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Towards a thematic strategy on the urban environment

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1. INTRODUCTION AND OVERVIEW

Some 80% of Europe's citizens live in urban areas[1] and it is here that the effects of many environmental problems are felt most strongly. Noise, poor air quality, heavy traffic, neglect of the built environment, poor environmental management and a lack of strategic planning lead to health problems and a lower quality of life. If we want to tackle the major environment-related health problems in Europe, it follows that we have to bring about a marked improvement in the urban environment and quality of life. In many areas citizens are turning their back on their towns and cities, preferring to live on the edges instead because they rightly feel that their well-bring is affected by urban pollution. This urban sprawl generates higher levels of traffic and the problems then reinforce each other with the focus of activity being on the periphery rather than on the weakening heart of the city. An ever increasing number of urban areas show these symptoms of excess strain. It is therefore not surprising that "pollution in towns and cities" is the image Europeans most frequently associate with the environment[2].

The failure to give sufficient consideration to the environmental implications of decisions and a failure to plan systematically for a high quality urban environment are among the principal causes of the current situation, with consequences both for the environment and for the city's economy and its citizens. Planning for a high level of environmental protection is one of the key elements to achieving the sustainable development of cities and to providing a high quality of life for Europe's urban citizens.

The Thematic Strategy on the Urban Environment constitutes an important step towards realising this aim, building on a series of initiatives that have contributed to the development of Europe's policy on the urban environment (see Annex 1). It is part of the European Community's Sixth Environment Action Programme "Environment 2010: Our Future, Our Choice"[3], and is one of seven thematic strategies in the Programme introduced to provide a holistic approach to key environmental issues that are characterised by their complexity, the diversity of actors concerned and the need for innovative and multiple solutions. As set out in the Sixth Environment Action Programme, the Thematic Strategy on the Urban Environment has the objective of:

" … promoting an integrated horizontal approach across Community policies and improving the quality of urban environment, taking into account progress made in implementing the existing co-operation framework, reviewing it where necessary, and addressing:

– *the promotion of Local Agenda 21;*

– *the reduction of the link between economic growth and passenger transport demand;*

– *the need for an increased share in public transport, rail, inland waterways, walking and cycling modes;*

– *the need to tackle rising volumes of traffic and bring about a significant decoupling of transport growth and GDP growth;*

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1 Urban areas in the broad sense (agglomeration), covering all types of urban settlements.

2 Eurobarometer 58.0 "Attitudes towards the environment" December 2000.

3 Decision No 1600/2002/EC of the European Parliament and of the Council of 22 July 2002 laying down the Sixth Environmental Action Programme (OJ L242, 10.9.2002, p. 1).

– *the need to promote the use of low emission vehicles in public transports;*

– *the consideration of urban environment indicators."*

Overall Aim of the Urban Environment Thematic Strategy

To improve the environmental performance and quality of urban areas and to secure a healthy living environment for Europe's urban citizens, reinforcing the environmental contribution to sustainable urban development while taking into account the related economic and social issues.

All of Europe's towns and cities need to tackle the environmental problems that they face and making this happen systematically is the key goal of the Strategy. However, it will not dictate the solutions and targets that they should adopt since no two urban areas are the same. Instead, the Strategy will set in place a strong framework to contribute to the better management of the urban environment and the widespread adoption of best practice. At the same time it will support towns and cities in their difficult but vital role as key actors, closest to the problems, drawing on the experience, initiatives and technological innovations of those that are more advanced.

Many of the problems facing Europe's towns and cities are common ones and there are clear opportunities at the European level to develop, share and facilitate the implementation of appropriate solutions. A wide range of Community policies, actions and funding programmes are tackling these problems, but mostly as separate exercises without considering the specific needs of the urban context or the potential synergies between them. Much can be achieved by a more integrated and focused approach using existing instruments and initiatives, and through enhanced co-operation and co-ordination at all levels of Government. The Thematic Strategy will therefore promote a consistent and integrated approach, establishing a European vision for sustainable cities (see Annex 2) and taking into account the specific circumstances of the Acceding and Candidate Countries.

Europe's towns and cities must be revitalised. They must be attractive, healthy, high quality places to live in that allow their communities and their economies to flourish. The environment must be at the heart of this process. The aim of the Strategy is to focus on the urban environment while taking into account the related and dynamic links with the economic and social issues, reinforcing the environmental contribution to the sustainable development of urban areas. It will consider the urban environment in its widest possible sense and include the important associated health implications of environmental problems. The closely linked Communication on Environment and Health[4] will play an important role in establishing the causal links between these. The Strategy will also consider quality of life issues for urban inhabitants and their communities, and will adopt an ecosystems approach[5]. Whilst the focus will inevitably be on the urban area itself, the importance of the wider, regional and national context will not be overlooked.

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4 COM(2003) 338 final.

5 Ecosystems thinking emphasises the city as a complex system which is characterised by continuous processes of change and development. It regards aspects such as energy, natural resources and waste production as flows or chains. Maintaining, restoring, stimulating and closing the flows or chains contributes to sustainable development.

This Communication "Towards a Thematic Strategy on the Urban Environment" is the first phase in the preparation of the final Strategy due in the summer of 2005. The initial ideas and approaches presented here are the results of consultations with cities and other stakeholders, independent expert working groups and the EU Expert Group on the Urban Environment. The contributions from these groups are available on the Commission's urban environment website[6].

Overview of the actions proposed for the forthcoming Thematic Strategy

The following overview presents the outcome of extensive consultations. This Communication and the actions it proposes will be subject to a second round of consultations in 2004, including discussions with the EU institutions, the EU Expert Group on the Urban Environment and different stakeholder groups, as well as an open internet consultation. In addition, technical working groups composed of experts and stakeholders will be organised to examine in further detail the key actions proposed, their feasibility and how they would contribute to improving the urban environment. The final Thematic Strategy will be proposed in mid-2005, taking into account the stakeholder consultations and the results of these working groups.

The aim is to contribute at the EU level to the development of a strong framework which will bring about local initiatives based on best practice, leaving the choice of solutions and targets to the local decision makers. Key elements in this framework are that capital cities and urban agglomerations of more than 100,000 inhabitants (i.e. the EU 25's largest 500 towns and cities) should adopt an urban environment management plan with objectives to achieve a sustainable urban environment, and should implement an appropriate environmental management system to manage its delivery. In addition, these towns and cities should develop and implement a sustainable urban transport plan. The Commission believes that there could be requirements at the EU level to this effect. These points will be the subject of further consultations in 2004, amongst others in the context of the specific working groups described above.

In order to provide support and better integration, all Member States will be encouraged to adopt national and regional urban environment strategies, linking to national sustainable development plans, and to nominate national and/or regional Focal Points for the Urban Environment to promote best practice and support towns and cities in delivering a sustainable and healthy urban environment.

The Commission will continue to support urban environment initiatives, as well as developing recommendations, guidelines, indicators, data, standards, evaluation techniques, training and other actions of a more technical support nature to help towns and cities assess and manage different aspects of their environment.

The European Environment Agency will report on the state of the urban environment and ensure access to data on the urban environment to provide better information to the policy makers, the public and other key actors, and to guide and monitor the progress of the Thematic Strategy.

6 www.europa.eu.int/comm/environment/urban/thematic_strategy.htm

In further developing the Thematic Strategy, the Commission will work in close partnership with all the stakeholders concerned and will foster a dialogue with them. The Strategy has to build on a common commitment by the Community, the Member States, regions and of course the cities themselves to improve the urban environment. The aim of this Communication is to present this first analysis for a second round of consultations in 2004. The Commission invites contributions to the ideas and approaches presented. To this end, a series of stakeholder consultation exercises and technical working groups will be set up in 2004 to examine in further detail the actions proposed, their feasibility and how they will contribute to improving the urban environment (see section 6). A wide range of stakeholders and experts, including representatives of Member States, Acceding and Candidate Countries, regions, cities, enterprises, NGOs and academics will be involved. Stakeholders can also comment directly[7] (deadline 15 April 2004). The final Thematic Strategy will be proposed in mid-2005, taking into account the stakeholder consultations and the results of these working groups.

2. PRIORITY THEMES

In order to fulfil the mandate set out in the Sixth Environmental Action Programme, the Thematic Strategy for the Urban Environment will focus on four cross-cutting themes which are essential to the long-term sustainability of towns and cities, which have clear connections to the economic and social pillars of sustainable development and where the most significant progress can be achieved. These themes, which have been determined in consultation with the EU Expert Group on the Urban Environment and other stakeholders, are sustainable urban management, sustainable urban transport, sustainable construction and sustainable urban design. The themes are presented separately but clearly have strong interactions. Other priority themes will be identified and addressed at a later stage, in line with the incremental approach of the Thematic Strategies.

2.1. Sustainable Urban Management

2.1.1. What makes sustainable urban management a priority

Urban areas perform many functions for their inhabitants and those that use them. These include housing, employment, access to goods and services, cultural activities and social interaction. To provide and support these functions, urban areas have many different static elements such as buildings, infrastructure, green space, abandoned and derelict land, as well as dynamic elements such as transport, water, air, energy and waste.

Each of these functions and elements has an environmental impact that will contribute to the overall environmental impact of the city. However, the different policies at different administrative levels that address these elements often act in isolation from each other, being managed by different administrative departments. The environmental implications of policy decisions are often not sufficiently considered. Reducing these environmental impacts whilst ensuring a vibrant economy and a healthy, equitable society is a goal of sustainable development. However, many municipalities do not give a sufficiently high priority to improving the environmental performance and quality of their town.

[7] www.europa.eu.int/comm/environment/urban/thematic_strategy.htm

A high quality and healthy urban environment is unlikely to emerge spontaneously through the multitude of decisions taken independently by the different authorities, businesses and individuals active in the different sectors of an urban area. A clear vision and an overall strategy and action plan to achieve agreed objectives and targets are necessary to provide a framework to guide and steer daily management decisions. These must be at the heart of a municipality's activities, rather than seen as additional tasks on top of their normal responsibilities. This involves making decisions in different ways so that the traditional barriers both between neighbouring municipalities and between administrative units within local authorities are broken down to achieve more integrated decision making. Changes in attitude are equally important and public participation and the active role of the citizen, transparency of decision making and accountability are key elements of sustainable urban management. Annex 2 proposes a European vision for sustainable urban management.

An example of good practice in environmental management planning

Stockholm adopted its first environmental programme in the mid-1970s. Its fifth[8] was adopted in 2003 following a comprehensive environmental survey of Stockholm and extensive consultation of the public sector bodies, citizens, companies and associations. The programme is managed within Stockholm's integrated management system, with regular environmental audits and reporting. It establishes six priority goals, relating to the environment and people's health, broken down into a total of 43 quantitative and qualitative subsidiary goals to be achieved by 2006, each identifying the bodies responsible and the key indicators used to monitor progress. The priority goals are environmentally efficient transport, safe products, sustainable energy consumption, ecological planning and management, environmentally efficient waste processing and a healthy indoor environment. An example of a subsidiary goal is that the consumption of fossil fuels for heating will be reduced by 20% through connection to district heating.

The importance of sustainable urban management at the local level has been recognised for some time. The 1992 Earth Summit recognised that local municipalities have a particular role in helping to achieve sustainable development and established Local Agenda 21 (LA 21). This calls for municipalities to prepare strategies, through a dialogue with their citizens, enterprises and other stakeholders, for the sustainable development of their area. Europe is the world leader in LA 21 with over 5,000 municipalities committed to the process[9]. The Local Authorities' Self Assessment of Local Agenda 21 (LASALA) research project[10], involving over 250 local authorities across Europe, reports that the LA 21 process has been extremely effective in securing changes in attitudes, understanding and practice at the local level, including a better implementation of environmental legislation.

However, despite this relative success, take up of LA 21 across Europe is very uneven and there is evidence that the implementation of LA 21 strategies is starting to falter even in the countries where it has been most enthusiastically supported. The environmental performance of Europe's towns and cities vary considerably (see Figure 1)[11], and many local authorities are not tackling their environmental problems systematically. The LA 21 processes that do exist vary widely in their scope and level of ambition, with little monitoring of the effectiveness of their implementation. Only a few Member States have institutionalised the LA 21 approach in law to overcome some of these shortcomings and mainstream the adoption of urban environmental management strategies (Denmark and the UK are examples).

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8 www.tyckom.stockholm.se.

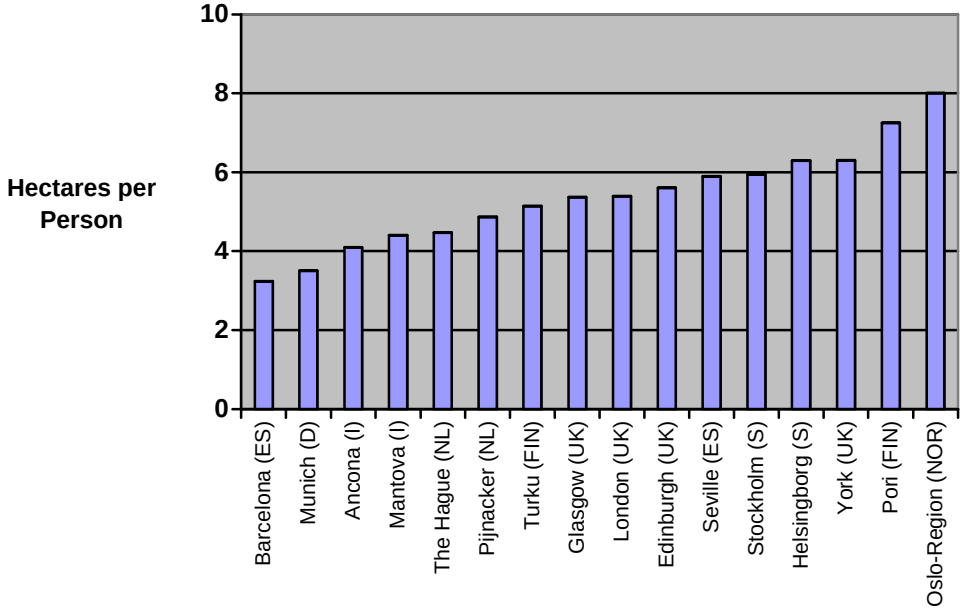
9 Second Local Agenda 21 Survey (ICLEI) 2002.

