of local government success since the Earth Summit, and highlights the major obstacles that must be overcome to implement *Agenda 21* and sustainable development at the local level. It concludes with a set of six action recommendations that aim to focus the new respect for local governments by the UN system, national governments, and NGOs on practical measures to lend them support.

B. PROGRESS ON THE IMPLEMENTATION OF *AGENDA 21* & RELATED UNITED NATIONS CONFERENCES AND INTERNATIONAL ACCORDS

Local government implementation of *Agenda 21* and related UN conferences and international accords is taking place in four categories of activity. These are:

1. Implementation of Chapter 28 of *Agenda 21*, "Local Authorities' Initiative in Support of Agenda 21," or Local Agenda 21, as well as related partnership activities with major groups (Chapters 24-27 and 29-32);
2. Implementation of Chapters 3-22 of *Agenda 21* via the day-to-day functions of local government in the areas of natural resource management (e.g., water supply, land-use control), urban development (e.g., housing, transportation), waste management, public health promotion, and social services as well as promotional activities to educate local residents and stakeholders about *Agenda 21* and sustainable development;
3. Local programmes and policies related to specific international accords and UN strategies; and
4. Municipal international cooperation (Chapter 2).

Highlights of activities in each of these areas are presented below.

1. The Local Agenda 21 Movement

Perhaps the greatest response by local governments to *Agenda 21* is in the area of Chapters 22-32, strengthening the role of major groups, and in particular Chapter 28 of *Agenda 21*. This chapter states that "by 1996 most local authorities in each country should have undertaken a consultative process with their populations and achieved a consensus on a 'local Agenda 21' for the community."

Following UNCED, local governments, national and international local government organizations (LGOs), and international bodies and UN agencies entered a period of experimentation with the implementation of the Local Agenda 21 concept. The lead actors in these efforts were the local governments themselves which worked, often with the support of their national municipal associations, to develop the Local Agenda 21 planning approaches appropriate to their circumstances. However, international programmes played a critical role in documenting and analyzing these growing local experiences, and in facilitating the exchange of Local Agenda 21 approaches and tools.

The accumulation and exchange of practical experiences helped to identify a set of universal elements and factors for the success of Local Agenda 21 planning. While these are being continually updated and revised by local practitioners, five key elements have been defined for Local Agenda 21 planning in the 1992-1996 period. These are:

- Multi-sectoral engagement in the planning process through a local stakeholders group which serves as the coordination and policy body for preparing a long-term sustainable development action plan.
- Consultation with community groups, NGOs, business, churches, government agencies, professional groups and unions in order to create a shared vision and to identify proposals and priorities for action.
- Participatory assessment of local social, economic, and environmental conditions and needs.
- Participatory target-setting through negotiations among key stakeholders in order to achieve the vision and goals set forth in the action plan.

A NOTE ON METHODOLOGY

The information presented in this report — and used to draw its conclusions — has been gathered by ICLEI and partner local government organizations using surveys, regional consultation meetings, telephone interviews, and extensive case study analysis. The following is a summary of the key data collection and analysis methods employed.

Local Agenda 21 and Implementation of Chapters 23-32 of Agenda 21

The primary sources of information used for this review were two international surveys on Local Agenda 21, the results of which were validated through regional consultation meetings, telephone interviews, and the country-specific surveys of national associations of local government. A full description of these surveys and their findings is presented in *Local Agenda 21 Survey — A Study of Responses by Local Authorities and Their National and International Associations to Agenda 21* (ICLEI/UNDPDSD, 1997).

Implementation of Chapters 2-22 of Agenda 21

The primary method used for this purpose was comparative case study analysis. ICLEI compared the contents of 150 local government “best practice” submissions from 23 countries in 1991 with the contents of 129 local government “best practice” submissions from 24 countries during the 1993-1996 period in order to discern priority areas of action and changes in practices. These findings were supplemented by a content analysis of the environmental policies and sustainable development strategies of six national associations of local government.

Analysis of Key Obstacles to Local Sustainable Development

The identification of obstacles was derived from the above mentioned case study analysis as well as from a comparison of the conclusions of three Local Agenda 21 consultation meetings held by ICLEI in preparation for the Earth Summit (1991-1992) with the conclusions of international and regional consultations of local governments in 1995-1996.

- Monitoring and reporting procedures, including local indicators, to track progress and to allow participants to hold each other accountable to the action plan.

During 1996, ICLEI and the UN Department for Policy Coordination and Sustainable Development (DPCSD) conducted an international survey on Local Agenda 21 progress worldwide. The following is a summary of the ICLEI/DPCSD Survey results, which have been published in a special report of the UNCDSD entitled *Local Agenda 21 Survey — A Study of Responses by Local Authorities and*

Their National and International Associations to Agenda 21 (1997).³

The survey revealed that as of November 30, 1996, more than 1,800 local governments in 64 countries were involved in Local Agenda 21 activities. Of this number, ICLEI confirmed that Local Agenda 21 planning was underway in 933 municipalities from 43 countries and was just getting started in an additional 879 municipalities. Most of these planning processes are being undertaken under the name of “Local Agenda 21.” However, the Local Agenda 21 mandate is being implemented in a number of

cities and towns under a different local name or through various established international assistance programmes, such as the UNCHS Sustainable Cities Programme, the UNDP Capacity 21 Programme or the GTZ Urban Environmental Management Programme.

Local Agenda 21 activities are most concentrated in the eleven countries where national Local Agenda 21 campaigns are underway—in Australia, Bolivia, China, Denmark, Finland, Japan, Netherlands, Norway, Republic of Korea, Sweden, and the United Kingdom. These national campaigns are usually operated by the national association of local government in partnership with national government and NGOs. In these countries, 1,487 local governments — representing 82% of the reported total — have established Local Agenda 21 planning efforts.

An additional 6% of the reported total, or 117 Local Agenda 21 processes, have been established in the nine countries where national Local Agenda 21 campaigns are just now getting underway — in Brazil, Colombia, Germany, Greece, Ireland, Malawi, Peru, South Africa, and the United States. The remaining 208 reported Local Agenda 21 processes are taking place in 44 countries that do not have national campaigns. These findings highlight the critical importance of national Local Agenda 21 campaigns to the implementation of *Agenda 21*, Chapter 28.

