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Targeted Summary
of the European Sustainable Cities Report
for Local Authorities

Prepared by the Expert Group on the Urban Environment

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INTRODUCTION

This summary is an abstract of the European Sustainable Cities Report and is specifically directed at local authorities of towns and cities at all scales in the Member States of the European Union. It is part of a series of documents prepared by the *Expert Group on the Urban Environment* addressing the main target groups and active partners able to influence the development and implementation of innovative policies and actions to promote a more sustainable urban Europe.

Expert Group on the Urban Environment

Since its inception, the work of the Expert Group on the Urban Environment has evolved in parallel with developments in environmental policy at the international, European Community and local levels, the latter through the input of experts with knowledge of European cities. The remit of the Expert Group is set out in the Council of Ministers Resolution on the Green Paper on the Urban Environment (CEC, 1990). The Expert Group on the Urban Environment was established by the European Commission in 1991. While the Group retains its original concern with the integration of the urban dimension into environmental policy, the policy agenda has broadened. The remit of the Expert Group is set out in the Council of Ministers Resolution on the Green Paper. The principal environmental policy debates now focus upon sustainable development, and upon sustainable urban development in particular. The *Sustainable Cities Project* is designed to contribute to these debates.

Sustainable Cities Project

In 1993, the Expert Group together with DGXI launched the first phase of the Sustainable Cities Project, to run from 1993 to 1996. Its principal aims are:

- to contribute to the development of thinking about sustainability in European settings;
- to foster a wide exchange of experience;
- to disseminate best practice about sustainability at local level; and, in the longer term,
- to formulate recommendations to influence policy at European Union, Member State, regional and local level, as called for in the Council resolution of 1991.

The European Sustainable Cities Report is one of the outputs of the Sustainable Cities Project and will form a principal background paper to the Second European Conference on Sustainable Cities and Towns in Lisbon, Portugal in October 1996. Other outputs of the Sustainable Cities Project include the Good Practice Guide and European Good Practice Information System, Targeted Summaries aimed at specific target groups and Dissemination Conferences tailored to the needs of individual Member States. The exchange of information and experience is being further encouraged through the European Sustainable Cities & Towns Campaign launched in May 1994 during the First European Conference on Sustainable Cities and Towns held in Aalborg, Denmark. In addition, the 'network partners' including Council of European Municipalities and Regions (CEMR), International Council for Local Environmental Initiatives (ICLEI), United Towns Organisation (UTO), World Health Organisation (WHO), and Eurocities are actively engaged in the sharing of information and experience between cities and towns and in the development of advice based on experimental and demonstration projects at the local level.

The project is therefore not conducted in isolation, and a number of complementary initiatives are underway or have recently been completed. The Expert Group considers that it is in the best interests of the European Union, Member States, local authorities, non government organisations and other key actors involved in the search for sustainability in cities to build on this positive context, to avoid duplication of work, to share

knowledge and ideas, and thus to advance thinking and practice in this important area. These actors play different roles in the process towards sustainability.

Role of Local Authorities

Cities and towns are a threat to the natural environment, with significant adverse impacts on natural resources, as a result of consumption, pollution and other factors. But cities and towns are also important resources in their own right. The challenge of urban sustainability is to solve both the problems experienced within the cities themselves and the problems caused by cities.

The role of cities and towns in solving global environmental problems was acknowledged in the Green Paper on the Urban Environment (CEC, 1990). The Green Paper advocates a holistic view of urban problems and an integrated approach to their solution. The economic activity and the health of urban residents along with the quality of life are seen as an essential component of the diverse and multifunctional European city.

The Fifth Environmental Action Programme 'Towards Sustainability' (CEC, 1992), seeks to address the root causes of environmental problems rather than the symptoms, and stresses the concept of joint and shared responsibility for the environment rather than a top-down approach.

Europe 2000+: Cooperation for European Territorial Development (CEC, 1994a) points out that the European Union is the most urbanised region in the world, with 79% of the total population living in urban areas. The report explicitly recognises the influence of quality of life and environmental factors on the location and success of economic activity, and emphasises the role of cities in the implementation of this more environmentally-sound regional policy.

Generally, EU policies and funding programmes explicitly recognise the urban dimension. The Structural Fund Regulations have broadened the scope for addressing urban issues and other programmes, for example, THERMIE and SAVE (1993) energy programmes, and more recently URBAN gives priority to innovative projects forming part of long term urban integration strategies.

It is clear that each European city is unique because it is the expression of the cultural identity of each community and local authorities have distinctive local mandates. However, whatever the responsibilities and competencies of local authorities as direct or indirect provider, regulator, leader by example, community informer, advocate, adviser, partner, mobiliser of community resources, initiator of dialogue and debate; local authorities throughout Europe are ideally placed to advance the goals of sustainability and to formulate a multi-levelled corporate strategy for the sustainable management of the local environment. Such action reinforces and complements global initiatives. This is an opportune moment for European cities to take action, playing their part in international processes and debates.

This abstract of the European Sustainable Cities Report develops the application of the concept of sustainability in urban areas. It gathers a set of ecological, socio-economic and organisational principles and tools for urban management which may be applied in a variety of European urban settings. This document provides an overview of the principal approaches by identifying key sustainability issues and

formulating recommendations for policy and practice to implement the main goals to achieve the sustainable urban environment.

In the report the Expert Group strongly advocates the adoption of ecosystems approaches towards the urban environment and the development of local community-wide management strategies for sustainability. The intention is to consider the application of these approaches to a range of key policy areas and ultimately to facilitate integration across the policy areas themselves. The report also establishes the key role of cities and of local governments in working towards sustainability.

CONTEXT FOR SUSTAINABLE URBAN DEVELOPMENT

While wishing to stress the potential for action in the European Sustainable Cities Report, the Expert Group recognises that the context within which cities are located provides challenges as well as opportunities. While small steps towards sustainability are being taken, major problems - such as population growth and poverty in developing countries - remain. Furthermore, the sustainability implications of world events and agreements need to be considered in international policy arenas.