10 http://www.iclei.org/europe/LASALA/

11 Reported study results for ecological footprints collated by Best Foot Forward (www.bestfootforward.com). The more sustainable the city, the smaller the ecological footprint per citizen.

A stronger framework at the European level is therefore necessary to revitalise and generalise the environmental management of Europe's largest towns and cities. This will also bring benefits for the other three priority themes under consideration (see sections 2.4).

Figure 1 - Ecological Footprints of Selected European Towns and Cities



2.1.2. Current community initiatives on sustainable urban management

The EU has developed a comprehensive environmental management tool, the voluntary Environmental Management and Audit Scheme (EMAS)[12]. Since its revision in 2001, over 500 public organisations, of which 110 are local authorities, have achieved EMAS registration. While originally conceived to generate a continuous improvement of the environmental performance of the daily activities within organisations, in the case of local authorities the scheme also provides a system that facilitates the management of their statutory environmental duties and non-statutory initiatives in a co-ordinated, systematic and auditable manner. It enables them to analyse their direct and indirect impact on the environment, such as their land use planning decisions and selection of contractors. It also requires local authorities to take account of interested parties' concerns (e.g. community associations) and to be more accountable to them by reporting on their environmental activities.

The Commission and the Council of European Municipalities and Regions (CEMR) have launched a campaign to encourage local authorities to use EMAS. Initial experience has shown that it is an applicable and useful tool for municipalities, that is sufficiently flexible to address the key environmental issues of towns and cities, helps set priorities, stimulates learning about the environmental issues, improves reporting and helps implement LA21.

[12] Regulation (EC) No 761/2001 of the European Parliament and of the Council allowing voluntary participation by organisations in a Community eco-management and audit scheme (EMAS) (OJ L 114, 24.4.2001, p. 1).

Examples of good practice in the use of environmental management systems

Since 1997, Leicester City Council[13] (UK) has been using EMAS to improve its own environmental performance. Since 2003, they have extended the scope of their system to manage the environmental performance of Leicester City itself, in particular focusing on aspects that have a high community profile. They have set ambitious targets for the energy efficiency ratings of homes, reducing car trips to the city centre, reducing car journeys to schools, raising environmental awareness, reducing construction waste, developing a local standard for sustainable construction, and making the streets clean of litter.

The Netherlands has adopted the objective that all public authorities, including local ones, should have in place an environmental management system (EMAS, ISO 14001 or equivalent) by the end of 2004[14]. In November 2002, Den Bosch was the first Dutch city to achieve ISO 14001 certification.

As well as supporting a series of research projects to provide tools that urban authorities need to manage their urban areas, in particular through the City of Tomorrow and Cultural Heritage research programme[15] (Annex 3), the Commission promotes the adoption of Local Agenda 21 by financially supporting various networks of cities that are committed to the initiative and promote it across Europe (see section 5.1).

The Commission has been active in providing other management tools to municipalities such as the European Common Indicators and the Ecological Footprint Tool (see also section 4). A number of European Directives also create obligations with respect to the management of different sectors of the urban environment, such as air, noise and water. These are summarised in Annex 6.

2.1.3. Further measures needed to achieve widespread sustainable urban management

The European Sustainable Cities Report[16] "strongly advocates the development of city-wide strategies for sustainable urban management". Similarly, the Local Authorities' Self Assessment of Local Agenda 21 project called for LA21 to be placed on a firmer and longer term basis so that it can become embedded into the practices and procedures of European local government, and the Plan of Implementation of the World Summit on Sustainable Development calls for measures to strengthen institutional arrangements on sustainable development, including at the local level, within the framework of Agenda 21.

In the long-term, active and integrated management of environmental issues for the whole urban area is the only way to achieve a high quality and healthy urban environment. Explicit environmental targets, actions and monitoring programmes that link environment policies to economic and social policies are required.

Urban municipalities therefore need to put in place an environmental management plan. To ensure its implementation and monitor its progress, they need to adopt an appropriate environmental management system.

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13 www.leicester.gov.uk/

14 "Met preventie naar duurzaam ondernemen – een programma voor en door overheden 2001-2005".

15 www.cordis.lu/eesd/ka4/home.html

16 ISBN 92-827-8259-X (1996).

The Commission believes that a corresponding requirement could be set at the EU level that would apply to all capital cities and towns and cities of more than 100,000 inhabitants, covering the 500 largest towns and cities in the EU 25. This point will be the subject of further consultations in 2004, amongst others in the context of a specific working group of experts and stakeholders.

The proposed requirement would oblige the adoption of such a plan and the implementation of an appropriate environmental management system. The procedures could include, for instance, the need to consult citizens, businesses and other stakeholders, the need to set targets (decided at the local level), and the need to monitor and communicate progress. It would not be the intention of the Commission to monitor the details of these management plans, but rather that they become an integral part of urban governance.

Existing EU Directives already require the authorities of urban agglomerations to manage air quality[17] and environmental noise[18], as well as to participate in the management of their river basin[19] (see Annex 6). The proposed requirement would provide an opportunity for the municipality to combine the management of these obligations and other environmental issues within a unified environmental management plan.

The plan could address the key issues such as energy consumption, greenhouse gas emissions, water use and treatment, waste, noise, air quality, nature and biodiversity, transport and mobility, design, natural and man-made risks, sustainable construction, related health issues and the quality of life as a whole. As urban areas often extend beyond the municipality's administrative boundaries, the plan would apply to the whole urban area and may require co-operation between neighbouring administrations (see also section 3.3).

In line with the EU better governance agenda, these environmental management plans would increase the co-operation between different levels of government (local, regional and national), between different departments within local administrations, and between neighbouring administrations, as well as increasing citizen and stakeholder participation. They would address other gaps and defects in current environmental management such as the lack or under-use of data and management tools, over-emphasis on project-based development rather than on a coherent sustainable development policy and the separation of planning and implementation.

They would help overcome the short-term planning driven by the political process, providing the necessary continuity for a municipality’s environment policy between successive administrations. Long-term challenges, such as the consequences of climate change, need to be considered and require integrated long-term planning in order to take into account all the relevant factors and their complex interactions, and to deliver sustainable solutions.

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17 Council Directive 96/62/EC of 27 September 1996 on ambient air quality assessment and management (OJ L 296, 21.11.1996, p. 55).

18 Directive 2002/49/EC of the European Parliament and of the Council of 25 June 2002 relating to the assessment and management of environmental noise (OJ L 189, 18.7.2002, p. 12).

19 Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy (OJ L 327, 22.12.2000, p. 1).

Environmental management plans would also help place the largest 500 European cities on a more comparable footing with respect to their environmental initiatives and obligations. At present, these vary considerably, with some cities significantly more proactive than others and with Member States setting different degrees and types of obligation. The adoption and implementation of environmental management plans in a large number of towns and cities would mean that economic competition between them would become less of a barrier to promoting a high quality and healthy urban environment. Towns and cities would instead increasingly attract business and new citizens on the basis of the quality of life that they offer.

A comprehensive environmental management system would be needed to accompany the environmental management plan and to allow the analysis, monitoring and forecasting required to review the plan on a regular basis. It would also assist municipalities in complying with national and European environmental legislation (such as those relating to air quality and noise) and ensuring effective enforcement, traditionally a weak area of environmental law. In this respect, a comprehensive system, such as EMAS, guides local administrations into a continual process of environmental policy definition, target setting, monitoring, auditing and reporting. The environmental situation is reviewed, leading to the definition of an environmental policy in consultation with the personnel, citizens, economic operators and other stakeholders. The management system is then installed, which involves distributing the responsibilities, training employees, establishing documentation, selecting a series of environmental objectives and targets (which can be as ambitious as the authority judges appropriate), defining a programme of actions to meet these targets, allocating resources and putting in place an auditing system to collect the relevant data and monitor the system and the progress in meeting the targets. An environmental statement is then made publicly available and annually updated. Importantly, an environmental management system installed in accordance with EMAS or ISO 14001 is verified by an independent external verifier or certifier.

As the European Sustainable Cities Report highlighted, different actions are required to remove political, structural and technical barriers to adopting a holistic and integrated approach. Environmental management plans and management systems would do much to achieve this but other actions are also necessary. Integrated decision making requires different ways of working within municipalities and this can mean significant changes in the organisation and structure of decision making. It is also important to establish adequate links with regional and national strategies and to provide better information and support for towns and cities. Proposals for action on these issues are contained in section 3.3. The role of indicators to measure progress and influence decision-making is discussed in section 4.

The training of officials and elected representatives in municipalities is important to create an understanding of urban environmental issues and their links with social and economic factors. The Commission will consider whether training programmes such as Leonardo da Vinci can be used to support the development of the relevant skills and understanding, and other mechanisms for the continued promotion of good practice and exchange of experience will be explored (see also section 5.1).

Actions proposed for the forthcoming Thematic Strategy
(these proposals will be the subject of further consultations in 2004)
Sustainable urban management

Each capital city and every other city and town of over 100.000 inhabitants should adopt an environmental management plan for the urban area as a whole, together with targets related to the key environmental impacts, and should implement an environmental management system to manage this process and deliver these objectives. The Commission believes that there could be a requirement at the EU level to this effect. This point will be the subject of further consultations in 2004, amongst others in the context of a specific working group of experts and stakeholders.

The Commission will develop guidelines for the implementation by local authorities of such management systems. Member States will be encouraged to ensure that local authorities have the necessary support, such as training and advice to implement an environmental management system.

The Commission will explore opportunities for training, research and exchange of experience on sustainable urban management.

2.2. Sustainable urban transport

2.2.1. What makes sustainable urban transport a priority

Urban transport systems are critical elements of the urban fabric. They ensure that people have access to goods, services, employment and recreation opportunities, that freight circulates efficiently and they enable local economies to flourish. However, if the high density of buildings is the first defining characteristic of towns and cities, then high volumes of traffic is now the second. Traffic has significant impacts on the environment and on the health of urban citizens, as well as on the overall quality of life in towns. Rising congestion levels are hampering mobility, with increasing costs for the economy (0.5% of Community GDP for road traffic congestion, rising to 1% by 2010[20]).

[20] COM(2001) 370 European transport policy for 2010: time to decide.

Nearly all (97%) of Europe's urban citizens are exposed to air pollution levels that exceed EU quality objectives for particulates, 44% for ground-level ozone and 14% for NO_2[21]. Motorised traffic is a major source of these and other air pollutants. Substantial progress has been made in tackling emissions from individual motor vehicles, contributing to reductions in the urban concentrations of PM_{10} (particles less than 10 micrometers in size), NO_x and other ozone precursors. However, hotspots continue to be a problem, and the growing overall levels of motorised transport in urban areas are to some extent offsetting this progress. The concentration of PM_{10} has stopped decreasing since 1999 and the concentrations of ozone are now increasing[22]. As indicated in the 2002 Transport and Environment Reporting Mechanism report, "Current measures will further improve urban air quality, but in 2010, the European urban population will still be exposed regularly to high concentrations of air pollutants". Increases in urban traffic will also counteract efforts being made to reduce greenhouse gas emissions. If nothing is done to reverse the traffic growth trend, CO_2 emissions from transport can be expected to increase by around 40% by 2010 compared to 1990. Urban traffic accounts for 40% of transport-related CO_2 emissions.

A number of studies suggest that the consequences for the health of urban citizens are considerable. For example, a study[23] using PM_{10} as an indicator of the air pollution level, concluded that the impact of traffic-related air pollution on public health in Austria, France and Switzerland is responsible for more than 21,000 premature deaths per year, as well as for more than 25,000 new cases of chronic bronchitis in adults, more than 290,000 episodes of bronchitis in children, more than half a million asthma attacks, and more than 16 million person-days of restricted activities. The related economic costs of traffic-related air pollution are estimated to amount to 1.7% of GDP[24]. This study is based on data collected in a range of studies carried out in the 1990s, and so does not take into account the recent substantial progress due to emission controls, but nevertheless gives an idea of the potential range and scale of the effects. The APHEIS research project[25], conducted in 26 cities in 12 European countries, estimated that reducing long-term exposure to outdoor concentrations of PM_{10} by just 5 µg/m3 would prevent some 19 premature deaths per 100,000 inhabitants per year, which is 1.5 times the annual rate of traffic fatalities. There is therefore a considerable health and economic benefit in reducing the emissions from urban traffic.