Municipalities in developed countries account for 1,631 or 90% of the identified Local Agenda 21 planning processes. Nevertheless, Local Agenda 21 planning is rapidly increasing in 42 developing countries and economies-in-transition, where 181 Local Agenda 21 planning processes were identified.

The survey also documented the types of activities being undertaken as part of Local Agenda 21 planning. Of the 933 Local Agenda 21 processes that were identified to be underway, all have established a consultative process with local residents, 516 have established a

local “stakeholders group” to oversee this process, and 666 have begun the preparation of a local action plan. Among the most advanced processes, 237 have established a framework to monitor and report on the achievement of action plan objectives, and 210 have established local indicators for monitoring purposes.

The ICLEI/DPCSD survey was unable to evaluate the local-level impacts of Local Agenda 21 planning activities. For this purpose, ICLEI undertook a detailed, comparative review of local practice through the documentation and evaluation of 29 case studies. The primary conclusion of this case study review is that the greatest impact of Local Agenda 21 during its first years has been to reform the process of governance at the local level so that the key requirements of sustainable development can be factored into local planning and budgeting.

As is illustrated by the case of Cajamarca, Peru, described in Section C, the implementation of the Local Agenda 21 process requires local governments to decentralize governance, reform their current departmental structures, and change traditional operational procedures. Most Local Agenda 21 efforts started by creating new organizational structures to implement planning. On the one hand, new stakeholder planning bodies are created to coordinate community-wide involvement and partnership formation for sustainable development. On the other hand, local governments institute internal reforms, such as the creation of interdepartmental planning units or the establishment of neighborhood or village-level government units.

These activities generally consume the first years of the Local Agenda 21 planning. Such institutional reforms may not immediately produce physical improvements in development or environmental conditions. Nevertheless, they are changing the fundamental approaches and policy focus of hundreds of local governments. These changes include extending the time horizon of local planning, establishing participatory, accountable decision-making frameworks,

and operating through multi-sectoral partnerships. As a result, these local governments are becoming more effective and dedicated agents of the sustainable development agenda.

In some cases — primarily in those communities that started work prior to 1992 — local governments have reached the stage in the process where they are implementing their Local Agenda 21 action plans. For instance, in Kanagawa Prefecture, Japan, the implementation of the Kanagawa Agenda 21 involves 52 projects with a budget of U.S.\$149 million.⁴

In developing countries, implementation tends to begin by addressing a few priority problems. For instance, the Local Agenda 21 effort in Quito, Ecuador, is focusing on the stabilization and restoration of the many ravines in that city's low income South Zone. Local Agenda 21 efforts in Pimpri Chinchwad, India, are focusing on slum upgrading. In Jinja, Uganda, efforts focus on solid waste management.

The challenges facing the Local Agenda 21 movement over the next five years fall into two categories. First, the growth of the movement itself must be supported. To date, the most successful mechanism of support has been the establishment by LGOs of national and, in some cases, regional Local Agenda 21 campaigns. Particularly attention needs to be given to the establishment of national campaigns in developing countries.

Second, local governments themselves must move from the planning stage to implementation. The successful implementation of Local Agenda 21 action plans will require further integration of the Local Agenda 21 strategies and targets with the traditional budgeting and statutory planning activities of municipalities. To the extent that statutory plans and annual budgets are not revised to reflect Local Agenda 21 objectives, these plans will limit the impact of the Local Agenda 21 movement on sustainable human settlements development.

2. Implementation of Chapters 2-22 of Agenda 21 via the Statutory Functions of Local Government

Local governments in most countries have direct responsibilities for some aspect of each chapter of *Agenda 21*. The fulfillment of these local responsibilities has a direct impact on the success of international accords, such as the Convention for the Prevention of Marine Pollution from Land-based Sources (1974) or the UN Convention on Climate Change (1992), as well as the achievement of other UN human settlements and social development strategies.

Local governments annually spend billions of dollars to fulfill their statutory responsibilities. The total annual expenditures of the world's local governments related to the thematic areas of *Agenda 21* is difficult to calculate. However, an extrapolation based on the annual budgets of typical medium-sized cities for solid waste management (Chapter 21), water supply and waste water management (Chapters 17 and 18), and public transportation (Chapter 7) would indicate that, in aggregate, local governments probably spend hundreds of billions of dollars annually in these areas alone.

In many countries, local governments spend more on environmental protection than other levels of government. The Organisation for Economic Cooperation and Development (OECD) has estimated that local governments in the United States will account for 65% of total U.S. public expenditure for the environment by 2000.⁵ A more detailed accounting of expenditures for Denmark has documented that Danish local governments are responsible for more than 80% of that country's environmental expenditures.⁶

In consideration of these realities, progress with the implementation of many chapters of *Agenda 21* would appear to be dependent upon the actions of local governments. In addition to their annual expenditures, local governments also have a variety of other instruments

to promote sustainable development including comprehensive development plans, land-use and construction controls, economic instruments (fines, fees, subsidies and taxes), and local regulations.

In preparation for this report, ICLEI compared the contents of 150 local government "best practice" submissions from 23 countries in 1991 with the contents of 129 local government "best practice" submissions from 24 countries during the 1993-1996 period in order to discern priority areas of action and changes in practices (see "A Note on Methodology"). A comparison of the management areas of these best practices and the levels of their reported impacts was used to evaluate local government performance in the areas of Chapter 2 through Chapter 22 of *Agenda 21*.

ICLEI's primary conclusion from this review is that improvements in performance have been most observable—in keeping with trends prior to 1992—in the areas of freshwater management (Chapter 18) and solid waste management (Chapter 21). These are areas over which local governments have both considerable control and have received increased local government commitment and investment since 1992. In addition, local governments have made considerable new commitments and investments in the areas of promoting sustainable human settlements development (Chapter 7) and integrating environment and development decision making (Chapter 8). The case studies reviewed indicate that in these two areas local governments have responded directly to inspiration derived from the UNCED and related promotion of sustainable development.

Local governments also appear to have maintained or increased their commitments and investments in a number of areas where local control is more limited and, therefore, where the impacts of local actions are not well established. These areas include, in order of expressed interest and commitment in the local government community: international cooperation to accelerate sustainable development

(Chapter 2), protection of the atmosphere (Chapter 9), protecting and promoting human health (Chapter 6), sustainable agriculture and rural development (Chapter 14), protection of oceans, seas, and coastal areas (Chapter 17), combating poverty (Chapter 3), changing consumption patterns (Chapter 4), conservation of biological diversity (Chapter 15), and combating desertification and drought (Chapter 12).