Definitions of Sustainable Development

In developing its approach to urban sustainability, the Expert Group endorses the following well-accepted definition of sustainable development set out in the Brundtland Report (World Commission on Environment and Development, 1987):

“Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”

The following definition by the World Conservation Union, UN Environment Programme and World Wide Fund for Nature (1991) is regarded as complementary :

“Sustainable development means improving the quality of life while living within the carrying capacity of supporting ecosystems.”

Sustainable development is thus a much broader concept than environmental protection. It implies a concern for future generations and for the long-term health and integrity of the environment. It embraces concern for the quality of life (not just income growth), for equity between people in the present (including the prevention of poverty), for inter-generational equity (people in the future deserve an environment which is at least as good as the one we currently enjoy, if not better), and for the social, health and ethical dimensions of human welfare. It also implies that further development should only take place as long as it is within the carrying capacity of natural and human systems. Clearly, addressing the sustainable development agenda provides new challenges for urban policy integration within holistic frameworks.

The following more practical and local interpretation of sustainable development, provided by the Campaign partner International Council for Local Environmental Initiatives (ICLEI, 1994), is helpful as we seek to apply the concept in Europe's urban areas:

“Sustainable development is 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 upon which the delivery of these services depends.”

Diversity of European cities

The European Sustainable Cities Report recognises and celebrates the diversity of European cities. Clearly the legal and organisational basis for urban environmental action varies between Member States, in part reflecting differences in the responsibilities assigned to different tiers of local government. In addition, cities differ in their geographical circumstances and city administrations vary in terms of the sophistication of local responses, processes and techniques. Approaches to sustainable development are likely to be different in different cities.

Sustainability in process terms

The European Sustainable Cities Report envisages the sustainable city in process terms rather than as an end point. Accordingly, it highlights policy processes as well as policy content. Both emphases are significant when it comes to the transfer of good practice from one locality to another. The city is seen as a complex system requiring a set of tools which can be applied in a range of settings. Although the system is complex, it is appropriate to seek simple solutions which solve more than one problem at a time, or several solutions that can be used in combination.

The European Sustainable Cities Report, therefore, does not suggest blanket solutions or recipes for all cities. Instead it advocates the provision of supportive frameworks within which cities can explore innovative approaches appropriate to their local circumstances, capitalising on traditions of local democracy, good management and professional expertise. Whatever their responsibilities and competencies, local governments throughout Europe, through the many and varied roles which they perform, are now in a strong position to advance the goals of sustainability.

PRINCIPLES FOR SUSTAINABLE URBAN DEVELOPMENT

There is, however, a need for a clear set of principles to use in setting goals and in evaluating and monitoring progress towards sustainability in urban areas. These principles are set out below.

Urban Management

Sustainable development will only happen if it is explicitly planned for. Market forces or other unconscious and undirected phenomena cannot solve the serious problems of unsustainability. The process of sustainable urban management requires a range of tools addressing environmental, social and economic concerns in order to provide the necessary basis for integration. There are various tools, some addressing environmental, social or economic concerns of urban management separately, others attempting to combine these concerns. The European Sustainable Cities Report focuses on the environmental tools available to urban management processes.

Five main groups of environmental tools are advocated. These are collaboration and partnership; policy integration; market mechanisms; information management; and measuring and monitoring. Each tool is considered as an element within an integrated system of sustainable urban management. There can be no prescriptions for how to use or combine these tools; there are many ways of moving towards sustainability. Institutional and environmental contexts are different in different Member States and in different cities, and

each therefore requires a novel approach. The fundamental goal is to achieve an integrated urban management process, but the elements in that process will evolve through the interplay of different interests.

The approach to these tools implies a need for a broader and more active view of the role of government, especially municipal government, than has become current in parts of Europe. The European Commission should act as a facilitator for local authorities and Member States. Management for sustainability is essentially a political process which has an impact on urban governance. The tools are all means of modifying or constraining the operation of professions, performance monitoring, and markets within sustainability objectives set from outside. By applying these tools, urban policy making for sustainability can become much broader, more powerful and more ambitious than has hitherto been generally recognised.

The political process of democratic choice can legitimate both sustainability objectives and the means to achieve them - provided people are educated and accurately informed about the consequences of their choices. Many of the problems related to unsustainability are only soluble if people accept limits on their freedom. These limitations can only be acceptable if the people affected choose or at least consent to them. The 'social contract' model of politics, in which civil society is created through individuals voluntarily agreeing to collective limitations on their own actions in order to make them all better off, may hold the solution to sustainable urban management.

Policy Integration

The need for coordination and integration is emphasized in Chapter 8 of the Fifth Environmental Action Programme. This is to be achieved through the combination of the subsidiarity principle with the wider concept of shared responsibility. In setting out the recommendations which emerge from the Sustainable Cities Project, the Expert Group is seeking to achieve both horizontal and vertical integration.

Horizontal integration is necessary in order to realise the synergies of further integration of social, environmental, health and economic dimensions of sustainability and therefore stimulate the process towards sustainability. Horizontal integration requires integration between the policy fields within municipalities, within regional and national authorities and within the European Union. The latter is required across the European Commission's activities as well as within each Directorate General. There is a need to develop the capability and experience of professionals to work in an interdisciplinary manner, and to increase their understanding of policy fields and sectors other than their own. Professional education and training programmes should therefore be adapted to provide for this wider dimension that interdisciplinary working requires.

Vertical integration across all levels at European Union, Member State and regional and local government is equally important. Vertical integration can result in greater coherence of policy and action, so that the development of sustainability at local level is not undermined by decisions and actions by Member State governments and the EU.

Ecosystems Thinking

Ecosystems thinking emphasizes the city as a complex system which is characterised by continuous processes of change and development. It regards energy, natural resources and waste production as flows or chains. Maintaining, restoring, stimulating and closing the flows or chains contributes to sustainable development. The regulation of traffic and transport is another element of ecosystems thinking.