The high level of motorised urban transport also contributes to the increasingly sedentary life-styles with a range of negative effects on health and life-expectancy, notably in relation to cardio-vascular disease. Cycling for 30 minutes per day can reduce the risk of cardiovascular disease by as much as half, yet more than half the trips under 5 km are made by car. A recent study calculated that a 10% shift from cars to cycling and walking in London might save 100 early deaths and 1,000 hospital admissions each year[26].

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21 EEA TERM 2002 report.

22 EEA report on Air Pollution in Europe 1990-2000.

23 The Lancet, Volume 356, Number 9232, 02 September 2000 Title: Public-health impact of outdoor and traffic-related air pollution: a European assessment Authors: N Künzli, R Kaiser, S Medina, M Studnicka, O Chanel, P Filliger, M. Herry, F Horak Jr, V Puybonnieux-Texier, P Quénel, J Schneider, RSeethaler, J-C Vergnaud, H Sommer.

24 WHO: "Health costs due to road traffic related air pollution. An impact assessment project for Austria, France and Switzerland." June 1999.

25 www.apheis.net; Air Pollution and Health: A European Information System – Health impact assessment of air pollution in 26 cities, 2nd year report 2000-2001.

26 Transport in London and the Implications for Health, Soderland N, Ferguson J, McCarthy M (1999)

There are still an unacceptably high number of injuries and deaths due to traffic accidents in towns and cities. Two thirds of the 1.3 million traffic accidents in the EU in 2000 that led to injuries took place in urban areas[27] and one fatal accident in two. Road accidents are estimated to cost 2% of the Community GNP.

Noise in urban areas is also a serious and growing problem and 80% of it comes from road traffic. At least 100 million people in Europe in agglomerations or in the vicinity of transport infrastructures are exposed to road traffic noise levels above the WHO recommended level of 55 dB(A)[28]. This causes serious annoyance and has negative effects on sleep and quality of life. Some 40 million people are exposed to levels above 65 dB(A), the level at which noise is seriously detrimental to health. Reductions in the volume of traffic and better fluidity, combined with tighter limits at the source, would reduce noise levels in urban areas significantly.

Traffic is perceived as one of the key factors compromising the quality of life in towns and cities. In a 1995 survey of EU urban citizens, 51% gave traffic as the main reason for complaining about their environment, with two other transport related issues, air quality and noise, being cited by 41% and 31%[29]. High volumes of traffic discourage people from walking on the streets and letting their children play there, contributing to the progressive weakening of the sense of neighbourhood and local community.

Increased mobility in urban areas is driving their development by facilitating the expansion of cities into the surrounding rural areas ("urban sprawl"). Just as poor land use decisions can generate increased traffic, increased traffic and mobility can encourage poor land use decisions in response to demands to ease congestion for instance. The two are inextricably linked (see also section 2.4.1 on urban design).

Urban mobility is also an important element of social equity. Services, education, employment, leisure and goods should be accessible to all urban citizens regardless of whether they own a car. Citizens in the poorest parts of the city have the lowest car ownership rates. Public transport can provide this access and has clear environmental advantages.

Urban mobility needs to be rethought to tackle these negative effects while retaining the potential for economic growth and supporting the freedom of movement and quality of life of urban citizens. A framework at the European level promoting sustainable urban transport seems therefore necessary.

2.2.2. Current community initiatives on urban transport

The EU Transport Council in 2001 adopted a definition of a sustainable transport system (Annex 4) which has been used in preparing this Communication.

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27 International Road Traffic and Accident Database (OECD), April 2002.

28 EEA 2001 Traffic noise, exposure and annoyance.

29 Eurobarometer.

The 2001 White Paper on European Transport Policy[30] highlights that European transport policy has reached a critical point where clean, well-functioning and less fossil-fuel based urban transport systems are considered an indispensable condition for achieving the Community's overall objective of sustainable mobility in Europe. The Transport White Paper identifies two fields of Community activities in the field of clean urban transport: supporting a diversified energy supply for transport and promoting good practice. In line with the subsidiarity principle, the Commission will not seek to use regulation as a means of imposing alternative solutions to the car in towns and cities.

The need to rationalise private car use and to improve urban transport, which is an important energy-consuming sector, is also highlighted in the Commission's Green Paper on the security of energy supply[31]. The paper sets an ambitious target of 20% substitution of diesel and gasoline fuels by alternatives in the road transport sector by the year 2020. In the follow up Communication on alternative fuels for road transportation[32], an "optimistic development scenario" is presented that builds upon three fuel types that potentially can reach a significant market share and which also present, in general, considerable advantages for the urban environment: biofuels, natural gas and hydrogen. Measures have been taken to support a broader market introduction of biofuels. A Directive setting targets for their market share has been adopted by Council and Parliament in May 2003 and a Directive allowing exemption has been adopted in October 2003. The Contact Group "Alternative Fuels" established in 2002 has prepared a report in 2003 giving expert advice on the further development of natural gas and hydrogen.

The Commission is implementing a work programme of specific and practical actions in the field of clean urban transport, for example through the CIVITAS initiative, as well as various research, benchmarking, demonstration projects and awareness raising actions (see Annex 3).

An example of good practice in sustainable urban transport

Since the late 1980's Graz (Austria)[33] has implemented an integrated transport plan to make it a city of "gentle mobility" centred around safety, environmental efficiency and increasing the attractiveness of public spaces. In 1992, a city-wide 30km/h speed limit was introduced, which contributed to a 20% reduction in accidents, as well as significant reductions in emissions of air pollutants and noise. In parallel, the city has restricted parking places and introduced higher parking charges in the centre, using the revenues to improve public transport. Incentives are in place to encourage the use of low-emission vehicles. Bicycle lanes have been expanded to over 100 km, with bicycle parking places installed and bicycle-related services developed. The pavements have been substantially improved, pedestrian precincts expanded, and primary pedestrian routes and throughways integrated into the overall planning. Schools and businesses are being helped to adopt mobility management plans to reduce the use of cars. Citizen information and participation in the transport planning has lead to a high percentage of the population supporting the city's policy, including 2 out of 3 of car drivers.

In order to facilitate road user charging, such as now being effectively demonstrated in London and considered by other cities, such as Stockholm, the Commission has proposed a Directive on electronic charging systems that will ensure the interoperability of road-toll systems across all areas of the EU.

30 'European transport policy for 2010 : time to decide', COM(2001) 370.
31 'Towards a European strategy for the security of energy supply', COM(2000) 769.
32 COM(2001) 547 final.
33 www.graz.at

The Commission also supports the development of high quality and accessible public transport in Europe through its research programmes as well as through its proposal for market opening. It is preparing a Directive on the promotion of energy efficient and clean vehicles and is implementing a research and demonstration agenda on alternative road transport fuels. The Commission's legislative proposal for introducing controlled competition into public transport[34] is also relevant. During the 1990s, a sample of European cities using controlled competition, succeeded in increasing the use of public transport by an average of 1.7% per year (compared with reductions of 0.2% per year in cities without competition)[35].

The Commission supports the development of the trans-European transport networks (TENS), which have a considerable impact on the interfaces with urban areas. For example the TENS programme supports the use of intelligent traffic management systems, the development of nodal points such as airports and ports, most of which are in or near urban areas, and the development of infrastructure connecting major urban areas in Europe, in particular by rail and waterways.

A considerable body of EU legislation concentrates on improving the technical quality of vehicles, with a series of Directives setting emission limits for different categories of vehicles and standards for fuel quality (following the Auto oil programmes I and II)[36], noise emission limits[37] and roadworthiness testing[38]. The Euro 3 and Euro 4 pollutant emission standards will provide considerable benefits in the short term as the older fleet is renewed and the Commission is now considering the future Euro 5 pollutant emission standards that will further substantially reduce emissions of NOx and particles. More indirectly, the Directives on air quality and noise (see Annex 6) will have a considerable influence on urban transport, as local authorities will need to implement active management of transport in order to meet their requirements.

The White Paper on European Transport Policy proposed a target of reducing road deaths by 50% by 2010. In 2003, the Commission adopted a European Road Safety Action Programme[39] which will contribute to reducing urban traffic fatalities. The main actions include encouraging road users to improve their behaviour, making vehicles safer (e.g. safer car fronts for pedestrians and cyclists), improving road infrastructure, and improving the safety of commercial goods and passenger transport. All authorities, including local authorities, are invited to subscribe to the European Road Charter and take a commitment to implement specific actions that will be publicised and monitored. Indicators of road safety performance will be specifically developed for urban areas to monitor progress and to evaluate the effectiveness of the measures taken.

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34 Amended proposal for a Regulation of the European Parliament and of the Council on action by Member States concerning public service requirements and the award of public service contracts in passenger transport by rail, road and inland waterway - COM(2002) 107 final.

35 "Good practice in contracts for public passenger transport", Colin Buchanan and Partners, study for European Commission, 2002.

36 Directives 98/69, 2001/1, 2002/80, 99/96, 2001/27, 97/24, 2002/51, 98/70.

37 Directives 70/157, 92/97, 92/61, 97/24, 2001/43, 2000/14.

38 Directive 96/96.

39 COM(2003) 311 final.

The 2002 eSafety[40] initiative complements the European Road Safety Programme by aiming to accelerate the development, deployment and use of safety systems using advanced information and communication technologies to reduce the number of road deaths. For instance, active safety systems, advanced driver assistance systems, and real-time traffic and travel information will enable accidents to be avoided and improve road users' chances of survival when they occur. An eSafety Working Group produced a report with 28 recommendations and an eSafety Forum has been established to take forward these recommendations. In addition, in September 2003 the Commission adopted a Communication on ICT for safe and intelligent vehicles[41] which detail the actions to be taken by the Commission in response to those recommendations in their field of responsibility. The eSafety initiative is seeking to encourage the participation of all the key stakeholders necessary for the advanced systems to be successful. This includes the automotive and telecommunications industries, as well as network operators and service providers. Therefore, the owners and operators of the transport infrastructure in towns and cities will have a key role to play.

2.2.3. Further measures needed to achieve widespread sustainable urban transport

Many negative aspects of urban transport are being comprehensively addressed by Community action. The work on improving the technical quality of road vehicles and in encouraging their preferential purchase is of central importance and will be continued.

However, the improvements from these current initiatives need to be set against the predicted increase in traffic and congestion in urban areas. Between 1995 and 2030, the number of kilometres travelled in urban areas is predicted to increase by 40%. In Europe, 3 million cars a year are added to the fleet which has trebled in the last 30 years. Sharp rises in car use are expected in the Acceding and Candidate Countries. It is therefore clear that measures are needed to deal with the rising volumes of traffic as well as on-going measures on emission standards. Vehicle engines are cleaner than before but their sheer number generates high levels of air pollutants in urban areas, contributing to large numbers of premature deaths. Congestion, even with clean vehicles, still has high economic costs. As highlighted in the White Paper on European Transport Policy, "the big problem that urban authorities will have to resolve, sooner than might be thought, is that of traffic management, and in particular the role of the private car in large urban centres. … The lack of an integrated policy approach to town planning and transport is allowing the private car an almost total monopoly".

It is therefore envisaged that the capital cities of Member States, and towns and cities with more than 100,000 inhabitants, should each prepare, adopt and implement a sustainable urban transport plan. While some Member States have started to implement similar requirements (e.g. Finland, France, Italy, the Netherlands and the UK), the Commission believes that a requirement could now be set at EU level. This point will be the subject of further consultations in 2004, amongst others in the context of a specific working group of experts and stakeholders.

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40 http://europa.eu.int/information_society/programmes/esafety/index_en.htm

41 COM(2003) 542 final.

The sustainable urban transport plan would cover the whole urban area, would seek to reduce the negative impacts of transport and tackle the rising volumes of traffic and congestion, and would link to regional and national plans and strategies. It would cover all modes of transport and seek to change the modal split in favour of more efficient transport modes such as public transport, cycling and walking. One of its basic objectives would be to create a more environmentally efficient transport system that serves all of the town's citizens, who themselves have a key role to play in their everyday decisions, such as their choice of transport. The link with land use would be an essential component.

Specific objectives, targets, solutions and packages of measures should not be imposed at the EU level, but should be decided at the local level, taking into account local circumstances and in consultation with the public, economic actors and other relevant stakeholders. The plan would be linked with the town or city's overall plans and objectives for environmental, economical and social development. In particular, while the important and wide ranging impacts of urban transport and its strong economic and social links require the development of a specific and detailed sustainable urban transport plan, this plan would necessarily play a key role in the overall environmental management plan proposed in section 2.1.3, and would need to be fully compatible with it.

The proposed requirement could concern the obligation to adopt such a plan and the related procedures. These could, for example, include the need to consider a wide range of possible solutions (see the vision for sustainable urban transport in Annex 2), the need to integrate transport and land use planning, the need to set targets (decided at the local level), the need to monitor progress and to communicate this, as well as the obligation to consult citizens, businesses and other stakeholders.

Such plans would help the 500 largest towns and cities in the EU 25 meet the requirements of the Directives on air quality and noise assessment and management, and would contribute to meeting the Kyoto agreement targets. A study in Bern, Switzerland, concluded that their traffic management policy would result in a significant reduction in air pollution in the city, reducing private vehicle emissions by more than 10%[42].

The plans would play a particularly important role to maintain the existing levels of use of more efficient transport modes in the Acceding Countries. Public transport systems are used there by a much larger proportion of the public than in the Member States, but this use is falling while car ownership is rising rapidly. For example, Prague has lost 30% of public transport passengers between 1991 and 1999.