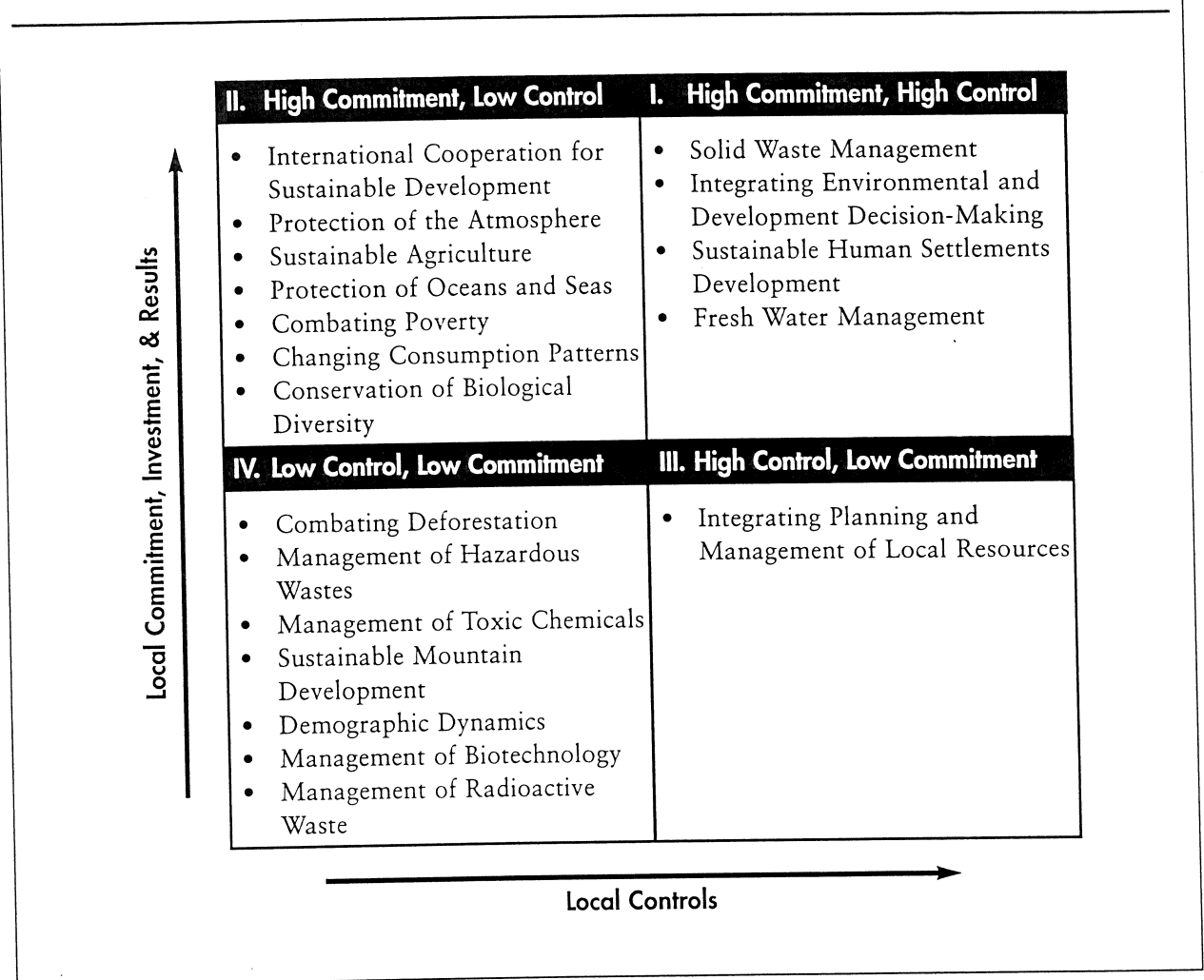
Local governments have considerable control over one area—integrated planning and management of land resources (Chapter 10)—where ICLEI has witnessed considerable commitment-in-principle to changing local practices, but where few local governments have demonstrated real progress in controlling low-density urban sprawl, soil erosion, and encroachment on agricultural and biologically-sensitive lands.

Finally, six chapters of *Agenda 21* represent areas where local governments have both limited local control and limited commitment as well. Combating deforestation (Chapter 11) is considered by ICLEI to be a borderline case in terms of commitment — local governments in Europe have made particularly commendable commitments in this area — but local government control over major forest areas is limited. The management of hazardous wastes (Chapter 20) is an area where local governments may have more control, but in practice their commitment and/or investments are still low. Other areas in these categories include: management of toxic chemicals (Chapter 19), sustainable mountain development (Chapter 13), demographic dynamics and sustainability (Chapter 5), and management of biotechnology (Chapter 16) and radioactive wastes (Chapter 22).

A graphic presentation of these conclusions is provided in Figure 2.

The above conclusions, based upon case study analysis, are supported by a content analysis of the environmental or sustainable development policy and strategy documents of eight national associations of local government

FIGURE 2. LOCAL GOVERNMENT RESPONSES TO CHAPTERS 2-22 OF AGENDA 21



in Australia, Austria, Canada, Denmark, Finland, Ghana, the United Kingdom, and the United States.⁷ This analysis identified the commitments and activities of these national associations relative to each chapter of *Agenda 21* in the following areas: domestic projects and training; domestic policy and advocacy, municipal international cooperation, and international policy advocacy. The overall commitments and activities of the albeit limited sample of national municipal associations was then scored for each chapter of *Agenda 21*. The results of this analysis are presented in Figure 3.

Closer consideration of local government commitments and priorities in each area of

Agenda 21 reveals that commitment is often higher than local control or resources for action. Even in areas where local governments have substantial control — such as solid waste or freshwater resources management — the actions of national and state-level governments or the private sector can reduce the effective application of this control.