The dual network approach is one example of an approach based on the principles of ecosystems thinking which provides a framework for urban development at regional or local level. This framework consists of two networks: the hydrological network and the infrastructure network. The hydrological network defines ecological cohesion by managing water quantity and flows. The infrastructure network provides opportunities to minimise car mobility and to stimulate the use of public transport systems, walking and cycling.

Analysing these networks will result in basic principles for urban sustainability from a physical ecosystems point of view. Ecosystems thinking also includes a social dimension, which considers each city as a social ecosystem. The protection and development of niches and diversity form the elements of this social ecosystem.

Cooperation and Partnership

Cooperation and partnership between different levels, organisations, and interests are essential parts of moving towards sustainability. It reduces the tendency of individual organisations and agencies to pursue their own agendas in isolation from the broader public interest. Furthermore, most problems can only be solved through coordinated action by a range of actors and agencies, in line with the principle of shared responsibility as advocated by the Fifth Environmental Action Programme.

The Sustainable Cities Project emphasizes the importance of 'learning by doing'. Involvement in decision making and management means that organisations and individuals engage in a process of mutual betterment. Viewing sustainable urban management as a learning process both reinforces the point made earlier about taking the first step towards sustainability and highlights the importance of experimentation. Much can be learned from sharing experiences between cities.

Two categories of cooperation are specifically promoted in the European Sustainable Cities Report. The first category is focused on the operations of local authorities and includes professional education and training; cross-disciplinary working; and partnerships and networks. This latter includes public-private partnerships, the involvement of non government organisations, as well as city and other networks. The second category is focused on the relationship between a local authority and its community and includes community consultation and participation; and innovative educational mechanisms and awareness raising. Whatever the type of cooperation, it implies a need for changes in traditional methods of working and for the adoption of innovative approaches.

A key goal is to create the conditions that enable collaboration and partnership to take place. This is important for the above mentioned reasons, as well as because cooperation promotes equivalence between actors, rather than hierarchy, thus facilitating increased understanding and sense of responsibility among different actors.

TOOLS FOR SUSTAINABLE URBAN MANAGEMENT

By applying environmental tools in the urban management process, urban policy making for sustainability can become much broader, more powerful and more ambitious than has hitherto been generally recognised. The main tools identified in the European Sustainable Cities Report include:

Tools for collaboration and partnership

These tools are based on the concept of 'learning by doing'. Involvement in decision making and management means that organisations and individuals engage in a process of mutual betterment. Mechanisms that facilitate collaboration and partnerships include:

- Providing professional education and training for all local authority staff to increase their knowledge, competence and confidence in dealing with the environmental aspects of their work;
- Reorganising the internal management structures of local authorities to facilitate cross-disciplinary working and an integrated approach to environmental issues;
- Using partnerships and networks to mobilise the skills, resources and commitment of all parties to ensure joint ownership of solutions;
- Adopting a flexible approach to management processes and the setting of objectives through the use of social, bottom-up processes (community consultation and participation) rather than top-down approaches;
- Facilitating greater public involvement and commitment in decision making processes and addressing motivational factors through innovative educational mechanisms, such as interactive information systems, and awareness raising for example by marketing the ideas of sustainability.

Tools for formulating, integrating and implementing local environmental policies

These tools help local authorities to set overall goals within which sectoral objectives are firmly lodged. They should be viewed as elements in an integrated environmental management process.

- City-wide environmental statements and charters to articulate a vision, set the agenda, legitimate policy, increase public participation and provide criteria to assess the environmental impacts of actions;
- City-wide environmental strategies or action plans to translate statements and charters into action plans containing explicit policy goals concerning when, how and by whom these will be implemented and monitored, and how these will be financed;
- Local Agenda 21 strategies to encourage and control environmental management through a strategic local process;
- Environmental budgeting to help local authorities to manage their environmental flows through techniques of financial accounting and budget management;
- Environmental management systems to specify procedures rather than levels of performance to be reached;
- Environmental Impact Assessment to assess the environmental effects of a proposed new activity or development; and
- Strategic Environmental Assessment to assess the environmental effects of policy options as part of the policy design process.

Tools for greening the market

The purpose of these tools is to help reconcile the use of market mechanisms with the requirements of sustainability. The ability of local authorities to apply these tools varies between Member States. Where local authority's influence is least, central government's responsibility is greatest.

- Local environmental taxes, charges and levies on environmentally undesirable activities;
- Pricing structures as an incentive to sustainable behaviour;
- Utility regulation (least cost planning) to resolve the contradiction between conservation and commerce by making conservation activities themselves a source of profit;
- Investment appraisal to consider the whole life of an asset, rather than a quick payback;
- Environmental considerations in budgeting to understand the environmental efficiency of expenditure; and
- Environmental criteria in the purchasing and tendering of local authorities to support (manufacturers of) sustainable products and services.

Systems for managing information

Systems of environmental information are formalised ways of accessing data, manipulating it and communicating with the intended audiences. Management tools can help to make more efficient use of the available data. Data should be consistent and comparable and should serve democratic ends. All interest groups should be involved in the data collecting process and should have equal opportunities to make use of the result of the collected data.

Tools for measuring and monitoring sustainability impacts and successes

Sustainability indicators are definable, measurable features of cities which can indicate whether it is becoming more or less sustainable. The choice of indicators is both a technical and political choice with important consequences. Indicators guide action through the setting of targets in order to ensure that commitments are implemented. Targets are based on physical thresholds, defined in terms of measurable indicators.

Systems for monitoring

Systems for monitoring must be built into all processes and linked to the use of all other management tools. Monitoring must be a key part of the policy process and of plan making. Regular state of the environment (SoE) reporting should be undertaken not just to assess the current state but also the desired future state. Other systems for monitoring include environmental budgeting, which also serves as a decision making tool, and community profiling, which involves gauging the public's perception of the environment and needs in relation to health, social services and community development. Ultimately, it is the public, and not simply objective measures of environmental performance, that decide whether sustainable development is being achieved or not.