To complement and support these local plans, all Member States will be encouraged in parallel to adopt a clear policy on urban transport to promote its sustainability, and as a general principle to seek to internalise the external costs of transport through measures such as taxation, road user charging and licence fees. To improve the understanding of the effects of new urban transport infrastructure projects, Member States will be encouraged to undertake evaluations after their completion to assess their impact on the sustainability of the town's transport system.

The role of Community funding mechanisms such as the Community's Cohesion Policy is discussed in section 3.1. Existing guidelines on the use of structural funds already address sustainability principles and should be closely followed.

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42 www.ecoplan.ch/Projekte/citaire.html

The Commission will also continue to develop the different types of support that are already available (see Annex 3) and that will help the towns and cities put in place these plans, such as the development of appropriate indicators and guidance material, the support for demonstration projects and exchange of best practice, and awareness raising actions.

Actions proposed for the forthcoming Thematic Strategy
(these proposals will be the subject of further consultations in 2004)
Sustainable urban transport

Each capital city and every city and town of over 100.000 inhabitants should develop, adopt, implement and regularly revise a sustainable urban transport plan, with short, medium and long-term targets. The Commission believes that there could be a requirement at the EU level to this effect. This point will be the subject of further consultations in 2004, amongst others in the context of a specific working group of experts and stakeholders.

All Member States will be encouraged to:

– set out a clear framework policy on sustainable urban transport;

– evaluate the impacts of new urban transport infrastructure projects on the sustainability of the town's transport system;

– closely follow the guidelines on the use of structural funds.

In the framework of the White Paper on European Transport Policy, the Commission is preparing a Directive focussing on the procurement of low energy and low emission road vehicles by public authorities. The aim of this will be to encourage the purchase of cleaner and more efficient vehicles, but it will not set new vehicle standards or encroach on existing vehicle tax incentive frameworks.

In the framework of the Alternative Fuel Strategy, the Commission will propose an Action Plan promoting the market development for alternative fuels, in particular natural gas and hydrogen

The Commission will continue to develop and expand the CIVITAS programme, urban research initiatives and the exchange of good practice and experience.

The Commission will develop the transport-related capacities of the 250 or more local and regional Energy agencies and other agencies in Europe to support the implementation of sustainable urban transport and promote best practices.

The Commission will identify a basic set of sustainable urban transport indicators, making use of the work of the European Conference of Ministers of Transport in this field.

The Commission will continue promotional activities such as the European car free day and mobility week. The need for guidance and training on sustainable urban transport issues and the contribution of new working methods such as tele-working will be assessed.

2.3. Sustainable construction

2.3.1. What makes sustainable construction a priority

Buildings and the built environment are the defining elements of the urban environment. They give a town and city its character and landmarks that create a sense of place and identity, and can make towns and cities attractive places where people like to live and work. The quality of the built environment therefore has a strong influence on the quality of the urban environment but this influence is much deeper than purely aesthetic considerations.

Heating and lighting of buildings accounts for the largest single share of energy use (42%, of which 70% is for heating) and produces 35% of all greenhouse gas emissions. Buildings and the built environment use half of the material taken from the Earth's crust and are the source of 450 MT construction and demolition waste per year (over a quarter of all waste produced). The interim Communication "Towards a thematic strategy on the prevention and recycling of waste"[43] notes that volumes of construction and demolition waste are rising and that the nature of the waste is becoming more complex as the range of materials used in buildings grows. This limits the scope for reusing and recycling this waste (at present only about 28%) increasing the need for landfill sites and for further mineral extraction.

In Europe, people spend almost 90% of their time inside buildings. Poor design and construction methods can have a significant effect on the health of the building's occupiers and can produce buildings that are expensive to maintain, heat and cool, disproportionately affecting the elderly and less affluent social groups. Badly designed buildings such as housing estates can facilitate criminal behaviour. Changing the ways that buildings and the built environment are designed, constructed, renovated and demolished therefore has the potential to make significant improvements in the environmental and economic performance of towns and cities and the quality of life of urban citizens (see the proposed vision for sustainable urban construction in Annex 2).

Example of good practice in sustainable construction

The Metropolitan Council of Lille[44] (France) organised a competition in 2003 to support construction projects that emphasise a high level of environmental, social and economic quality. For example, the new school canteen at Lompret will have a high energy efficiency, use at least 20% renewable energy, and will stock and re-use rain water. The materials have been selected for their environmental quality to guarantee a high indoor air quality that will not compromise the health of the schoolchildren. The project aims to minimise the combined construction and operating costs over the whole life of the building (50-60 years). In parallel, Lille is organising training courses on sustainable construction techniques for local building professionals in collaboration with their trade organisations so as to increase the availability and practice of sustainable construction. This new approach is conceived and financed in the framework of a public-private partnership (MIEL21), and will be progressively generalised.

[43] COM(2003) 301 final.

[44] www.mairie-lille.fr

While the knowledge of how to construct buildings in a sustainable way exists, most new buildings are not being built using these proven techniques. Even if they were, the slow rate of replacement of existing buildings (between 0.5 and 2% per year) is such that it would be a considerable length of time before they had a significant impact. As emphasised in the 3rd European Minister's Conference on sustainable housing[45], existing buildings must also be made more sustainable by retrofitting them or ensuring that sustainability is a key consideration in their refurbishment. Improving the energy efficiency of existing buildings is one of the most cost-effective ways of meeting the Kyoto climate change commitments. Retrofitting Europe's older building stock with insulation could reduce CO_2 emissions from buildings and related energy costs by as much as 42%[46]. Renovation is more complex than new construction as different buildings require different solutions, and even more so in protected buildings, but sustainable renovation has several environmental advantages over demolition and reconstruction, for example retaining the embedded energy and material. In addition, the renovation and regeneration of historic buildings and areas contributes to the sense of pride and heritage in local communities.

The focus on existing buildings will become particularly important after accession. More than 40% of inhabitants in the larger cities in the Acceding and Candidate Countries live in large, mass-produced, prefabricated housing estates. The figure is as high as 80% in Bucharest. These estates represent a challenge to urban sustainability, with their large scale and the urgent need to tackle low energy efficiency, poor maintenance and related health issues. While data is still very incomplete, initial estimations suggest that as much as one fifth of the flats are in need of light renovation, three fifths are in need of major renovation, and one fifth need to be completely rebuilt. The estates themselves also need restructuring to provide a better mix of residential, economic and social facilities to create sustainable communities rather than the current uniform uses that promote lengthy journeys to services.

The sustainable construction of new buildings and infrastructure and the sustainable renovation of existing buildings can begin to achieve a major improvement in the environmental performance of our towns and cities and the quality of life for its citizens by the middle of this century.

2.3.2. Current community initiatives on sustainable construction

The 1997 Communication on the Competitiveness of the Construction Industry[47] outlined the importance and benefits of integrating environmental concerns into all aspects of construction. The working group on sustainable construction, involving representatives of the Commission, Member States and industry, produced in 2001 a comprehensive report entitled "An agenda for sustainable construction in Europe"[48], proposing a programme of actions and a set of targeted recommendations.

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45 27-28 June 2002.

46 "The contribution of mineral wool and other thermal insulation materials to energy savings and climate protection in Europe", ECOFYS report for the European Insulation Manufacturers Association, 2003.

47 COM(1997) 539 final.

48 europa.eu.int/comm/enterprise/construction/suscon/sustcon.htm. The work of the group has focused on environmentally friendly construction materials, energy efficiency in buildings, construction and demolition waste management, and life cycle costing of the built environment.

This work contributed to the recent Directive on the energy performance of buildings[49], which requires new buildings to meet minimum energy efficiency requirements that will be set by each Member State following a common methodology. Existing buildings of over 1,000m^2 undergoing a major renovation will also have to meet these minimum requirements and when buildings are constructed, sold or rented out, an energy performance certificate will have to be made available.

Several Community funding programmes support the development, demonstration and implementation of energy demand management and the use of renewable energies in both individual buildings and 'communities' of buildings, as well as on other aspects of sustainable construction (see Annex 3).

The Commission has adopted a proposal for a Directive[50] on the promotion of energy end-use efficiency and energy services to support the widespread development of energy efficiency and energy service providers that would not just sell energy but help their customers improve their energy efficiency and manage their energy needs. In the long-term, this Directive should radically change the way energy is marketed, leading to significant savings in energy use.

The Construction Products Directive[51] covers health and environment issues and mandates to CEN are being prepared for the development of harmonised standards and test methods for indoor air quality.

2.3.3. Further measures needed to achieve widespread sustainable construction

Despite the availability of proven techniques, most buildings are not being built or renovated in a sustainable way. The main barrier is the lack of interest from builders and buyers who perceive, incorrectly, sustainable construction as expensive and are suspicious of new technologies, doubting their long-term reliability and performance. The longer term benefits of sustainable construction such as lower maintenance and running costs, better durability and higher resale price are not immediately apparent in the short term or at initial purchase (on average, a building will cost up to 10 times more to operate during its life than it cost to build). Action is therefore needed to emphasise these longer term benefits so that purchasers, banks and mortgage companies can differentiate between buildings designed and constructed using standard techniques and those using sustainable techniques.

The Directive on the energy performance of buildings has made a significant step forward in highlighting long-term ecological performance. This approach should be progressively extended to smaller buildings. More fundamentally, it should be extended to include other key environmental and sustainability elements, such as indoor air quality, accessibility, noise levels, comfort, environmental quality of the materials and the life-cycle cost of the building. It should also include the ability of the building to resist environmental risks, such as flooding, storms or earthquakes, depending on their location.

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49 Directive 2002/91/EC of the European Parliament and of the Council of 16 December 2002 on the energy performance of buildings (OJ L 1, 4.1.2003, p. 65).

50 (COM(2003) 739).

51 Council Directive 89/106/EEC of 21 December 1988 on the approximation of laws, regulations and administrative provisions of the Member States relating to construction products (OJ L 40, 11.2.89, p. 15).

This will first require developing a common methodology at the European level for evaluating the overall sustainability performance of buildings and construction, including their life-cycle costing. This would build on the existing methodology for the integrated energy performance of buildings and other existing initiatives and be developed in collaboration with all the relevant stakeholders. The methodology should not only be applicable to existing buildings, but also to the plans for new building and significant renovations, so as to stimulate the incorporation of sustainable techniques at the design stage. Decisions made at the design stage determine life-cycle costs, energy consumption, indoor air quality, and the recyclability and reuse of demolition waste.

The common methodology, adapted and adopted in the Member States as appropriate, and the resulting evaluations and life-cycle costing should then be used to promote best practice linked to a range of incentives. For example, a high level of sustainability might lead to lower tax rates; insurance companies and lending institutions might offer more favourable conditions. The demonstration of lower life-cycle costs should make buildings more attractive to buyers and financial institutions. Once the appropriate methodology is well established, the Commission will then propose further non-energy-related environmental performance requirements to complement Directive 2002/91.

In parallel, various other measures need to be taken to support the mainstreaming of sustainability techniques. Several Member States have adopted a sustainable construction programme with associated programmes of action, and these positive initiatives should be generalised and systematically implemented. Local authorities similarly need to promote sustainable construction. Sustainability should be incorporated into national building codes, standards and regulations, using where possible a performance-based approach rather than prescribing particular techniques or solutions to be applied. Member States and local authorities also need to set an example in their own purchasing requirements and where public funds are used in housing and other construction works, as called for in the 3rd European Minister's Conference on sustainable housing.

The need for training in sustainable construction methods and techniques of professionals involved in the design and construction industry has been highlighted as a priority, as well as the need for the construction team to work in a different way to overcome traditional professional, design and institutional barriers that hinder the adoption of sustainable construction. Differences in terminology can also be a barrier. The Commission will therefore explore the possibilities for providing related training and guidance.

Demonstration projects should continue to be supported through Community research programmes, focusing on “normal” construction and renovation projects such as standard town houses, schools, hospitals and work places. Research is also needed to improve practice developing sustainable methods and techniques for certain infrastructure construction such as roads and utility networks.

In the framework of the Thematic Strategy on the Prevention and Recycling of Waste, the Commission will consider measures to tackle the rising volumes of construction and demolition waste.

Better and more systematic information on the environmental characteristics of building materials is necessary to guide designers, builders and their customers in their choice of materials, and the Commission will develop the environmental labelling of construction materials in the framework of environmental product declarations (EPD's) and/or the EU eco-label as appropriate. In order to guide the choice of consumers with respect to buildings and building services, the Commission will propose a corresponding EU eco-label and/or a harmonised EPD, making use of the common methodology for sustainability evaluation. Other awareness raising actions will also be considered, such as prizes for architecture based on sustainability.

Actions proposed for the forthcoming Thematic Strategy
(these proposals will be the subject of further consultations in 2004)
Sustainable construction

The Commission will develop a common methodology for evaluating the overall sustainability of buildings and the built environment, including life-cycle cost indicators. This will also be applicable to the plans for new building and significant renovations. All Member States will be encouraged to adapt and adopt this methodology and to use it in support of best practice. The Commission will then propose further non-energy-related environmental performance requirements to complement Directive 2002/91 on the energy performance of buildings, taking into account the methodology of this Directive.

As indicated in Directive 2002/91, the Commission, assisted by the Committee established by the Directive, will examine possible ways to address the renovation of smaller buildings and general incentives for energy efficiency.