For instance, during the 1992-1995 period hundreds of local governments have increased the portion of their municipal solid waste that is recycled. Nevertheless, overall volumes of solid waste have increased in many cities due to increased consumption and wasteful product design and packaging. In many African cities,

FIGURE 3. PRIORITY AREAS OF AGENDA 21 FOLLOW-UP FOR EIGHT NATIONAL MUNICIPAL ASSOCIATIONS

Rank	Agenda 21 Chapter	Topic Area
1.	7	Promoting sustainable human settlement development
2.	21	Safe and environmentally sound management of solid wastes, sewage, and related sanitation issues
3.	3	Combating poverty
4.	9	Protection of the atmosphere
5.	8	Integrating environment and development decision-making
6.	18	Protection of freshwater resources: integrated management of water resources
7.	10	Integrated planning and management of land resources
8.	23-32	Strengthening the roles of major groups
9.	15	Conservation of biological diversity
10.	4	Changing consumption patterns
11.	2	International cooperation to accelerate sustainable development in developing countries
12.	6	Protecting and promoting human health
13.	14	Promoting sustainable agriculture and rural development
14.	17	Protection of oceans, seas and coastal areas and protection/rational use of their living resources
15.	20	Environmentally sound management of hazardous wastes, including prevention of illegal international traffic
16.	11	Combating deforestation
17.	5	Demographic dynamics and sustainability
18.	12	Combating desertification and drought
19.	22	Safe and environmentally sound management of radioactive wastes
20.	19	Environmentally sound management of toxic chemicals
21.	12	Sustainable mountain development
22.	15	Environmentally sound management of biotechnology

local governments have made efforts to improve drainage and sewerage systems, but the proliferation of one simple product — the plastic bag — has resulted in continued clogging of drains and sewers and associated floods in residential areas. In North America local governments have worked to reduce private automobile use and air emissions; the impacts of these efforts are being eroded by the increasing popularity of vehicles with low fuel efficiencies.

In areas where local governments have high commitment but low control — such as protection of the atmosphere, promoting human health, sustainable agriculture, protection of seas and coastal areas, or combating poverty — success will depend upon partnerships among all levels of government, the private sector, and households. Local governments can make important contributions, but only if the policies, economic instruments, and activities of other sectors are harmonized with local objectives.

3. Programmes and Policies Related to International Accords

The implementation of a number of international accords and United Nations strategies can be greatly assisted by local government action. These include:

- the Convention on Wetlands of International Importance,
- the Convention on the Prevention of Marine Pollution from Land-based Sources,
- the Convention on Long-range Transboundary Air Pollution,
- the Convention Concerning Occupational Safety and Health and the Working Environment,
- the Montreal Protocol on Substances that Deplete the Ozone Layer,
- the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes,
- the UN Framework Convention on Climate Change, and
- the Convention on Biological Diversity.

Many local government campaigns, networks, projects, and planning bodies have been organized to address these issues. Local government efforts in the areas of wetlands protection, marine pollution, and biological diversity are typically organized on a sub-regional basis to address specific problems related to a biologically significant area. Since 1992, significant local government networks have been organized in particular to address pollution and coastal management on the Baltic Sea, the North Sea, the Mediterranean, the Marmara Sea, and the Indian Ocean. The networks facilitate the exchange of expertise within their regions and support their municipal members to undertake environmental audits and design concrete projects for pollution control.

Local government campaigns to address the issue of global climate change provide a different

model for engaging local governments in the implementation of international accords.

In 1993, ICLEI joined with UNEP to host the first Municipal Leaders' Summit on Climate Change and the Urban Environment at the United Nations in New York, which established ICLEI's Cities for Climate Protection Campaign (CCP). Participating municipalities adopt a formal resolution committing them to prepare an inventory of their local greenhouse gas emissions and an action plan — with concrete targets — for reducing these emissions. Cities in highly industrialized countries are urged to adopt an emissions reduction target of 20%. The Campaign presently has 164 members from 34 countries. Together they represent more than 4% of the world's anthropogenic emissions of carbon dioxide. The Campaign has set as its target the recruitment of cities which represent a total of 10% of the world's emissions.

Participants are provided with assistance in preparing their climate action plans through training workshops, a "tool kit" with emissions quantification procedures and greenhouse gas reduction measures, and a related software programme. In addition, in some countries, local governments are provided with small grants to implement their action plans.

The Campaign also provides a vehicle through which local government leaders can give input into the Conference of the Parties (COP) to the UN Framework Convention on Climate Change (FCCC), through meetings of the Intergovernmental Negotiating Committee. In 1996, ICLEI also was given an official observer seat in the Subsidiary Body for Scientific and Technological Advice for the COP.

ICLEI has facilitated local government input into the FCCC process through a series of international "summits." In March 1995, 320 mayors and city representatives from more than 50 countries met in Berlin on the occasion of the first meeting of the COP to discuss and compare strategies to reduce greenhouse gas emissions. They then adopted and directed a Communiqué to the COP, urging national leaders to recognize and support partnerships with

local authorities to reduce greenhouse gas emissions. In October 1995, a third CCP summit was hosted by Saitama Prefecture in Japan to launch the Cities for Climate Protection Campaign in Asia. A fourth summit will be held in Nagoya, Japan shortly before the third meeting of the COP in December 1997. The Nagoya Summit will focus on concrete reports by municipal leaders on the specific reductions in greenhouse emissions that their cities have achieved since participation in the Campaign.

At a regional level, nearly 650 European cities and towns in 10 countries have joined the Climate Alliance campaign to both reduce their greenhouse gas emissions and work to protect the world's rain forests and biodiversity. A unique aspect of the Climate Alliance is its alliance with indigenous people in the Amazon region and its effort to discourage local governments from using tropical wood.

4. Municipal International Cooperation (Chapter 2)

Municipal international cooperation (MIC) is a modality of international development assistance that presently involves concrete exchanges of personnel, technology, equipment, training, and experience between hundreds of cities and towns in every region of the world. MIC offers a very direct and cost-effective medium for development cooperation, bringing together peers in partnerships based on appropriate professional expertise, innovation, joint-ownership and mutual benefit.

Long before the Earth Summit, local government organizations like the International Union of Local Authorities (IULA), the United Towns Organization (UTO), Sister Cities International and the Arab Towns Organization (ATO) organized a variety of international programmes to share technical expertise on a North-South and East-West basis. The number of LGOs specifically dedicated to MIC increased dramatically in the 1980s, when

groups such as the United Towns Development Agency (UTDA), the Organization of Islamic Capitals and Cities, ICLEI, the MegaCities Project, CITYNET, Eurocities and others were formed.