POLICY AREAS - KEY ISSUES

Natural Resources, Energy and Waste

The functioning of urban systems is compared to natural systems, where equilibrium is maintained by circulating resources and wastes internally. The difference between the functioning of the natural and the urban system lies in the way the latter is dependent on importing natural resources and energy into the city and exporting waste and pollution out to the surrounding areas. Instead of being closed systems, where natural resources are used in an economical way to provide energy, and any unused material is reused, recycled or processed for re-entering the circulation process, cities are highly dependent open systems. By depending on surrounding areas for the provision of natural resources and energy, and for the disposal of waste, cities impose their problems on these areas. Depletion of natural resources, pollution and environmental degradation with their resulting social, economic and environmental consequences affects the rural population as well as urban systems themselves.

A more sustainable functioning of urban systems requires a move towards management of cities that makes use of the lessons that nature can teach us about ecological and economical flow management. An integrated approach to closing the cycles of natural resources, energy and waste should be adopted within cities. The objectives of such an approach should include minimising consumption of natural resources, especially non-renewable and slowly renewable ones; minimising production of waste by reusing and recycling wherever possible; minimising pollution of air, soil and waters; and increasing the proportion of natural areas and biodiversity in cities. These objectives are often easier to achieve on a small scale, which is why local ecological cycles can be ideal for introducing more sustainable policies for urban systems. However, the appropriate level at which cycles ideally should be closed is not fixed, but could be the neighbourhood level, local or regional levels depending on circumstances.

Socio-Economic Development

European cities have a key role in the European and global economy. Population shifts and economic restructuring within the European urban system have impacted differentially upon cities. Greater economic integration through the Single European Market, developments in Central and Eastern Europe and the expansion of the EU as new Member States join are having far-reaching effects upon the economies, social structures and environments of cities. A recent trend has been to ignore environmental and social risks, and to concentrate on accumulating material wealth. From a social perspective, a key question is whether the poor and the wealthy citizens are affected by risk to the same degree. Social sustainability is most concerned with equity among social groups in cities.

Resisting these trends implies changes to the underlying values in society, as well as to the basics of economic systems. Shifts in the behaviour and lifestyles of citizens will be required, and these need to consider the welfare of future generations. This, in turn may require a change in individual values in relation to communities, ownership, responsibility and individual involvement. Access to basic services and amenities, education and training, health care, housing and employment form the basis for the well-being of people, and for the enhancement of equality and social integration. Physical aspects such as the quality of urban space also affect social sustainability. Issues of economic and social sustainability cannot be considered in isolation from issues relating to spatial planning and transport systems.

Accessibility

Growing mobility and decreasing accessibility are threats for the environmental quality, social well being and economic viability of a city. A significant increase in traffic flows and a dramatic shift in modes of

transport, away from walking, cycling and public transport to the private car, contribute to these trends. Associated problems include:

- environmental problems including air pollution and energy consumption;
- health problems caused by the air pollution and noise pollution resulting from road traffic;
- social problems including isolation from necessary services, changing social patterns and a deterioration in the level of public transport provision;
- transport problems including congestion, increased danger for cyclists and pedestrians, infrastructural barriers and an increasing take up of urban land by transport related activities;
- economic problems including inefficiency engendered by congestion, unattractiveness for investors and social, economic and environmental costs estimated at 5% of GDP in OECD countries.

Achieving sustainable urban accessibility requires the development of sustainability goals and indicators, target setting and monitoring, along with policies aimed at improving accessibility and not simply movement. Reconciliation of accessibility, economic development and environmental objectives should be the primary objective of a city's transport policy.

Spatial Planning

Spatial planning systems are essential for the implementation of city-wide policies for sustainable development. In developing policy and practice recommendations for land use in cities, the Expert Group acknowledges the diversity of local problems and solutions and seeks to strengthen existing spatial planning systems, especially by encouraging ecologically-based approaches and a move away from a narrow land use focus. The solutions advocated are seen as applicable in all urban settings, for example, in historic city centres, suburbs and new settlements.

Action is needed to ensure the more effective use of the principles and mechanisms available for achieving greater awareness and prioritisation of sustainability issues in policy and practice. Of particular importance is the integration of environmental and spatial planning, the identification of environmental objectives at an early stage in plan making, the use of targets and indicators in this area of urban management, improved forms of public involvement in planning and the potential linkage of spatial planning and Local Agenda 21 processes.

Urban Regeneration

The restructuring of heavy industry and utilities have left large areas of vacant and often contaminated land within cities whilst increasing the pressure for the development of urban open space and countryside. There is an urgent need to ensure the reuse of redundant, derelict or contaminated land, which is at a greater scale than during any period in industrial urban history. The recycling of previously developed land, and in some cases existing buildings, of itself can be seen to meet the sustainability objective of the re-use of a resource. In addition, land recycling also has the potential to achieve the retention of greenfield sites, and protection of countryside, open space and wildlife.

Decontamination of polluted soil is a major concern in many urban regeneration projects. Cleansing techniques are often expensive operations. Decontamination should not be seen as a separate project requiring subsidy, but rather as part of an integrative approach which provides a financially advantageous position. This requires a development vision that covers the wider area and takes into account the potential strengths of specific sites. The proceeds of financially sound developments should be utilized to finance decontamination costs. The inclusion of a wide area within the development vision provides the possibility

for achieving such cross-subsidy between sites. These principles should be incorporated into the various planning systems in order to create better frameworks for sustainable development.

Urban Cultural Heritage, Leisure and Tourism

Cultural heritage, which is the expression of knowledge, values and beliefs, forms the cultural identity of a city and its inhabitants. The city itself is a cultural subject, a collection of places with cultural values and different lifestyles. Cultural heritage is expressed in many different spaces: historic centres, the new core and the hinterland, and consequently in many different ways.

Leisure and tourism activities can have significant impacts on the quality of a city's cultural heritage. The attraction of tourists to historic cities or a cities with special architectural interest has positive economic and social effects. At the same time a number of negative economic, demographic, social and cultural impacts are apparent including loss of traditional jobs, changes in property and land prices, population out-migration; invasion of living space, loss of privacy, stress, insecurity, crime and the loss of cultural identity. Similarly, the transportation effects of tourism are most visible with, for example, congestion resulting from leisure and tourism activities creating an adverse impact on the urban morphology.