All Member States will be encouraged to develop and implement a national sustainable construction programme, and set high performance requirements using European harmonised standards and the Eurocode. Local authorities will similarly be encouraged to promote sustainable construction.

All Member States, local authorities and other public purchasers will be encouraged to introduce sustainability requirements in their own tendering procedures for buildings and other construction works and in relation to the use of public funds for buildings and other construction works. They will be encouraged to develop fiscal incentives for more sustainable buildings.

The Commission will explore opportunities for training, guidance, exchange of experience and further research on sustainable construction.

The Commission will consider measures to tackle the growing levels of construction and demolition waste as part of the Thematic Strategy on the Prevention and Recycling of Waste.

The Commission will develop the environmental labelling of construction materials (EPDs and/or EU eco-label), and will propose an EU eco-label and/or a harmonised EPD for buildings and/or building services.

2.4. Sustainable urban design

Sustainable urban design refers to the pattern and type of land use within the urban area.

2.4.1. What makes sustainable urban design a priority

The way land is used in an urban area is fundamental to a town or city's character, its environmental performance and the quality of life it provides for its citizens. Decisions on land use need to protect a city's identity, cultural heritage, historic street pattern, green space and biodiversity. Poor land use decisions have created urban areas that are regarded as unattractive to live in and have produced patterns of settlement that are not sustainable.

Urban sprawl is the most urgent of the urban design issues. Towns and cities are expanding outwards into rural areas at a faster rate than their population is growing (a 20% expansion in the last 20 years with only a 6% increase in population over the same period). Green space (valuable agricultural and natural land) is being replaced by low-density housing and commercial uses. Urban sprawl reinforces the need to travel and increases dependence upon private motorised transport to do so, leading in turn to increased traffic congestion, energy consumption and polluting emissions. These problems are most acute where residential densities are low and where daily activities (home, work, shopping) are widely separated. There is a sharp increase in car use where land use densities fall below 50-60 people per hectare (see figure 2).

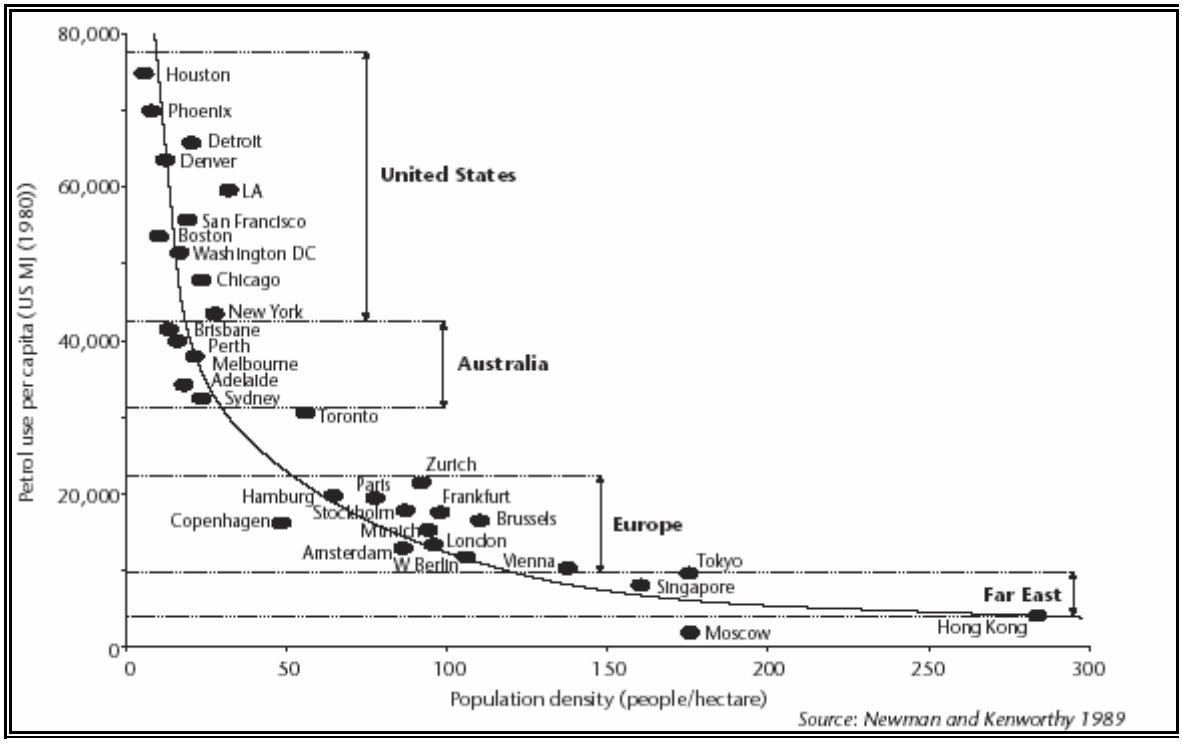

Figure 2: Car use is reduced at higher housing densities (reprinted by permission[52])

Unlike towns and cities in the existing Member States, rural to urban migration is still taking place in some towns and cities in the Acceding and Candidate Countries. However, this alone cannot account for the rate of expansion of these urban areas. Urban sprawl is a serious problem for these countries, fuelled by changes in land-use attribution and by large out of town shopping centres and commercial projects. Up to 30% of retail floor space in some of their towns and cities is in such large-scale premises, a much higher figure than in the

[52] Newman PW and Kenworthy JR, 1989. Gasoline Consumption and cities: a comparison of US cities with a global survey. Journal of American Planning Association, 55(1): 24-37.

Member States. The migration of economic activity beyond the municipal administrative boundary also reduces its tax income, undermining its ability to invest in the future.

At the same time that towns and cities are expanding outwards, many contain large amounts of unused, derelict land ('brownfield sites') and high numbers of empty properties. Social segregation can occur within cities with more affluent citizens leaving these unattractive, less prosperous areas. Again, the Acceding and Candidate Countries face a greater magnitude of these problems than the Member States. Derelict land and empty properties need to be brought back into productive use to alleviate pressure for new developments outside the urban area. The social, economic and environmental costs of leaving land and property unused in an urban area are high.

The location of infrastructure is another crucial land-use issue. Cities compete with each other to attract investment and offer incentives such as greenfield sites where construction costs are lower for new commercial projects. However, the siting of employment, retail and leisure centres outside urban areas, for instance around motorway junctions, undermines the economic viability of the city centre as a commercial district, encourages car use and excludes citizens who do not have access to a car from these jobs and services. The siting of industrial developments within an urban area also raises issues of social equity if they are mainly situated in poorer neighbourhoods.

Previous policy papers (see Annex 1) have emphasised the need to construct high density, mixed use and compact urban areas to minimise these problems. Different approaches implemented in towns and cities of some of the Acceding and Candidate Countries, such as strong functional divisions in land uses in the city, promote the need to travel. These areas will need restructuring or "retro-fitting" to make them more sustainable. Large areas of housing outside the city that lack basic services will need to be converted into sustainable communities.

An example of good practice in sustainable urban design

Following the Second World War, Warsaw (Poland) needed to rebuild its housing stock very quickly to provide for a rapidly growing population. The Natolin Wyzyny Housing Estate[53] is one example of the type of housing estates built. It is characterised by high, multi-storey buildings, a monotonous spatial structure and large areas of open space. Reconstruction and privatisation of the estate started in 1994. Reconstruction measures included adding heat insulation to building facades, modernising heating and plumbing systems and introducing metering systems for individual consumption. A state subsidy of 920,000 ECU was granted to insulate the facades. By 1998, about 60 % of dwellings had been privatised and 90 % of the housing stock renovated or reconstructed. In addition, the functional patterns of buildings were changed to provide a mixed use pattern and create sustainable neighbourhoods rather than the original uniform housing blocks that provided almost no services to residents. Significant new volumes of retail space, shops and office space were created. The reconstruction project has created a more sustainable community that is an attractive place to live in with high standards of energy efficiency.

Growing mobility is resulting in the emergence of new patterns of urban development where one urban area can have several "centres", each specialising in a different function (shopping, offices, entertainment) or competing against each other. There are also increasing links between neighbouring urban areas which produce networks of cities. One of the challenges of urban design is to respond to these emerging patterns so as to overcome negative effects such as excessive dependence on the private car and urban sprawl (see the proposed vision for

[53] www.ursynow.pl

sustainable urban design in Annex 2), and to develop the necessary cooperation between neighbouring authorities.

Green space in a town and city has a strong influence on the quality of life for its citizens. Such spaces provide opportunities for exercise, social interaction, relaxation and peace and quiet. Well managed green spaces, parks and woodlands can become much loved and distinctive features of an urban area. They should be protected and the opportunity for new green areas or other public spaces to be created through the reuse of brownfield land should be considered. Green spaces are also important for urban biodiversity. Urban design should protect important habitats from urbanisation and promote biodiversity by incorporating it into the city's fabric. Enabling urban citizens to have contact with wildlife is an important way to raise awareness of wider environmental issues.

In addition to these issues, the use of land in all European towns and cities will become increasingly important as demographic and environmental changes take place. Europe's citizens are living longer and the demand for individual homes for single occupiers is also increasing. Even though total populations in Italy, Greece, Spain and Portugal are falling, the number of households is dramatically increasing. This demand must be managed in a sustainable way. Expansions of towns and cities must be planned and fit within an overall long-term strategy, with the environmental impacts identified and minimised, rather than being an unplanned process leading to urban sprawl. Future climate change may mean that current plans for new areas of settlement are no longer appropriate, for instance due to a higher risk of flooding.

An example of good practice in sustainable urban design

Vitoria-Gasteiz (Spain) has systematically implemented a policy of mixed land use, high density along public transport corridors, rehabilitation of its historical districts, decentralisation of social services, balanced access to green spaces, the development of public transport, bicycle paths and pedestrian zones and other key principles of sustainable urban design and development such as investment in social programmes. In this way, despite having almost quadrupled its population since 1950, the city has managed to maintain and develop a compact, high quality urban environment, with a surrounding green ring.

City centres must become attractive places to live in, otherwise in spite of the environmental arguments in favour of high density cities, citizens will continue to move out to the suburbs or surrounding countryside. The 1999 Communication "Sustainable Urban Development in the European Union: a Framework for Action", and the 2001 EU Expert Group on the Urban Environment's Report "Towards More Sustainable Land Use" (see Annex 1) both highlight the importance of land use in achieving a sustainable urban environment for the reasons outlined above. Land use also has a strong role to play in the sustainability of the built environment, for instance by allowing proper alignment to maximise passive solar heating. Sustainable urban design will therefore be a key element of the thematic strategy for the urban environment.

2.4.2. Current community initiatives on Urban Design

The European Spatial Development Perspective (ESPD)[54]prepared in 1999 by the Committee on Spatial Development has been adopted by all of the Member States on a voluntary basis. It sets out objectives and guidelines for balanced and sustainable spatial development, with a third of the 60 agreed policy options directly addressing the question of how to control the

[54] ESDP: European Spatial Development Perspective - Towards Balanced and Sustainable Development of the Territory of the European Union (1999) ISBN 92-828-7658-6.

physical expansion of towns and cities. Following on from this, the European Spatial Observatory Network (ESPON) programme implements and co-ordinates research in spatial planning, and is putting in place a framework for collecting and analysing spatial data.

Several Directives have an influence on urban land use, notably the Directives on environmental impact assessment (EIA)[55] and strategic environmental assessment (SEA)[56], as well as the water framework Directive[57]. Article 12 of the Directive on the control of major accident hazards[58] ("Seveso II") requires that Member State's land-use planning and/or other relevant policies take into account the objectives of preventing major accidents and limiting the consequences of such accidents. Public participation in environmental decision making is an important element in these procedures, in line with the Aarhus Convention.

The Commission is preparing a proposal for a framework Directive to create a policy and legal framework for the establishment and operation of an Infrastructure for Spatial Information in Europe (INSPIRE[59]). It will make harmonised and high-quality spatial (geographic) information readily available for formulating, implementing, monitoring and evaluating Community policies and for providing information to the citizen in a wide range of sectors at local, regional, national or international level. This will have a major effect in improving the range and quality of spatial data available to those involved in urban design and land-use planning.

55 Directive 85/337/EEC as amended by Directive 97/11/EC.
56 Directive 2001/42/EC.
57 Directive 2000/60/EC.
58 Directive 96/82/EC.
59 www.ec-gis.org/inspire.

The Structural Funds Regulations and Guidelines for the period 2000-2006[60] set out the need for sustainable approaches to the use of urban land, including priority to be given "to the rehabilitation of derelict industrial sites (brownfields) over the development of greenfield sites". The URBAN II initiative supports "mixed-use and environmentally-friendly brown-field redevelopment, involving reduced pressures on green-field development and urban sprawl". Indicative eligible measures include "reclamation of derelict sites and contaminated land; rehabilitation of public spaces, including green areas; and renovation of buildings to accommodate economic and social activities, in a sustainable and environmentally-friendly manner". INTERREG has offered similar opportunities.

Community guidelines on State aid for environmental protection[61] outline the conditions under which financial assistance to companies for rehabilitating polluted industrial sites can be considered compatible with the common market. Section E.1.8. of these guidelines states that the 'polluter pays principle' applies, hence aid for the rehabilitation of a polluted site can only be given where the polluter cannot be identified or made to bear the cost. In addition to compatible measures described in these guidelines, the Commission in its Decision on "State aid N 385/2002 - United Kingdom: Support for Land Remediation" recently considered that aid for reusing brownfield land could in general be considered compatible with the common market.