Expansion of MIC activities was further increased by the growing investments of national municipal associations in development assistance projects. During the 1990s alone, associations such as the Federation of Canadian Municipalities, the Association of Netherlands Municipalities, and the UK Local Government International Bureau have sponsored major technical assistance and technology transfer programmes involving hundreds of municipalities.

Since the Earth Summit, these national and international LGOs have increasingly focused their international assistance activities on sustainable development. Dozens of specialized multi-city and twin city projects have been implemented on urban environmental management, potable water supply, transport, energy management, solid waste management, waste water management, coastal protection, fresh water supply, hazardous waste management, reforestation, parks management and dozens of similar topics.⁸

MIC networks and projects serve as a parallel and complementary technical assistance system to the international development assistance system. Increasingly, bilateral and multilateral donor institutions have financed these networks directly to deliver appropriate and low-cost assistance. Since the Earth Summit, supporters of these networks have included UNDP, the World Bank, UNCHS, the European Union and the bilateral assistance agencies of Norway, Sweden, Denmark, Netherlands, Germany, France, Canada, United States and many other countries.

C. LOCAL IMPLEMENTATION OF SUSTAINABLE DEVELOPMENT — LESSONS FROM THE FIELD

1. Participation and the Sustainable Development Process — Local Agenda 21 in Cajamarca, Peru

Values and Principles for Success

Participatory local action planning — or “Local Agenda 21” planning — has proven to be a particularly valuable way to advance sustainable development in developing country cities and towns. By engaging all sectors to jointly address priority local problems, it mobilizes local resources and increases public will to affect change. This helps to overcome the weak financial condition of many developing country municipalities and increases political pressure upon key institutions — such as the municipality or private corporations — to support change. Furthermore, Local Agenda 21 planning has proven to be a useful means to support successful local responses to decentralization policies.

Case Summary

The Provincial Municipality of Cajamarca, Peru ranks among the poorest communities in the world. In 1993, the infant mortality rate was 82% higher than the Peruvian national average, and was 30% higher than the average for the world’s low income countries. The Province’s main river has been polluted by mining operations and untreated sewage. Farming on the steep Andean hillsides, overgrazing, and cutting of trees for fuel has resulted in severe soil erosion.

In 1993, the Mayor of Cajamarca initiated an extensive Local Agenda 21 planning effort for the Province. This effort had two main components. The first was a dramatic decentralization of the provincial government so that local government decisions would reflect the needs of the Province’s many small and remote

communities. Cajamarca City was divided into 12 neighborhood Councils and the surrounding countryside into 64 “minor populated centers” (MPCs), each with their own elected Mayors and Councils. The Provincial Council was reconstituted into a body with 48 Mayors from the MPCs, 12 Cajamarca City Mayors, 12 District Mayors, and the Provincial Mayor.

The second element of the initiative is the creation of a Provincial Sustainable Development Plan. An Inter-Institutional Consensus Building Committee was established with representation from the Province’s different jurisdictions, NGOs, private sector, and key constituency groups. Six “Theme Boards” were established under this Committee to develop action proposals in the following areas: Education; Natural Resources and Agricultural Production; Production and Employment; Cultural Heritage and Tourism; Urban Environment; and Women’s Issues, Family, and Population. These Theme Boards were charged with creating a strategic plan for their respective areas. Training workshops were held in the new local authorities to gather local input, and educational notebooks were prepared for the local Mayors to use in discussing proposals and ideas with their constituents.

The plans prepared by the Theme Boards were integrated into a Provincial Sustainable Development Plan, which was submitted to the Provincial Council in August, 1994. Having received approval, after a series of public education workshops about the Plan, the Plan was submitted for public approval through a citizens’ referendum.

Since that time, the Theme Boards have continued their work, raising funds and creating partnerships to implement the Plan. Projects have included provision of potable water, sanitation, environmental education, and

rural electrification. In total, the Local Agenda 21 process has mobilized more than U.S.\$21 million for sustainable development activities since 1993.

Source: The Provincial Municipality of Cajamarca and UNDP/CSD/ICLEI, *The Role of Local Authorities in Sustainable Development*, New York, April 1995.

2. The Use of Flexible Public Regulation to Promote Pollution Prevention — The Green Builder Program of Austin, U.S.A.

Values and Principles for Success

Public regulation of private and municipal activities has proven to be a fundamental ingredient to improvements in environmental and social conditions at the local level. However, regulations have been justly criticized for their inflexibility, bureaucratic costs, and insensitivity to the unique conditions of regulated parties. Nevertheless, these criticisms justify regulatory reforms, not regulatory abandonment. Systems of regulation can be established that maintain a minimum standard of performance for all actors while offering regulatory relief to those actors who consistently exceed regulatory standards of performance through alternative, voluntary means.

Case Summary

Like most local governments, the City of Austin, Texas, regulates the practices of private builders through its municipal Building Code. The Building Code imposes hundreds of specifications on construction site preparation and building design, ranging from lot size to window requirements to the types of materials used in construction. In 1986, Austin amended its Building Code to include an Energy Code, which established minimum energy-related

standards for floors, walls, windows and doors, roofs, air infiltration, insulation, lighting, heating and cooling system efficiencies, solar exposure and shading, and the use of waste heat. Parallel to this upgrading of building regulation, the City provided a voluntary compliance mechanism which builders could use to achieve the Energy Code's energy efficiency standards through alternative measures than those specified in the Code. That mechanism was the Energy Star Rating System.

Established in 1985, the Energy Star Rating System is a voluntary programme in which municipal staff audit and rate the energy efficiency of new residential buildings according to a comprehensive set of criteria. Building designs that achieve the performance standards of the Energy Code are relieved of relevant design specifications in the Code. In addition, these high performance buildings are marketed to home buyers by the municipality and the local real estate brokerage industry as superior homes.

Due to the dual incentive of potential regulatory relief and marketing support, more than 50 separate builders and construction companies participated in the Energy Star programme between 1986 and 1992, resulting in the rating of more than 90% of the new residential buildings constructed during that time — a number exceeding 4,000 new homes.

Building upon the success of the Energy Star system, in 1991 the City of Austin decided to expand its voluntary rating framework to include a variety of other sustainability criteria in home construction. That year, the Energy Star system was expanded into the Green Builder Program whose four-star rating system focuses on energy savings, sustainable building materials and materials recycling, water conservation, and waste. The rating system applies a lifecycle approach, addressing upstream and downstream impacts of materials and home resource consumption patterns. In addition to residential construction, the Green Builder Program also covers all municipal building

projects, including the municipal airport and public housing. A Commercial Green Builder Program also has been established.