The creation of new frameworks for sustainable approaches to urban cultural heritage, leisure and tourism requires the incorporation of key principles as an integral part of the spatial planning process. Planning for tourism, leisure and cultural heritage should therefore be integrated in national guidelines and regional policies dealing with economic, social, environmental and cultural aspects as part of a medium to long term plan. There should be a balanced programme of job creation, diversification of economic activities and fairer income distribution to ensure an equitable distribution of gains to local communities. Contributions should be made by tourism and leisure economic activity to the protection, maintenance and upgrading of the urban environment. All the above will require new models for combining economic activities with social and cultural dimensions.

RECOMMENDATIONS FOR LOCAL AUTHORITIES

The recommendations for local authorities identified in this report set out a range of options for action by local authorities and other agencies in support of urban sustainability. It is recognised that not all recommendations will be appropriate in all circumstances and furthermore, that variations in the specific competences of local authorities and other local factors will inhibit the implementation of certain recommendations even where they are desirable and relevant.

In setting out the recommendations which emerge from the Sustainable Cities Project, the Expert Group is seeking to achieve:

- further integration of the economic, social, health and environmental dimensions of sustainability across all policy sectors at European Union, Member State, and regional and local government levels;
- improved capacity for managing urban areas for sustainability;
- greater coherence of policy and action, so that the development of sustainability at local level is not undermined by decisions and actions by Member State governments and the EU;

- measures to avoid wasteful duplication of work and to enhance the productive exchange of experience; and
- both the enhanced application of existing policies, programmes and mechanisms and, where necessary, the development of new ones.

The problems of non-integration of environmental policies into other areas identified in cities apply equally, if not more so, to higher levels of government. All governmental and public agencies should:

- apply the principles and tools for policy integration to themselves;
- promote the development of sustainability appraisal through appropriate applied research and ultimately include sustainability appraisal in the decision making process for all significant changes in action or policy; and
- establish formal management procedures for declaring environmental aims; deciding on, resourcing and implementing actions to work towards aims; and monitoring and reporting on progress.

Action by local authorities

An urgent requirement for local authorities is to reorganise their internal management structures to facilitate cross-disciplinary working and an integrated approach to environmental issues. In addition, local authorities should consider the following:

- engaging in networking between cities and towns in the pursuit of sustainability;
- supporting the maintenance of an information system concerning local environmental initiatives, providing examples of good practice, reference literature and access to expertise on environmental issues;
- setting up and participating in inter-municipal projects to further develop and test the tools for sustainable urban management; and
- encouraging and facilitating exchanges and secondments of staff (such as those arranged through the European Municipal Officials Exchange Programme).

Natural Resources, Energy and Waste

The issues of natural resources, energy and waste are closely interconnected. Cities are places of high energy intensity, and energy plays an increasingly important role in the operation of urban systems. The more energy that is consumed, the higher the need for natural resources to support energy production. Similarly, the higher the consumption of natural resources and energy, the more waste is accumulated. Due to this inter-relationship it is logical that several of the relevant policy options have multiplier effects. So by addressing one particular problem, the policy options may simultaneously solve one or more problems.

The key goal of sustainable management in relation to air is to ensure quality and supply. Recommendations for local authorities include:

- Local governments should, together with the EU, Member States and regional governments, adopt regulatory instruments and technical measures to reduce pollution sources and quantities, and to promote air

generation and filtering. The capacity for air regeneration and filtering can be increased by providing more green elements and selecting suitable plant species that maximize the transformation of CO₂ into oxygen.

The principles of sustainable water management are related to water conservation and minimisation of the impact of all water related functions on the natural system.

Recommendations for local authorities include:

- Local authorities should, together with the EU, Member States and regional governments, promote the implementation of more environmentally friendly sewerage solutions in order to improve the quality of the waste water which is returned to the water system. Biological treatment plants and passive water treatment methods based on ecological functions should be more widely utilised;
- Local authorities should encourage water conservation through the collection of storm water and recycling grey water, such as washing water, for secondary uses where drinking water quality is not required;
- Local authorities should promote the use of dual water supply systems through spatial planning systems and by incorporating such requirements into building regulations; and
- Local authorities should promote the use of permeable surfaces wherever possible in order to facilitate the infiltration of storm water into the ground. The high proportion of impermeable surfaces in cities can also be counterbalanced by creating storm water retention facilities.

The general aim in relation to soil, flora and fauna is to increase the proportion of natural and human-made eco-systems within cities. Recommendations for local authorities include:

- Local authorities should encourage and facilitate the improvement of soil and plant-life through the upgrading of disused areas as well as land unsuitable for development. The complex support that a healthy ecosystem requires can be provided by moving from monoculture towards increased biodiversity; and
- Local authorities should facilitate the development of green corridors linking the countryside to the various green elements within cities, in order to provide the best ecological framework for habitats, thus combining an increase of biodiversity with recreational value.

The basic aim of sustainable energy management is concerned with energy conservation. The key to energy conservation lies in the behaviour of individuals and organisations, but also in energy production and distribution. Recommendations for local authorities include:

- Local authorities should, together with the EU, Member States and regional governments, apply a fair pricing system based on the principle of the thermodynamic efficient city;
- Local authorities should, together with the EU, Member States and regional governments, promote least cost planning to motivate energy suppliers to adopt substantial energy conservation measures whilst retaining profit;
- Local authorities should, together with the EU, Member States and regional governments, create the right conditions to replace non-renewable energy sources with renewable ones wherever possible;

- Local authorities should, together with Member States and regional governments, facilitate higher efficiency by co-generation of electricity and heat;
- Local authorities should contribute to the development of technological applications for renewable resources and energy conservation measures by supporting small scale applied research and facilitating demonstration projects;
- Local authorities should facilitate the introduction of local energy management systems to achieve higher levels of energy conservation;
- Local authorities should promote local energy production to facilitate utilization of local energy sources, enhance the efficiency of local energy management systems, provide local employment and encourage flexibility by adjusting production quantity to actual local demand;
- Local authorities should use the spatial planning system to achieve form and functionality which produces significant energy savings, and incorporate such requirements into local building regulations; and
- Local authorities should introduce energy efficiency measures based on an energy audit of the city's or town's internal and external activities and its own building stock.