The Commission supports different research projects related to the revitalisation of city centres and neighbourhoods, the rehabilitation and re-use of contaminated and brownfield sites, sustainable retrofitting of urban areas such as large housing estates and on ways to reduce urban sprawl, especially through the integration of land use and transport planning (see Annex 3).

In the framework of the Thematic Strategy for Soil Protection[62], the Commission has identified soil sealing as one of the eight major threats for the European soil. A core set of indicators to address soil sealing are being developed by the European Topic Centre on Terrestrial Environment.

The Commission is preparing a Communication on hazards[63] that amongst others will focus on the need for mapping in relation to natural and man-made hazards, such as flooding. This will contribute to helping those involved in urban design take into account more systematically such hazards in their planning.

The 2001 Communication on a biodiversity action plan for the conservation of natural resources[64] foresaw, amongst others, a series of actions specifically for urban areas, in particular relating to use of greenfield and brownfield sites and contaminated land. The Commission will report to the Council and Parliament in 2004 on the progress in implementing the plan, reviewing the relative priorities of the different actions. The urban aspect will receive full consideration in this report.

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60 Commission Communication concerning the Structural Funds and their coordination with the Cohesion.Fund. Guidelines for programmes in the period 2000 to 2006 (OJ C 267, 22.9.1999, p. 12).

61 OJ C 37, 3.2.2001, p. 3.

62 COM(2002) 179 final.

63 www.europa.eu.int/comm/environment/civil/prote/integrated_strategy_en.htm

64 COM(2001) 132 final.

2.4.3. Further measures needed to achieve widespread sustainable urban design

The favoured vision of high density, mixed use settlements with reuse of brownfield land and empty property, and planned expansions of urban areas rather than ad hoc urban sprawl, has been repeated in each Community policy document on the urban environment (see Annex 1). The Strategy will endorse this vision as the valid basis for Europe's cities whilst recognising that there are limits to acceptable population densities (indeed some urban areas suffer from poor quality environments due to over crowding) and also recognising that converting areas to mixed uses is easier than reversing urban sprawl or increasing land-use densities. The vision will be developed to reflect current trends in towns and cities (multiple centres) and the regional dimension (concentrated decentralisation).

It is not for the Community to set a standard system for making land use decisions, or to define the "ideal" settlement pattern as each town and city is unique and the solutions needed to achieve a sustainable urban environment are specific to each case. However, it is clear that some approaches are unsustainable and the Strategy will seek to discourage these and promote the more sustainable alternatives. The actions proposed in relation to sustainable urban management (section 2.1.3) will contribute to this. The Commission will also explore the possibility of developing guidelines on specific issues that could have a positive influence on daily practice. These could concern, for example, guidelines on the location and density of new developments, the integration of green space, retrofitting urban areas to improve their sustainability, or on the continuity of the urban fabric (knitting new and old developments together).

Urban sprawl is a priority issue for Europe's towns and cities and in this context it is clearly beneficial to reuse derelict and brownfield land within city centres for other uses. Some of these have adopted policies and approaches that have succeeded in slowing urban sprawl and increasing land use densities. Member States need to ensure that their land use planning systems deliver these objectives. Incentives to encourage sustainable urban design, for example discouraging greenfield development, need to be adopted. Strategies and policies for urban areas need to be linked with regional and national strategies to ensure their coherence, and avoid local initiatives being undermined.

Research, exchange of experience and promotion of best practice on urban land issues is of particular importance and the Commission will investigate opportunities for reinforcing these activities.

The Thematic Strategic on Soil will consider issues such as soil sealing that are relevant to this priority theme and may propose additional measures to limit this. Objectives such as the reuse of brownfield land and limiting urban sprawl are common to both Strategies.

Actions proposed for the forthcoming Thematic Strategy
(these proposals will be the subject of further consultations in 2004)
Sustainable urban design

All Member States will be encouraged to:

– ensure that their land use planning systems achieve sustainable urban settlement patterns and take into account environmental risks, and to undertake a review to assist this;

– develop incentives to encourage the reuse of brownfield land over the use of greenfield land, create national databases of brownfield land and set challenging targets for its reuse, and provide support for the reuse of empty properties in urban areas;

– set minimum residential land use densities to encourage higher density use and limit urban sprawl;

– evaluate the consequences of climate change for their cities so that inappropriate developments are not begun and adaptations to the new climatic conditions can be incorporated into the land use planning process.

The Commission will prepare guidelines on "high density, mixed use" spatial planning, and will propose definitions of brownfield and greenfield land. The Commission will explore the possibility of developing other guidelines on specific urban design issues.

The Commission will explore opportunities for training, exchange of experience and further research on sustainable urban design.

The European Environment Agency (EEA) will continue to monitor land use and land cover changes as a priority data set for the future. Urban sprawl and land use will be the subject of a special report by the EEA.

3. TOWARDS A MORE INTEGRATED APPROACH

One of the main challenges of improving the urban environment lies in the diversity of environmental issues, the multitude of forces, actors and factors influencing the environment and the quality of life in urban areas, and the fragmented approach taken so far. Integration is needed in several ways:

– Horizontally, to integrate the urban environment in the most relevant Community policies, such as transport, cohesion, health, research and technological development.

– Horizontally within Community environmental policy, to develop an urban focus in the key sectors such as water, air, noise, waste, climate change, nature and bio-diversity.

– Vertically, between the different levels of administration: EU, national, regional and local.

– Horizontally, at the local level, by encouraging local authorities to adopt an integrated environmental management plan and implement an integrated environmental management system (see section 2.1).

3.1. Horizontal integration within Community Policies

The integration of urban environment issues into relevant EU policies is a long-term process that requires consistent and sustained co-operation and co-ordination between different Commission services.

The 1990 Green Paper on the Urban Environment (see Annex 1) started the integration process within the Commission and raised the profile of urban environment issues and policies. It contributed to the launch of the URBAN initiative[65], of the Community Regional Development Fund, which devoted approximately one billion Euro for the sustainable development of urban districts facing severe social, environmental and economic problems. The 1998 "Communication on Sustainable Urban Development in the European Union: a Framework for Action" led to the inclusion of urban environmental considerations in the Commission guidelines for regional development programmes 2000-2006, contributed to the renewal of the URBAN initiative (approximately 728 M€), and supported the development of the City of Tomorrow and Cultural Heritage research programme. Not all of the Framework's intentions came to fruition and the Thematic Strategy will inject new vigour into the integration process.

Since 2003, the Commission carries out an extended impact assessment[66] on all significant new policies and related instruments that have the potential to lead to significant environmental, economic and social impacts. Issues relevant to the urban environment, such as land use, transport, pollution and health, are part of this assessment. This will help ensure that future Community policies from all Commission services are compatible with the aims of the Thematic Strategy.

In the field of research, the results from the City of Tomorrow and Cultural Heritage research programme are now becoming available. The programme, from its conception, has sought to provide a comprehensive approach by integrating the key urban issues. It is already evident that there are some important results which will fill gaps in knowledge, provide new approaches and inform policy making. Examples of these have been referred to in Annex 3. It is essential that there is a continued effort to establish and disseminate best practice developed by projects supported by the Community's research framework programme so that it is widely used in towns and cities[67]. Where innovative technologies need to be further developed to address urban environment problems, these should also be supported.

In the field of cohesion policy, the European Regional Development Fund (ERDF) and the Cohesion Fund have made significant contributions to the sustainable development of many urban centres. For the 2000-2006 programming period at least 10% of the ERDF (Objectives 1 and 2) amounts are for urban centres and urban population. These correspond to almost €15 billions (11.5 for Objective 1 and 3.4 for Objective 2). Large contributions from the Cohesion Fund serve the same purpose though the estimation of total amounts is more difficult to calculate. Some examples of the use of the Funds are included in Annex 5. In the context of the Third Cohesion Report on the Cohesion Policy, the Commission is considering the use of mainstream funds for sustainable urban development in the post-2006 Cohesion Policy.

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65 europa.eu.int/comm/regional_policy/urban2/index_en.htm

66 Communication from the Commission on Impact Assessment COM(2002) 276 final.

67 Note: many urban-related European research projects and concerted actions have also been launched in the framework of COST and EUREKA.

Education and training have been highlighted as essential in each priority theme, and the Commission will explore ways to support this through programmes such as Leonardo da Vinci.

Through its focus on the four priority themes that each have strong links to these and other different Community policy areas, the Thematic Strategy itself will lead to better integration of urban environment issues in relevant Community policies, in particular in relation to transport and energy.

Actions proposed for the forthcoming Thematic Strategy
(these proposals will be the subject of further consultations in 2004)
Integration within Community Policies

The Commission believes that the knowledge gaps identified in the preparation of the Thematic Strategy should be the basis for the continuation of the EU urban research and demonstration activities, including enhanced dissemination of the results from existing and future European urban research.

In the context of the Third Cohesion Report on the Cohesion Policy, the Commission is considering the use of mainstream funds for sustainable urban development in the post-2006 Cohesion Policy.

The Commission will consider how training and education policy, through programmes such as Leonardo da Vinci, can support the achievement of a sustainable urban environment.

3.2. Horizontal integration within Community Environmental Policy

The Community is active in all of the environmental sectors that are critical in urban areas, in particular air quality, climate change, waste, water, noise and biodiversity. Although currently most of the measures in these sectors do not have a particular urban focus, they contribute significantly to the improvement of the urban environment. It is important that the baselines set by these general measures are implemented and developed. The Thematic Strategy will consider ways in which their implementation can be facilitated in urban areas, and ways in which a particular urban focus can be integrated into future measures and accompanying actions. Overviews of existing activities in these sectors, which are relevant for the priority themes identified for the Thematic Strategy, are provided in Annex 6.

Actions proposed for the forthcoming Thematic Strategy
(these proposals will be the subject of further consultations in 2004)
Integration within Community Environmental Policy

Water: In the context of the Water Framework Directive and its Common Implementation Strategy, the Commission will prepare a recommendation on how local authorities can implement sustainable water management and contribute more effectively to river basin management. Further and more targeted measures will also be considered in the Strategy.

Climate change: The Commission will consider the possibility of supporting networks of cities that address adaptation to the impacts of climate change, and will provide general scientific support, for example, concerning the nature, scale and timing of the different effects being predicted.

Air: The CAFE (Clear Air for Europe) programme will take into account urban transport demand management and modal shift elements in the development of measures on air quality. CAFE will also explore the links between outdoor and indoor air quality in urban areas, and the reporting requirements on air quality will be reviewed to allow an urban focus.

Waste: Within the framework of the Thematic Strategy on the Prevention and Recycling of Waste, the Commission will assess the potential role of the Community in the development of local initiatives to manage and reduce the environmental impacts of waste. In particular, the urban dimension of managing certain waste flows, such as construction and demolition waste (see also section 2.3.3), will be taken into account in the definition of future Community policy promoting recycling.

Nature and Biodiversity: The Commission will develop guidelines to help local authorities manage and promote biodiversity in urban areas, and guidelines on the protection of endangered species and habitats in urban areas. The Commission will develop biodiversity indicators.

Pesticides: The Thematic Strategy on the Sustainable Use of Pesticides[68] will propose relevant measures (e.g. training, guidelines) addressed to local authorities and other professional and non-professional users on different issues related to the sustainable use of pesticides.

3.3. Integration between the different levels of administration.

Although the Thematic Strategy will focus on urban areas, the influence of regional and national factors is strong and must be taken into account in developing local strategies for a high quality and healthy urban environment. Similarly, regional, national and Community strategies must be reviewed to check that they are promoting the same goals at the local level. Vertical integration between these different administrations is vital. A key element of this integration should be the adoption by Member States, within the framework of their sustainable development plans, of a national urban environment strategy. Where appropriate, regional strategies should also be adopted. These should help fulfil the Johannesburg plan of implementation agreed at the World Summit on Sustainable Development.

[68] COM(2002) 349 final.

In order to support this process and to provide their towns and cities with information, expertise and advice, national and/or regional "Focal Points for the Urban Environment" should be nominated. The focal points should help local and regional authorities gain access to data and expertise, training, awareness raising actions and best practice examples, with a view to facilitating the implementation of the national urban environment strategy.

An example of good practice for a National Focal Point for the Urban Environment

In 1973 the German Institute of Urban Affairs (Difu)[69] was founded by the Deutscher Städtetag (German Association of Towns and Cities) with the aim of identifying long-term prospects for urban development and providing expert advice to municipal authorities to help them solve their problems. With 100 employees, Difu offers some 130 towns a broad spectrum of services in the fields of the urban environment, urban development, economic policy, social policy, cultural policy, legislation and municipal finances. Studies, expert reports, training seminars, information and documentation services, and regular publications promote the user-orientated dissemination of scientific findings. Difu provides a forum where local authorities can exchange ideas and experience and municipalities can gain advice on how to implement their planning objectives in administrative practice.

Calls have also been made for specialist centres for specific topics. For example, the 3rd European Minister's conference on sustainable housing recommended the establishment in each State of a national point of contact for sustainable housing to encourage the exchange of experience and good practice. Indeed, given the integrated nature of the problems facing the urban environment and local authorities, it would be appropriate to concentrate the wide range of issues within one focal point.

It should also be noted that the administrative structures and boundaries have not always kept pace with the geographical extension of towns and cities. Member States, the regions and the local authorities may therefore need to reflect on the co-ordination and the distribution of competencies necessary to address the major urban environmental issues, in particular between neighbouring authorities and between different levels.