The rapid expansion of the Green Builder Program — presently involving more than 150 builders — requires that the City operates the rating system on a self-rating basis. In order to participate in the programme, builders must participate in a half-day rating training session and pledge accurate and honest rating of their buildings. The accuracy of the voluntary ratings is randomly confirmed by municipal employees.

A recent study of the actual energy consumption of a superior Green Builder home with a home that merely complies with the Energy Code showed that the Green Builder home used 48% less electricity and 34% less natural gas than the standard Code home. In addition, the average Green Builder home is estimated to use 114,000 less gallons of fresh water per year than the standard Building Code home, and discharges 22,000 less gallons of greywater per year into the municipal sewerage system.

The Austin Green Builder Program could not have generated such widespread voluntary participation without the underlying regulatory requirements of the Energy Code. It serves as an excellent example of the flexible and effective use of public regulation for sustainable development.

Source: ICLEI, *Case Study #5: Housing Construction* (Toronto, ICLEI: 1992).

3. Building Local Government Capacity for Sustainable Development in Mexico City, Mexico and Quito, Ecuador

Values and Principles for Success

Decentralization and the reorganization of municipal jurisdictions is often a prerequisite to addressing the pollution problems of many fast-growing cities.

Case Summary

For decades, Mexico City, Mexico and Quito, Ecuador were known for their pollution problems. However, shortly after special legislation was passed in each city, providing their local governments with increased administrative, political, and fiscal powers, the respective cities achieved dramatic improvements in environmental conditions.

In the 1970s, Mexico City established a reputation as both the largest and most polluted city in the world. By the mid-80s the city's 2.5 million vehicles consumed 20 million liters of gasoline and diesel fuel each day. The city's 35,000 industries and service facilities daily used 1.8 million liters of fuel oil and 340 million cubic feet of natural gas. These fuels were burned mainly in old vehicles and in obsolete industrial facilities. Ninety-seven percent of all gasoline consumed contained lead, while diesel and fuel oil had high sulfur content. The combined daily combustion of these fuels produced 11,700 tons of pollutants. The national government seemed powerless to stop the downwards spiral of one its great cities into an environmental oblivion.

Then, in 1989, the Federal Government of Mexico established the "General Law of Ecological Balance and Environmental Protection," which, among other things, decentralized authority to control sources of pollution to states and municipalities. Article 9

of the law granted Mexico City the authority to regulate emissions from businesses, service industries and all mobile sources, to regulate urban development, land use, vehicle traffic, and to operate environmental laboratories.

That same year the mayor of Mexico City launched a municipal clean air initiative without precedent in the world. The initiative implemented a clean fuel programme which reduced lead content in gasoline by 50% and enriched its oxygen content. The programme provided a new gas-oil fuel for industry to reduce sulfur content by 33%. It replaced fuel oil in the city's power plants with natural gas. In addition to these measures, the city administration implemented 1,865 partial or temporary closures of local industry and 62 high pollution industries were permanently closed.

The city also invested in a major expansion of the public transit system, adding 10 miles to the subway system, retrofitting 3,500 buses with low emission engines, adding 250 electric buses, and replacing 55,000 taxis with 1991 or newer models. A trial programme called "A Day Without Car" limited the use of private cars to six days per week and reduced gasoline consumption in the city by 12% in the first year.

Within the first year of these and other measures, Mexico City saw a 23% reduction in total pollutant emissions — over two thousand tons per day. Air quality indexes for carbon monoxide, sulfur oxides, hydrocarbons, and lead ranged from 10-15%. Winter ozone levels decreased by more than 40%.

Like the Mexico City model, Quito's ability to address the systemic roots of its key environmental problems was dramatically strengthened with the passage of the 1993 Metropolitan District Law in Ecuador. This law was initiated by the Municipality of Quito in 1990 and adopted by the National Congress in 1993.

The law permits the Municipality to establish its own local environmental ordinances for activities within its jurisdiction. Formerly, environmental regulations had to be approved by the National Congress. As a result, the Municipality now independently controls land-use, building and construction, public and private transportation, and environmental contamination. Additionally, the law was used to increase the jurisdiction of the new Metropolitan District to include the entire urban area, so that land-use and transportation could take place for the first time on a metropolitan basis.

Since passage of the law, the Municipality has established a light rail transit system, a pollution monitoring system, and a flood, erosion and risk control programme. It is extending the water and sanitation system in the metropolitan area, with a particular interest in reducing discharges into local rivers. The Municipality also has prepared a local ordinance for the control of all hazardous industrial wastes and private vehicle emissions.

The cases of Mexico City and Quito illustrate that the simultaneous decentralization of responsibilities, legal powers, and financial means to municipalities can result in dramatic improvements in environmental conditions.

Source: ICLEI, *Instructions for a Sustainable Future* (1992) and various reports prepared for ICLEI by the Metropolitan District of Quito (1996).

4. Local Implementation of International Environmental Accords — The Case of Local Climate Action Planning in Hannover & Saarbrücken, Germany

Values and Principles for Success

The implementation of international environmental accords generally requires action at the local level. Timely and effective local responses to these accords can be facilitated by including local governments in the negotiation process as well as in the preparation of national level action plans.

In the case of global climate change, the largest source of greenhouse gas emissions is energy consumption in urban-based industry, transportation, and building heating and cooling systems. Local governments have a variety of instruments at their control to reduce energy consumption, but their ultimate success in achieving global greenhouse gas reduction targets will depend upon support and cooperation from industry and utility companies, national and subnational government, and households.

Case Summary

In 1991, fourteen local governments from North America, Europe, and the Middle East joined with ICLEI to develop a methodology for local climate action planning. Supported by the US Environmental Protection Agency and private foundations, this methodology established a baseline inventory of greenhouse gas (GHG) emissions for each city, a scenario of emissions growth until 2005, and a plan for measures to reduce emissions. Through this experience, ICLEI demonstrated a clear role for local governments in the implementation of the pending UN Framework Convention on Climate Change.