Various solutions that utilise waste for energy production serve the dual purpose of conserving natural resources and making efficient use of waste products. The ultimate aim of sustainable waste management is, however, to minimise production of waste. Recommendations for local authorities include:

- Local authorities should, together with the EU, Member States and regional governments, promote the reduction of packaging, and the increased use of reusable and recyclable packaging;
- Local authorities should introduce incentives for local agents who produce less waste and manage the recyclable materials at source, e.g. reduction of municipal taxes;
- Local authorities should provide appropriate collection facilities to encourage individuals to separate waste;
- Local authorities should reduce the overall amount of municipal waste by local composting of household and garden waste; and
- Local authorities should introduce regulations on use, reuse and recycling of building materials.

Finally, local authorities should, together with the EU, Member States and regional governments, bear in mind that influencing behaviour through education, information and practical evidence is a key factor in achieving more sustainable urban systems. The relationship between influencing behaviour and sustainable management of natural resources is particularly evident. It is an area where individual behaviour affects the level of sustainability directly, and where people can see the results of changed behaviour in a transparent way.

Socio-Economic Development

Considering the local economy, there is a role for local authorities in promoting local economic activity and facilitating the creation of new employment and the greening of local businesses. Recommendations for local authorities include:

- Local authorities should, together with the EU, Member States and regional governments, ensure that all policies encourage energy efficiency, since improved energy efficiency is recognised as a key means of achieving both economic development and environmental quality objectives;
- Local authorities should explore ways of creating employment through environmental measures, for example by improving public transport service, redeveloping or improving public urban areas, stimulating economic activity in the service sector (commerce, tourism, arts, etc.), property renovation, maintenance and restoration of cultural heritage, and improving security;
- Local authorities should encourage better environmental performance by existing businesses in the community, and should adopt a problem-solving rather than a punitive attitude towards polluting industries;
- Local authorities should adopt an ecosystems approach to industry by consciously mapping the resource flows at city level, co-ordinating the development of industry sectors in order to maximise resource synergies, keeping the local economy as closed as possible, providing sustainable infrastructure and encouraging businesses to locate near their workforces, suppliers, customers and other businesses with synergies;
- Local authorities should encourage and facilitate the above processes on the supply-side by providing advice, support, infrastructure, grants, loans, and development work. On the demand-side local authorities should inform, encourage and enable their citizens to support sustainable economic activities by 'green consumerism';
- Local authorities should target inward investment strategies for types of economic activity which favour sustainability;
- Local authorities should build competitive advantage and retain existing economic activity by developing and promoting the environmental quality and quality of life in their local areas. This will attract new activities and generate new jobs. Local authorities should, however, take care that the business they attract does not undermine the quality which attracted them; and
- Local authorities should, wherever possible, allow public and quasi-public bodies to raise money in markets and invest in sustainability with the same freedom as the private sector.

In the field of social sustainability there is a need for local authorities and Member States to strengthen their commitment and actions in striving towards the achievement of just societies that provide the necessary conditions for the well-being of all citizens. Recommendations for local authorities include:

- Local authorities should, together with the EU, Member States and regional governments, improve welfare standards by providing all citizens with access to basic services, education, housing, employment and information;

- Local authorities should, together with Member States and regional governments, ensure the provision of housing for everyone at an affordable price. Local authorities should increase the availability of social housing and improve the living conditions of homeless people;
- Local authorities should, together with the EU, Member States and regional governments, actively contribute to improving the health of their citizens through:
 - adequate provision of health services;
 - education and training programmes;
 - the collection of statistical data;
 - the reduction of traffic and other polluting activities; and
 - awareness raising campaigns;
- Local authorities should promote health issues by charging health authorities with the responsibility to control working conditions in new and existing jobs, and to communicate ‘health intelligence’ to all decision makers in public and private sectors;
- Local authorities should, together with Member States and regional governments, actively contribute to the elimination of poverty and social exclusion; and
- Local authorities should facilitate the active involvement in policy processes and decision making by all groups in society.

Accessibility

It is necessary to reduce the demand for urban travel and reverse the trend of growing mobility in order to minimise energy consumption and the adverse environmental, economic, social and health impacts of motorised travel. This is as important as reducing the reliance on the car in favour of more environmentally friendly transport modes. Measures to achieve these aims will only be effective if considered within the overall framework of the planning system. Recommendations for local authorities include:

- Local authorities should, together with the EU, Member States and regional governments, set transport policy targets covering all aspects of the environment (for example, land take, noise and visual intrusion), and in the longer term all aspects of sustainability;
- Local authorities should, together with the EU, Member States and regional governments, develop an equitable system for evaluating different transport modes which takes effective account of all benefits and costs, including environmental impacts;
- Local authorities should, together with Member States and regional governments, develop measures to reduce the need to travel rather than continuing to emphasise measures which seek to minimise travel time;
- Local authorities should, together with the EU, Member States and regional governments, develop policies and measures to ensure a transfer from private to mass transit. Investment in public transport will not solve problems unless combined with action to give public transport priority over private cars;
- Local authorities should develop intermodal transport systems where complementarity rather than competition between modes is promoted. An example is an integrated traffic policy that combines measures

such as priority to public transport and cycling, park and ride facilities, parking restrictions in the city, and tickets that are valid throughout the city region on all forms of public transport;