In the White Paper on European Governance in 2001, the Commission put forward the idea of target based tripartite agreements between the Member States, territorial authorities and the Commission, and the environment was identified as an area for testing this potential new instrument. Three pilot projects on the urban environment have been launched to assess the added value of tripartite agreements in this area at the European level.

[69] www.difu.de

Actions proposed for the forthcoming Thematic Strategy
(these proposals will be the subject of further consultations in 2004)
Integration between different levels of administration

All Member States will be encouraged to:

– adopt national and/or regional urban environment strategies;

– nominate National and/or Regional Focal Points for the Urban Environment;

– consider raising awareness exercises for regional and local administrations on urban environment issues.

The Member States, the regions and the local authorities will be encouraged to develop the co-ordination and the distribution of competencies necessary to address the major urban environmental issues.

4. INDICATORS, DATA, TARGETS AND REPORTS

Identifying indicators for the urban environment is important. They highlight which data is needed to monitor urban trends. They allow the effectiveness of initiatives and progress towards a high quality and healthy environment to be assessed, enable targets to be set and help steer decision making to more sustainable outcomes.

At the local level, the Commission has provided an "off the shelf" set of urban environment indicators that can be used by towns and cities on a voluntary basis. The European Common Indicators (ECI)[70] were developed by the EU Expert Group on the Urban Environment and are particularly useful for local authorities just starting to tackle environmental issues for their urban area as a whole. They provide a focus for establishing their initial policy and action plans, as well for communicating locally to citizens[71] and to raise the general level of awareness of key urban environmental issues. They can be adapted or extended by the town or city to reflect the local situation, and can support the widespread implementation of environmental management plans by local authorities (see section 2.1.3).

European Common Indicators

1. Citizen satisfaction with the local community
2. Local contribution to global climatic change
3. Local mobility and passenger transportation
4. Availability of local public open areas and services
5. Quality of local ambient air
6. Journeys by children to and from school
7. Sustainable management of the local authority and local business
8. Noise pollution
9. Sustainable land use
10. Products promoting sustainability
11. Ecological footprint

[70] www.sustainable-cities.org/indicators/index.htm

[71] 'Environmental Issue Report No 30 : Towards an Urban Atlas' EEA/JRC Publication ISBN 92-9167-470-2.

At the European level, while there are many indicators in use in different cities and towns, they are in general only sporadically implemented, do not provide comparable data, or are not suited to the multiple ambitions of the Thematic Strategy. Similarly, the data gathered in the framework of sectoral actions, such as air or water, are rarely analysed separately at the urban level. The Commission will therefore identify a set of indicators that can be used at the European level to guide the collection of data necessary to monitor the Strategy. This will be underpinned by the proposed INSPIRE Directive (see section 2.4.2) which will provide a standardised format for the collection and exchange of spatial information. It will take into account relevant on-going initiatives such as the ECI, the Urban Audit II which analyses economic, social and environmental data from 200 cities, and the Transport and Environment Reporting Mechanism (TERM) which provides data on transport and related environmental parameters. It will also make use of the European Information and Environment Observation Network (EIONET), set up by the member countries of the European Environment Agency (EEA) and work such as the EEA and Joint Research Centre's Urban Atlas which assesses the links between urban sprawl and the social and economic factors that drive it.

An example of good practice for urban environmental data

Prague's Environmental Information System (IOZIP) began in the 1980s and now focuses on collecting and processing data on the environment and offering this information to municipal bodies, experts and the public. This gives an excellent overview of environmental issues and development to planners and investors. The system supports a variety of products, such as the Environment Atlas[72] (supported by an EU Interact project), a series of annual 'state of the urban environment' reports for Prague[73] since 1989, CD ROMs on overall environmental development of the city and a web site on the Internet offering data and maps (GIS based) to a wider audience (a pilot project). The on-line version also features data derived from the EU HEAVEN project on air quality and weather conditions. The wide ranging new technology-based municipal information system is proving to be highly efficient in linking a number of environmental projects on sustainable development in the city of Prague. The system is run and paid for by the city of Prague.

With respect to data on environment and health, the bio-monitoring of children, as foreseen in the European Environment and Health Strategy includes a commitment to develop environment and health indicators, bringing together ongoing activities in both the environment and health fields. Moreover, the biomonitoring of children, as foreseen in the strategy, will focus on children in urban environments. This programme will in the long-term allow an analysis of whether the progress in improving the urban environment is reflected in the improvement of children's health, and in which towns and cities extra effort is required.

While for some urban environmental issues, such as air quality, limit values have been set at the European level, for many others such as sustainable urban transport, the target setting should be done at the local level. Local authorities are in the best position to take account of the local conditions, making a single European target inappropriate. However, there is a clear need for guidance on target setting, and for some issues indicative targets at the national or European level could be usefully discussed. The Commission will therefore seek to provide guidelines for target setting and will explore the possibilities of developing indicative targets where appropriate.

72 www.wmap.cz/atlasen

73 www.praha-mesto.cz/zp/rocenky/eng.asp

Finally, the EEA should, within its regular reporting activities, report on the state of the urban environment in Europe's towns and cities. It is already a requirement of Directive 2003/4/EC on public access to environmental information[74] that Member States regularly prepare state of the environment reports. The state of the urban environment report should cover the main environmental sectors (air, noise, water, waste, biodiversity), as well as the priority areas of the thematic strategy (management, transport, construction, design) and the wider aspects (health and quality of life). It should include some form of comparative evaluation of individual towns and cities. Such a detailed report is necessary to drive the future development of the Thematic Strategy, to make the information available to European citizens and would serve to stimulate the local authorities to improving the environmental performance of their municipality.

Actions proposed for the forthcoming Thematic Strategy
(these proposals will be the subject of further consultations in 2004)
Developing targets and indicators

The Commission will identify key indicators to monitor the effects of the Thematic Strategy and the state of the urban environment.

Member States will be encouraged to support the use of the European Common Indicators at the local level.

The EEA will report on the state of the urban environment in the EU within its regular reporting activities and will ensure access to data on the urban environment to provide better information to the policy maker, implementing actors and the public and to guide and monitor the progress of the Thematic Strategy.

The Commission will seek to provide guidance and advice to towns and cities on setting targets for urban environment issues, and will explore the possibilities of developing indicative targets where appropriate.

[74] Directive 2003/4/EC of the European Parliament and of the Council of 28 January 2003 on public access to environmental information and repealing Council Directive 90/313/EEC (OJ L 41, 14.2.2003, p. 26).

5. SUPPORTING THE MAINSTREAMING OF GOOD PRACTICE AT LOCAL LEVEL

5.1. Local authorities

In 1994, a number of towns and cities and local authority networks in Europe established the Aalborg Charter[75] which commits its signatories to the Local Agenda 21 process and to the development of long-term action plans towards sustainability. The European Sustainable Cities and Towns Campaign was established to develop networking between the signatories and between existing networks of towns and cities, and to widen participation in the Charter. To date, political representatives from more then 1,950 cities and towns from 41 European countries have committed their municipalities to the Charter[76]. These towns and cities and their networks have been the driving force behind the development of Local Agenda 21 and its practical implementation, and are currently discussing an Aalborg+10 initiative which would go a significant step further by committing its signatories to explicit and quantitative targets and actions for the next decade.

An example of good practice in implementing Local Agenda 21

Started in 1998, the LA21 process in Ferrara (Italy) has now become an integral part of their development strategy. As the result of a continuing emphasis on awareness raising, sustainability concepts are now largely understood by local stakeholders and have become part of everyday practice. A range of methods to develop participation and partnerships (such as forums, workshops, working groups, agreements, projects) have been used to prepare and implement a set of voluntary local plans, covering amongst others energy, traffic, health and welfare. These now form the basis of the city's new Urban Master Plan. In 2002 the city council approved its first Environmental Balance, including natural resource management targets, green procurement, and the implementation of a local environmental management system.

The Commission has supported the Aalborg Charter, the Campaign and the various networks that work towards sustainable urban development, notably through the Community framework for co-operation to promote sustainable urban development[77]. Other support is available. The INTERREG initiative[78] offers a range of opportunities for towns and cities to exchange experience on sustainable urban development and for projects that cover small scale environmental infrastructure development, although these possibilities are underused by towns and cities at the moment. Similarly, the URBACT programme allows towns and cities involved in the URBAN initiative to exchange experience and best practice. The Commission also awards funding to town-twinning activities[79] with the aim of reinforcing existing links between towns and encouraging new twinning initiatives. Over 1 million people a year benefit from the initiative and environmental themes account for around a third of the 1,250 twinning projects supported each year. The town twinning initiative offers towns and cities an excellent way of exchanging experience and good practice on the wide range of urban environment issues. In addition, the different EU urban research programmes (see Annex 3) have brought together several hundred cities in many projects to cooperate in developing and implementing best practice.

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75 www.sustainable-cities.org/keydocs.html

76 A number of regions have signed up to a comparable initiative, the 1998 Valencia Charter.

77 Decision No 1411/2001/EC of the European Parliament and of the Council of 27 June 2001 on a Community Framework for cooperation to promote sustainable urban development (OJ L 191, 13.7.2001, p. 1.)

78 www.interreg3c.net

79 europa.eu.int/comm/dgs/education_culture/towntwin/index_en.html

The Member States also have a strong role to play in promoting best practice, the adoption of Local Agenda 21, the Aalborg Charter and similar initiatives.

Taking into account the development of the Strategy and of a more action-oriented approach to LA21, the Commission will consider how to adapt and develop its support for local authorities and their networks, amongst others through a revised framework for co-operation to promote sustainable urban development. The Commission will also explore the possibility of using the co-operation framework to disseminate more widely the results of the City of Tomorrow and Cultural Heritage projects and other European projects relevant to the urban environment.

5.2. The role of the citizen

Much of the emphasis of the Thematic Strategy will inevitably fall on recommendations for action by the European Commission, the Member States and local authorities. However, the individual citizen also has a vital role in achieving a sustainable, healthy urban environment.

Public participation in decision making is recognised as a prerequisite for achieving sustainability. Initiatives such as the Aarhus Convention and the Governance White Paper promote opportunities for public involvement and any proposals in the Strategy for plans to be drawn up by municipalities would include appropriate provisions for public participation.

More fundamentally, individual decisions and behaviours have a strong influence on the success of any local plan or framework for action. Individuals can choose whether to walk, cycle, take the bus or take their car. They can choose which energy source they use to heat their homes, and whether to invest in better insulation. As set out in this Communication, a lack of public awareness of the environmental consequences of their actions is sometimes a considerable barrier preventing a more sustainable approach. Raising awareness of the public and changing behaviour are necessarily important elements of any strategy to achieve a high quality and healthy urban environment.

At the European level, the Commission undertakes various awareness raising activities such as the European Car Free Day and these will be continued. New activities will be developed, such as the Green Urban Days in which cities present their environmental activities and performance to their citizens. Strategies drawn up by municipalities, regions and national Governments should not only involve the public but also contain appropriate activities to encourage changes in behaviour.

Actions proposed for the forthcoming Thematic Strategy
(these proposals will be the subject of further consultations in 2004)
Supporting the mainstreaming of good practice at local level

The Commission will propose a revised Community framework for co-operation to promote sustainable urban development.

The Commission will explore ways of improving the dissemination of urban research results to towns and cities.

The Commission will examine the ways in which it can support the development of an Aalborg+10 initiative by towns and cities to set in place a co-ordinated action committing them to explicit and quantitative targets for the next decade.

6. NEXT STEPS

In preparing the Commission proposal for the Thematic Strategy, scheduled for mid-2005, the Commission will continue its process of extensive consultation initiated to help prepare this Communication, and invites contributions to the ideas and approaches presented. To this end, in 2004 the Commission will hold several stakeholder consultation events and technical working groups to examine in further detail the actions proposed, their feasibility and how they would contribute to improving the urban environment. They will be composed of a range of stakeholders and experts, including representatives of Member States, Acceding and Candidate Countries, regions, cities, enterprises, NGOs and academics.

The Commission web-site (www.europa.eu.int/comm/environment/urban/thematic_strategy.htm) will provide up to date documentation, and an opportunity for stakeholders to comment directly (deadline for comments is 15 April 2004).

Annex 1: Urban Environment Policy Development

The Thematic Strategy will constitute an important step in a series of initiatives that have contributed to the development of Europe's policy on the urban environment.

The 1990 "Green Paper on the Urban Environment"[80] presented a comprehensive and far-sighted review of the challenges facing the urban environment and for the first time proposed an overall approach and a series of actions at the European level, stressing the importance of developing co-operation and integration between policies.

The EU Expert Group on the Urban Environment was established in 1991.

The Sustainable Cities Project was launched in 1993. The aims of the project were to promote new ideas on sustainability in European urban settings; foster a wide exchange of experience; disseminate good practices on sustainability at the urban level; formulate recommendations for the EU institutions, national, regional and local authorities; and to assist the implementation of the European Community's Fifth Environmental Action Programme.

In 1996, the EU Expert Group produced a major report "European Sustainable Cities" in support of the Local Agenda 21 process. The report provided a detailed framework for local action, identifying urban management, policy integration, eco-systems thinking and co-operation and partnership as the basic principles for progressing towards sustainability in urban areas.