The cities of Hannover (population 514,000) and Saarbrücken (population

189,000), Germany completed their local climate action plans in 1994. Both municipalities have been worldwide leaders in local energy efficiency and renewable energy strategies. The CO₂ emissions inventories prepared by each city highlighted the extent to which emissions reductions could be best achieved by reducing heating and electricity demand in residential, commercial and industrial buildings.

The Hannover action plan aims to reduce total CO₂ emissions 25% by 2005. The total estimated annual CO₂ emissions of the city of Hannover was estimated to be 10.8 million tonnes. This estimate includes lifecycle emissions from upstream energy inputs in its calculations. Energy end-use for buildings and industry (electricity, heating and cooling) in Hannover accounts for 83% of total emissions. The transportation sector accounts for 17% of the city's CO₂ emissions.

As of 1997, the energy efficiency measures of the municipality and its municipal energy utility since 1990 are estimated to result in an annual reduction of CO₂ emissions of 199,000 tonnes. This accounts for a 2.2% annual reduction in CO₂ emissions from buildings and industry and a 1.8% annual reduction of total CO₂ equivalent emissions. Hannover's measures range from increasing the expansion of combined heat and power facilities, changing in energy costs (least cost planning) to encourage energy retrofit activities in buildings, and retrofitting of public buildings including schools. Among Hannover's most important initiatives is a "green pricing" utility rate for electricity generated by five new wind generation facilities. Utility customers are willing to pay a premium for this clean, wind energy.

The Saarbrücken action plan also sets a target of 25% reduction in CO₂ emissions by 2005. However, unlike Hannover, Saarbrücken did not factor upstream emissions in its calculations. Nonetheless, the Saarbrücken plan builds upon an outstanding record of achievement in the 1980s which produced a 15% reduction in CO₂ emissions from city-wide heating demand

and a reduction of CO₂ emissions from municipal buildings of 37% between 1980 and 1990. An expansion of these programmes, as well as an innovative programme to finance solar energy conversions for residential and commercial buildings, has produced an annual reduction of CO₂ emissions of 1% between 1990 and 1996.

The progress of Hannover and Saarbrücken since 1990 demonstrates that lasting reductions in CO₂ emissions can be achieved without damaging local economic health. In addition to their own energy efficiency measures, these cases highlight the role that municipalities can play in introducing new, renewable energy technologies to the market.

However, both municipalities report that they are unlikely to achieve their 25% reduction targets on their own. In order to achieve the levels of reductions required to protect the global climate, municipalities require further commitment and supportive actions by national governments, industry and households — such as energy taxes, measures to reduce the growth of private automobile transportation, and industrial efficiency measures.

Source: The Urban CO₂ Reduction Strategies of Hannover and Saarbrücken and staff reports from the Hannover energy utility (Stadtwerke Hannover) and the Saarbrücken Energy Department.

5. Protection of Biodiversity as a Local Management Challenge — Multi-Functional Park Design and Management in Durban, South Africa

Values and Principles for Success

Among all the environmental problems addressed by international agreements, the protection of biodiversity, in particular, represents a local management challenge. The survival of each species requires the maintenance of specific ecological conditions in geographically distinct habitats. As humans establish settlements and economic activities on all of Earth's terrain, maintenance of these conditions requires site-specific planning, management, and integration of local social and ecological requirements.

Historically, most human settlements have been established with little reference to local ecological features and indigenous species. However, a growing number of local governments have begun to factor habitat protection and species reproduction issues into municipal planning and development approval procedures. In so doing, they are pioneering new ways to create more symbiotic relationships between local residents and their neighbors in the plant and wildlife communities.

Case Summary

Metropolitan Durban (population 3.5 million) is located in a high rainfall transition area between tropical and temperate zones and has an almost full representation of species from both zones. Ad hoc urbanization in the city's central core, coupled with poverty, overcrowding, and poor municipal services in the peripheral township areas, has led to the degradation of the major ecosystems in the city — forests are being stripped for firewood and building materials, soil erosion is rife, rivers are polluted with untreated wastewater, and natural areas

are being cleared for development. In an attempt to alleviate both the ecological and social problems it faced, the city established the Durban Metropolitan Open Space System (D'MOSS) as part of its long-term land use plan.

D'MOSS employs a holistic approach to park development, incorporating both social and ecological criteria into park design and management. To ensure that local residents respect sensitive ecological areas, the municipality involves residents in neighboring park development through a continuous consultation process that aims to establish compatible social and environmental uses of the parks. By using park areas to provide abutting neighborhoods with services such as waste water treatment, schools, health clinics, and community gardens, the parks are being designed to meet the recreational, educational, health, and economic needs of a diverse group of citizens. Furthermore, the municipality trains and employs local people in the construction and maintenance of sections of the parks, thus providing education and employment opportunities while developing municipal services.

Along with this very significant social component, the parks are designed to fulfill a number of different environmental functions for the city. In particular, D'MOSS gives the local government and its citizens the opportunity to play a crucial role in maintaining, and increasing, biodiversity.

In most cities and towns, urban conservation is concerned with the survival of "islands" of vegetation and wildlife in a "sea" of building development. The populations within these islands are cut off from the main body of their particular plant or animal community. This undermines the long-term survival of the isolated species — the small populations in these communities decrease the likelihood of successful reproduction, reduce genetic diversity, and increase vulnerability to natural disasters and competition from invasive, non-native species.

D'MOSS planners have adopted physical design principles which aim to establish and maintain links between these remnant patches of original natural vegetation and to restore disturbed areas to their natural state. Large and small nature reserves are being connected by natural area corridors that serve as biological links. These corridors enhance plant and animal habitats and maximize natural dispersal of plant and animal species. The linkages allow genetic transfers between the areas thereby maintaining diversity both in species numbers and in genetic material within a species. In keeping with the multi-functional design strategy, the corridors include rustic trails featuring interpretative charts, bird-watching blinds, and picnic sites, for recreational use by local citizens.

Eventually the park system will form a grid across the entire city, with the principal axes following the coast and several river valleys running perpendicular to the coast. The water-courses will be retained in their natural state with indigenous vegetation.

In addition to establishing biological linkages, Durban will undertake a process of active management to restore missing habitats and to encourage the re-establishment of indigenous plant and animal communities. Costs for this part of the project will be minimized through the application of biogeographical design principles which allow natural dispersal to assist active management.