- Local authorities should promote the use of low-floor buses, trams, light rail systems and trolley-buses, and train lines for urban trams. Passengers benefit from direct links, shorter train intervals, more stops and ease of a single fare structure;
- Local authorities should encourage and facilitate the introduction of car sharing schemes, community taxis or fleets of small electric vehicles which are self-driven and resemble personal taxis or hire cars, and service-route small buses with a flexible timetable running from residential areas to for example hospitals and town centres;
- Local authorities should consider the development of park and ride schemes as an accompanying measure to public transport improvements. To be effective park and ride schemes need to be accompanied by action on signposts, pedestrian links, pricing advantages, security measures for drivers and parked cars, as well as reductions in parking space in city centres and other dissuasive measures;
- Local authorities should consider the role of restraint measures as essential elements of reducing private car travel. Limiting car access to the urban area, access restrictions on heavy goods vehicles and combining speed restrictions with traffic calming measures can be important elements of an overall traffic management plan, but require accompanying measures to ensure access through alternatives to the car or heavy goods vehicles;
- Local authorities should consider the role of reserved lanes for High Occupancy Vehicles (HOV lanes) in promoting the use of public transport, car pooling and multi-used or multi-owned vehicles;
- Local authorities should consider the role of pricing measures such as urban tolls to reduce traffic and stabilise public transport flows. Road pricing measures must be integrated with other planning policies to ensure that they do not lead to urban sprawl and out of town developments;
- Local authorities should use parking management as a tool to control traffic volumes through both price and supply. Reducing parking facilities available to commuters as opposed to residents, limiting parking provision for offices and other employment sites, and priority parking for environmentally friendly vehicles are examples of measures that should form part of an overall traffic policy. Through a combination of high fees in the city or town centre and free parking at locations connected to the public transport network, car users are encouraged to use the park and ride system;
- Local authorities should support measures which give priority to cyclists and pedestrians in cities. Cyclist and pedestrian friendly planning requires that cycling and walking is made pleasant and convenient, and in particular that:
 - detours and waiting times are avoided;
 - attention is paid to the ability to move safely and without fear;
 - secure bicycle parking facilities are provided near public transport stations, shopping centres, schools, public buildings, etc.;
 - transport of bicycles is allowed on public transport;
 - employers are encouraged to use incentives to reward employees who cycle, walk or use public transport to get to work, and to provide washing and changing facilities;

- Local authorities should encourage and facilitate the use of electric/hybrid vehicles and alternative/reformulated fuels to assist in reducing air quality problems. These measures do not contribute towards solving the congestion problem, but electric vehicles can be the only vehicles permitted in a city or town on days when, due to high pollution levels, it is necessary to close the urban area to traffic; and
- Local authorities should recognise that public awareness and information campaigns to influence behaviour are vital accompanying measures to the range of actions outlined above. A transport awareness campaign with the aim of reducing the rate of growth in car traffic can be directed at both individuals and a wide variety of groups in the municipality.

Spatial Planning

Sustainability requires a move to planning systems in which environmental carrying capacities at local, regional and global levels are accepted as guiding principles within which other considerations may be traded off. Capacity-based approaches are already being applied in certain Member States and should be encouraged. Other measures recommended for local authorities include:

- Local authorities should ensure that planning is objectives-led. Objectives should formulate strategic directions and specific levels of environmental quality, economic growth and social progress. Through them, plans should describe intended states of the environment;
- Local authorities should ensure that plans include both national and locally-derived targets related to sustainability, and should develop indicators to measure both the extent of problems and the degree of success in dealing with them;
- Local authorities should develop planning policies based on long-term principles with strategic short-term programmes and continued feedback;
- Local authorities should adopt ecologically-based approaches to planning;
- Local authorities should develop policies promoting flexibility of use in areas and buildings throughout the city, and should promote the concept of green building in order to ensure the design of buildings for durability, adaptability and multiple use. Local authorities should also facilitate longer write-off periods to extend the life of structures; and
- Local authorities should use the planning system to influence urban form and function as a long term mechanism since new development is a relatively small proportion of the total urban stock, but it is essential for the development of more radical measures in the future.

Urban Regeneration

When undertaken within the framework of an overall plan for the urban area, urban regeneration as a process of reversal of urban economic, social and physical decay, has a key role to perform in the attainment of sustainability. Recommendations for local authorities include:

- Local authorities should adopt a more flexible attitude in policy and design processes towards:
 - zoning and planning policy;
 - amendments of certain standards to support the objectives of sustainable regeneration;

- the planning of entire blocks of the city or the design of individual buildings not restricted to a single function but with flexibility of permitted use;

- Local authorities should ensure the restoration of ecological links and former landscapes, and the strengthening and conservation of ecological values, as part of an integrated ecosystem. The opportunity to establish new green elements or other areas of ecological value should not be neglected. The regeneration of the original system of surface and underground water should be taken into account while considering landscaping, greening and planting;

- Local authorities should use urban regeneration to improve the accessibility of existing areas. New infrastructure should be designed to complete the fabric of footpaths, cycle lanes and bus lanes, and public transport provision should be encouraged in order to provide opportunities for more sustainable transport patterns and for the reinforcement of the functioning of the surrounding areas. Urban regeneration sites near railway stations should be used for high density developments which concentrate activities;

- Local authorities should apply ecological principles for buildings at the urban scale by optimising the efficient use of water, using systems for the circulation of rainwater with peak and seasonal storage, optimising energy use for heating and cooling by insulation, facilitating separation of waste and recycling of materials, and achieving energy efficiency by training professionals in the use of recycled materials and in the evaluation of elements to be preserved;

- Local authorities should recognise that they have to manage change in democratic societies with limitations on individual choice, which emphasises the need for public consultation and involvement. The publication of technical information in the form of urban renewal briefs, for example, facilitates the public consideration of urban sustainability issues, whereas the specific involvement of residents of deprived residential areas in the regeneration process contributes to strengthening social cohesion;

- Local authorities should consider the benefits of forming partnerships to improve the opportunities of undertaking urban regeneration projects;

- Local authorities should take action to encourage the reuse of contaminated land through:
 - preparation of registers of contaminated land;
 - dissemination of information about decontamination treatments, solutions and costs;
 - provision of grants for decontamination; and
 - provision of information of land transactions as potential purchasers may be unaware of latent problems;

- Local authorities should pay attention to the following in the reclamation of contaminated land:
 - restoration of the existing water flows (underground and surface water);
 - improvement of the quality of soil;
 - the potential of the area to create open spaces; and
 - restoration of the functional urban fabric and links to other areas;

- Local authorities should carefully consider which decontamination approach is the most appropriate for each site, end use decontamination or the multi-functionality approach. As contamination often is seen as a constraint to the re-use of urban land it is important to recognise that the opportunities to deal with contamination are enhanced when:

- the cost of contamination removal is to be paid by developers;
- the contaminated land is to be sold at lower price;
- the negative value of land is clearly expressed to prevent ownership change; and
- other devices such as 'clean up' funds, funded by fuel tax, for example, are used.