As an example of the practical initiatives underway, Durban is developing a nursery for indigenous medicinal shrubs and trees aimed at providing an alternative supply of traditional plant material. City staff will teach herbalists and traders how to grow these plants. Through this and other initiatives, Durban is creating a multi-functional park system which addresses both environmental and social needs.

Source: ICLEI, Case Study #27: Multi-Functional Park Design and Management (Toronto, ICLEI: 1995).

D. OBSTACLES TO THE LOCAL IMPLEMENTATION OF SUSTAINABLE DEVELOPMENT

The surveys and case study analysis undertaken for this report identified a number of common obstacles to the local implementation of sustainable development.

Obstacle 1

In most countries, existing policies and fiscal frameworks at all levels of government serve as barriers to efficient resource use and development control at the local level. At the local level these barriers include statutory municipal development plans and budget priorities that do not reflect Local Agenda 21 or sustainable development objectives. Of equal importance, most municipalities apply old land-use, building and public health requirements that discourage the design of neighborhoods that support public transit or of buildings that use new technologies for water, energy and waste water management. At the state and national levels, governments maintain barriers such as subsidies and other economic incentives/disincentives that encourage unsustainable practices.

The centralized control of local budgets and resources, and poor coordination of national investment plans with local priorities can seriously undermine the ability of local governments to implement their Local Agenda 21 action plans. Numerous examples can be found of local governments whose aims to increase public transit services and discourage private vehicle use are contradicted by nationally-supported road building schemes or transportation subsidies.

A further area of contradiction between local plans and state and national efforts is the lax enforcement or deregulation of polluting activities. Local governments play an important role in the enforcement of national environmental standards, but their efforts can only succeed if they are fully supported at other levels of government. Likewise, local governments can make

serious efforts to improve local environmental conditions, but these efforts often can be marginalized if other levels of government fail to enforce regulations on the facilities of major manufacturers or natural resource industries.

Obstacle 2

The revenue generation options of local governments are regulated and restricted by national and state-level policies; however, at the same time, national and state-level governments continue to transfer their fiscal problems to the local level. This is commonly achieved by making local governments responsible for services or government functions that were traditionally the responsibility of national government — without transferring the traditional revenues for this purpose. Such transfers undermine efforts to build stronger local governments. Without the parallel establishment of new sources of local revenues, these transfers also generally weaken public sector capacity to implement new social and environmental mandates.

Obstacle 3

The establishment and enforcement of national regulatory standards is a prerequisite to improved local government performance in a wide variety of areas, including air pollution and water quality control, waste reduction, and pollution prevention. While local governments welcome ongoing review of regulatory approaches, deregulation creates a dual barrier to local implementation of sustainable development — it both legalizes practices that cause social and environmental problems and it increases the complexity of holding institutions accountable for the problems they cause.

Obstacle 4

The development of resource efficient, socially vibrant (i.e., sustainable) cities requires local control of development according to clear, locally-determined strategies and principles. However, the opening of global markets is accelerating investments and development activities in cities by external actors, such as transnational corporations, which have minimal incentive to be accountable and committed to local development strategies.

Obstacle 5

The unsustainable design and packaging of consumer products is a significant contributor to local environmental problems. Consumer products and packaging account for a large portion of the local solid waste stream, contain high levels of toxic substances, and rarely employ best available technology to maximize energy and water efficiency. Local governments have few direct controls over the products that are sold and used in their jurisdictions.



Donor agencies, often the same as those which promoted and promulgated decentralization and administrative reform, instead of trying to build capacity at the local level, return to the very parastatal and central government agencies in their efforts to integrate environmental and development considerations and more sustainable approaches to project design and implementation. These are the same control government agencies which have weakened the capacity of local authorities for the past two decades. This pursuit of rapid results has frustrated serious attempts in building capacity at the local authority level. Such capacity is essential for the long-term sustainability of development efforts and initiatives.

UNCHS in *Making Cities Work: The Role of Local Authorities in the Urban Environment*, R. Gilbert et al, 1996, Earthscan Publications, London.

E. RECOMMENDATIONS FOR IMPROVED LOCAL PERFORMANCE FOR SUSTAINABLE DEVELOPMENT

On the basis of the previously identified obstacles, and reflecting the successful responses to these obstacles identified at the local level, ICLEI submits the following recommendations to improve sustainable development efforts at the local level.

Recommendation 1 — Strengthen and support the Local Agenda 21 movement.

The Local Agenda 21 movement is one of the most extensive follow-up activities to the Earth Summit. To expand this movement, national governments, NGOs, and donor institutions are encouraged to support the establishment of national Local Agenda 21 campaigns. To intensify the implementation of Local Agenda 21 action plans, local governments are strongly urged to formally link Local Agenda 21 planning activities with the annual budgeting and statutory planning activities of the municipality. It is further recommended that national and international investment programmes actively factor the strategies and targets of Local Agenda 21 action plans in the selection and design of projects for their support.

Recommendation 2 — Harmonize public sector policies and approaches.

Within each country, establish a partnership between national, state, and local levels of government — perhaps within the framework of National Councils for Sustainable Development — to identify and review policies, legal frameworks, and fiscal frameworks that inhibit sustainable resource management and social development. It is further recommended

that the UNCSD request a preliminary review report on this topic to be prepared by the UNDP/CSD and ICLEI for its sixth session.

Recommendation 3 — Increase local government financial capacities.

Establish a global partnership of national governments, local government organizations, and multilateral and private lending institutions to devise and recommend local government revenue enhancement strategies to accompany national decentralization programmes or “down loading” initiatives. Focus municipal development programme assistance on capacity-building in municipal finance.

Recommendation 4 — Establish flexible regulatory frameworks for all areas of Agenda 21.

The role of regulation in achieving sustainable development needs to be refined. However regulatory frameworks should be designed to consist of two integrated elements: minimum enforceable standards and a framework for flexible compliance using innovative voluntary agreements and programmes.

Recommendation 5 — Increase private sector accountability to Local Agendas 21.

Establish cooperation agreements between LGOs and international business organizations on a sector-by-sector basis to encourage all businesses and, in specific, transnational corporations to respect and support the Local Agenda 21 strategies of the communities in which they invest and maintain their operations.

**Recommendation 6 —
Organize local government purchasing powers
for sustainable development.**

Establish international protocols among local governments on an international basis to use their purchasing and legal powers to persuade consumer products manufacturers and retailers to achieve minimum efficiency and waste reduction standards in product design and packaging.

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