Urban Cultural Heritage, Leisure and Tourism

The protection of the cultural heritage depends on the retention of its physical expression and on the maintenance of the intangible cultural ambience and identity of the townscape as a whole. Cultural and environmental policies require medium and long term planning in order to define what is to be safeguarded or rehabilitated and by which methods, how the quality of the inhabitants' daily life is to be protected, the acceptable number of tourists and the upgrading of the whole urban environment.

A balanced economic structure based on a programme of job creation and diversification of economic activities is required so that the historic centre and the new core support mixed uses which complement their roles, so protecting and maintaining existing elements in harmony with architectural or traditional values. Recommendations for local authorities in the development of frameworks for the sustainable management of urban cultural heritage, leisure and tourism include:

- Local authorities should develop policies to promote active conservation of the urban cultural heritage environment in all its expressions. In particular, local authorities should develop policies which promote an appropriate "fit" between architecture and the traditional surroundings so that the urban identity is maintained in the urban fabric as well as in open spaces;
- Local authorities should avoid the concentration of activities in the intensively used historic centres, although the dilution of activities must not lead to a mono-functional use of the historic centre as the harmony and the quality achieved by the city or town is directly related to the efficient functioning of each part;
- Local authorities should promote policies that maintain the ecosystems balance between human features and local environmental conditions in order to avoid the abandonment of land due to the economic pressures of leisure and tourism activities;
- Local authorities should maintain balanced links between the urban settlement and its hinterland, protecting and improving the environmental quality of the hinterland in order to maintain the overall environmental quality of the city;
- Local authorities should develop policies as part of regional planning frameworks. Innovative ways of managing rural and natural areas should be promoted offering guidelines to manage cultural heritage and to ensure its continued existence. These guidelines should be related to the enlargement and diversification of tourism opportunities;
- Local authorities should consider Ecolabel schemes for cities and towns where the relationship between tourism-leisure, cultural heritage and quality of life has reached a balanced and harmonious level, as an additional incentive for the whole community;
- Local authorities should, in particular, promote planning frameworks which aim to:

- demonstrate that cultural environmental policies are a reasonable and operative part of long term planning;
 - be flexible and adapt to new requirements of tourism;
 - guarantee the conservation of the European cultural heritage;
 - create a tourism programme integrating all interests and avoiding negative tourism impacts;
 - promote, maintain and respect the ambience created by vernacular architecture and traditional urban features; and
 - establish a balanced relationship between cultural human features, materials, building patterns, climate and resources;
- Local authorities should develop policies to protect the quality of the urban cultural heritage from the intrusive impacts of traffic, particularly in respect of pollution (visual, noise and water), and vibration;
 - Local authorities should, in particular, promote traffic policy frameworks which aim to:
 - establish different timeframes in order to use the same infrastructure for both inhabitants and tourists at different times;
 - extend pedestrian areas, reducing the car domain;
 - promote the use of public transport and introduce new modes of transport;
 - create transport nodes; and
 - secure appropriate coach parks locations;
 - Local authorities should, together with the EU, Member States and regional governments, develop sustainability indicators for the cultural heritage environment. Local monitoring offices should be created to investigate and to regulate tourist flows and the impacts of tourism. In addition, a cultural heritage environmental database should be organised to manage and disseminate information on the many and varied experiences of European cities.

EPILOGUE

In the preface to the European Sustainable Cities Report it was emphasised that global urban challenges need to be urgently addressed by European cities and towns as we enter the next millennium. The report goes some way towards comprehensively identifying problems, providing ideas and recommending actions to support policy communities across Europe in their continuing goal of progressing towards sustainability in urban settings.

The finalisation of the policy report provides the foundation for the other components of the Sustainable Cities Project which will be completed in time for the Lisbon conference - the good practice guide and European Good Practice Information System, the targeted summaries including this one, and the dissemination conferences. In addition the Sustainable Cities and Towns Campaign and the 'network partners' (CEMR, Eurocities, ICLEI, UTO and WHO) are actively engaged in the sharing of information and experience between cities and towns and in the development of advice based on experimental and demonstration projects at the local level.

In the next stages of the Sustainable Cities Project after the Lisbon conference we can speculate on the priorities for action. These may include:

- consolidation and implementation of the thinking in this report through a range of mechanisms
- continuation of the other outputs and the network projects
- further development of the European Sustainable Cities and Towns Campaign
- evaluation of progress in a more measured evaluative research programme
- specific emphasis on policy development for small and medium sized towns in addition to cities
- focus on Southern and Central and Eastern Europe
- dialogue with international agencies to explore ways of encouraging European cities to enhance their links with cities in the South in line with Agenda 21.

Whatever the priorities emphasis must be placed on the 'sustainability transition'. In general it is easier both to diagnose what is wrong with present ways of doing things and to describe desired future states than to establish how to move from the current position to the desired future. The 'sustainability transition' - how to make this step - should be emphasised in policy development, research and practice.

The sustainable city process is about creativity and change. It is about the substance of policy as well as policy methods. It challenges traditional governmental responses and seeks new institutional and organising capacities and relationships. The notion of sustainability is dynamic and evolving and will change over time as understanding of the local and global environment becomes more sophisticated and shared. The European Sustainable Cities Report and its recommendations represent a contribution to this dynamic process, to be refined and consolidated as the Sustainable Cities Project progresses.