The 1997 Communication "Towards an Urban Agenda in the European Union"[81] built on this report, focussing on the economic, social and environmental challenges facing European towns and cities, and underlining the need for an urban perspective in EU policies. This was followed by the 1998 Communication on "Sustainable Urban Development in the European Union: A Framework for Action"[82] which for the first time took a true sustainable development approach, with four interdependent policy aims:

– *Strengthening economic prosperity and employment in towns and cities;*

– *Promoting equality, social inclusion and regeneration in urban areas;*

– *Protecting and improving the urban environment towards local and global sustainability; and*

– *Contributing towards good governance and local empowerment.*

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80 COM(1990) 218 final.
81 COM(1997) 197 final.
82 COM(1998) 605 final.

In particular, it detailed a series of policy objectives for improving the urban environment that remain valid and will provide the essential foundation for the Thematic Strategy:

– *Improve ambient air quality in urban areas, the reliability and quality of drinking water supplies, the protection and management of surface and ground waters; reduce at source the quantity of water requiring final disposal and reduce environmental noise.*

– *Protect and improve the built environment and cultural heritage, and promote biodiversity and green space within urban areas.*

– *Promote resource efficient settlement patterns that minimise land-take and urban sprawl.*

– *Minimise the environmental impacts of transport through aiming at a less transport-intensive path of economic development and by encouraging the use of more environmentally sustainable transport modes.*

– *Improve environmental performance of enterprises by promoting good environmental management in all sectors.*

– *Achieve measurable and significant reduction of greenhouse gas emissions in urban areas, especially through the rational use of energy, the increased use of renewable energy sources and combined heat and power and the reduction of waste.*

– *Minimise and manage environmental risks in urban areas.*

– *Promote more holistic, integrated and environmentally sustainable approaches to the management of urban areas, within functional urban areas, foster eco-systems-based approaches that recognise the mutual dependence between town and country, thus improving linkage between urban centres an their rural surroundings.*

In 2001, the EU Expert Group produced the report "Towards more sustainable urban land use: advice to the European Commission for policy and action".

On a wider level, Article 6 of the Treaty places sustainable development at the very centre of EU policies and actions, as underlined by the 2001 Communication "A Sustainable Strategy for a Better World: A European Union Strategy for Sustainable Development"[83].

[83] COM(2001) 264 final.

Annex 2: A European Vision for Sustainable Cities, Sustainable Urban Management, Transport, Construction and Design

The following visions proposed here have been developed following extensive consultation, and will be used to guide the Strategy and those that have a key role in its implementation.

European Cities of the 21st Century

Cities and towns should be designed, constructed and managed to support a healthy, vibrant, inclusive and environmentally efficient economy, to support the well-being of and meet the needs of its citizens in a sustainable manner, and be sensitive to and work in harmony with the natural systems which sustain it.

A vision for sustainable urban management

Sustainable urban management is a process through which the sustainable development of urban areas, their immediate environs and the regions within which they are located may be secured. It seeks to minimise the negative impacts of urban areas on ecological cycles at all levels, applying the precautionary principle, and to improve ecological conditions to make cities healthy places to live.

It focuses upon the preservation of the natural environment within its social and economic context, integrating the environment into other policies, and recognising the interrelated nature of the social, the economic and the environmental, and the need to secure equitable and just policy outcomes.

It requires reformed organisational structures which enable integrated policy approaches to urban problems to be developed, and is based on the best available information on the state of environment, using the most suitable approaches and tools which meet the specific needs of the urban areas in question. Local authorities are the natural hosts of sustainable urban management.

It develops a culture of learning, understanding and respect within organisations and amongst individuals involved in the processes of sustainable development policy making, and involves the participation of stakeholders, interest organisations and citizens in an open and inclusive decision making process.

It is a continuing cycle of problem analysis, planning and programming, implementation, monitoring, progress assessment, and evaluation that builds on accumulated knowledge and experience, ensuring that new policy approaches learn from past performance, and recognises the need for long term vision in policy making.

A vision for sustainable urban transport

A sustainable urban transport system:

– Supports the freedom of movement, health, safety and quality of life of the citizens of current and of future generations;

– Is environmentally efficient; and

– Supports a vibrant, inclusive economy, giving access to opportunities and services to all, including less affluent, elderly or disabled urban citizens and non-urban citizens.

It achieves these objectives by, amongst others:

– Promoting a more rational use of private cars, and favouring clean, quiet energy efficient vehicles powered by renewable or alternative fuels;

– Providing a regular, frequent, comfortable, modern, competitively priced, well linked network of public transport;

– Strengthening the share of non-motorised transport (walking and cycling);

– Making the most efficient use of land;

– Managing transport demand through the use of economic instruments and plans for behavioural change and mobility management;

– Being actively managed, in an integrated manner, with the participation of all the stakeholders;

– Having quantified short, medium and long-term objectives, with an effective monitoring system.

A vision for sustainable construction

Sustainable construction is a process where all the actors involved (e.g. owner, financier, engineer, architect, builder, material supplier, permitting authority) integrate functional, economic, environmental and quality considerations to produce and renovate buildings and a built environment that is:

– Attractive, durable, functional, accessible, comfortable and healthy to live in and use, promoting the well-being of all that come into contact with it.

– Resource efficient, in particular with respect to energy, materials and water, favouring the use of renewable energy sources and needing little external energy to function, making appropriate use of rain and ground water and correctly handling waste water, and using materials that are environmentally friendly, that can be readily recycled or reused, that contain no hazardous compounds and can be safely disposed of.

– Respects the neighbourhood and local culture and heritage.

– Is competitively priced, especially when taking into account longer-term considerations, such as maintenance costs, durability and re-sale prices.

A vision for sustainable urban design

Sustainable urban design is a process whereby all the actors involved (national, regional and local authorities, citizens, community based organisations, NGOs, academics and enterprises) work together to integrate functional, environmental and quality considerations to design and plan a built environment that:

- Creates beautiful, distinctive, secure, healthy and high quality places for people to live and work in that foster a strong sense of community, pride, social equity, integration and identity;
- Supports a vibrant, balanced, inclusive and equitable economy that promotes urban regeneration;
- Treats land as a precious resource that must be used in the most efficient way possible, reusing land and empty property within the urban area in preference to seeking new land outside and avoiding urban sprawl (compact cities and, at the regional level, concentrated decentralisation);
- Considers the relationship between cities and their hinterlands and wider regions;
- Ensures that new developments are located strategically, accessible by public transport, and respecting the natural environment (biodiversity, health, environmental risk);
- Has sufficient density and intensity of activity and use so that services such as public transport are viable and efficient whilst respecting a high quality living environment (privacy, personal space and minimising adverse effects such as noise);
- Promotes a mixed land use to make best use of benefits of proximity in order to minimise the need to travel between home, shops and employment;
- Has a green structure to optimise the ecological quality of the urban area (biodiversity, micro climate and air quality);
- Has high quality and well planned infrastructure including public transport services, streets, paths and cycleways to promote accessibility, particularly for disadvantaged communities, and to support a high level of social, cultural and economic activity;
- Makes use of state of the art resource saving approaches such as low energy housing, fuel efficient transport, district heating and recycling systems;
- Respects and enhances existing cultural heritage and communities.

Annex 3: Examples of Research or Demonstration Projects and Initiatives Financed by the Commission in Support of Sustainable Urban Management, Transport, Construction and Design

Sustainable Urban Management

"The City of Tomorrow and Cultural Heritage" Key Action within the 5th Framework Programme for research[84] has been active in providing tools that urban authorities need to manage their urban areas (for instance, the ECOLUP[85] project uses EMAS to manage land-use planning in local authorities) and in building the institutional and social capacity for urban sustainability. The LASALA project undertook a comprehensive review of the Local Agenda 21 initiative in Europe and created a self assessment tool for local authorities to use to report on their performance. The PASTILLE project looks at how environmental indicators should be used to greatest effect. The Commission is also funding a peer review project for local administrations using EMAS[86]. In the field of urban waste management, SWA-tool, for example, is developing a methodology for solid waste analysis, tested in some EU and accession country cities, and the PAYT project analyses the potential advantages and problems associated with a "pay as you throw" policy. INTEGAIRE is a thematic network on air quality management and urban governance, providing input to the Clean Air for Europe initiative.

Sustainable Urban Transport

To promote the spread of good practice across Europe, the Commission offers financial support to Europe's most advanced "light tower" cities through the CIVITAS Initiative[87]. CIVITAS currently brings together and supports a first group of 19 cities willing to introduce and demonstrate bold and innovative measures to radically improve their urban transport system. A second group of CIVITAS cities will be selected in 2004. The ELTIS website[88] and different teaching programmes[89] are used to strengthen the knowledge of urban transport professionals. The Urban Transport Benchmarking Initiative[90] allows cities to assess and improve the performance of their transport system through self evaluation.

Through the Sustainable Mobility and Intermodality[91] and the Energy[92] research programmes the Commission is supporting research and best practice demonstrations. Besides the above-mentioned CIVITAS Initiative, projects include the worlds biggest fuel cell bus demonstration project (CUTE). They address issues such as the implementation of urban road user charging schemes (PROGRESS), policy requirements for high quality public transport (VOYAGER), socio-economic impacts of urban transport investments (TRANSECON), urban freight policies (BESTUFS) and the assessment of mobility management and behavioural change programmes (MOST, TAPESTRY).

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84 www.cordis.lu/eesd/ka4/home.html
85 www.ecolup.info
86 www.emascities.org
87 www.civitas-initiative.org
88 www.eltis.org
89 www.transport-training.org , www.eu-portal.net
90 www.eltis.org/benchmarking/
91 europa.eu.int/comm/research/growth/gcc/ka02.html
92 europa.eu.int/comm/research/energy/nn/nn_rt_en.html

The City of Tomorrow and Cultural Heritage research programme covers urban transport and particularly the links with other issues. Examples of projects include the development of a practical tool to assist local authorities develop and monitor a range of transport studies to combat social exclusion (MATISSE), mobility services such as car sharing, including the launch of the first scheme in Eastern Europe in Bucharest (MOSES), the promotion of walking in urban areas (PROMPT), information dissemination on cycling strategies (VELOINFO) and the value of freight distribution centres (CITY FREIGHT).

Through STEER, the 'transport-part' of the new Intelligent Energy for Europe[93] programme, the Commission is also developing the promotion and dissemination of best practice, information and advice on the energy aspects of urban transport.

Within the IST programme in FP5 and FP4, the Commission has co-financed research projects developing methodologies for the assessment of traffic related air / noise pollution especially for urban areas. These projects have designed part or complete decision support systems, including the different necessary modules like sensors, data capture, data validation, data aggregation, modelling the prediction of air/noise quality (e.g. the projects ECOSIM, EFFECT, EMMA, HEAVEN, ADA, HARMONOISE). Other projects have dealt with the need to inform citizens and change via this information their behaviour as a function of air quality predictions (e.g. APNEE, APNEE-TU).

In the field of awareness raising for sustainable urban transport, the Commission initiated the annual European car-free day ("In town without my car!") in 2000[94]. Support for the event is growing, with 760 cities and towns involved in 2000, 1005 in 2001 and 1448 in 2002. In 2002, the Commission launched the European Mobility Week[25], a week-long event of awareness raising focusing on various aspects of sustainable mobility. Awards were given to the best performing cities. In 2003 and 2004 there will be a European Mobility Management Action Day during this week[95]. The Commission has produced various publications, including "Kids on the Move" (2002) and "Cycling: The Way Ahead for Towns and Cities" (1999)[96].

Sustainable urban construction

Several Community funding programmes support the development, demonstration and implementation of energy demand management in buildings. The most recent research Framework Programmes include work on eco-buildings which aims to reduce the consumption of energy in individual buildings and to promote the self-supply of new and renewable energies. The CONCERTO[97] initiative concentrates on the integration of self-supply and demand management techniques in larger "communities" of buildings. Its focus on energy efficiency, combined with renewable energies and new technologies will reduce the CO_2 emissions significantly in a cost-effective way. The Intelligent Energy for Europe[98] programme, acting closer to the market, aims to facilitate the replication at a very large scale, for example in the retro-fitting and new construction of social housing.

93 europa.eu.int/comm/energy/intelligent/index_en.htm
94 www.mobilityweek-europe.org/
95 www.emma-day.info
96 europa.eu.int/comm/environment/pubs/urban.htm
97 europa.eu.int/comm/dgs/energy_transport/rtd/concerto/index_en.htm
98 europa.eu.int/comm/energy/intelligent/index_en.htm

"The City of Tomorrow and Cultural Heritage" programme is very active on sustainable construction issues. Several projects constitute a major step forward in establishing and promoting sustainable construction and renovation practices in Europe. PRESCO aims to define a European Code of Practice for Sustainable Building, and CRISP aims to develop and validate harmonised criteria and indicators to measure the sustainability of construction projects particularly within the urban built environment. SUREURO deals with the sustainable refurbishment of post war housing in Europe and aims to develop practical management tools for integrating sustainable development and tenant participation in the process. A 40% reduction in overall energy use is planned. The RUFUS project considers methodologies for the re-use of foundations in urban areas to reduce costs and waste generated and the SHE project, proposed by social housing organisations, aims to manage the building process of some 750 sustainable dwellings. The WAMBUCO project will produce a waste manual for building construction to save resources and improve on-site productivity. Sustainable construction techniques and technology are also being addressed in the framework of the Commission's Environmental Technology for Sustainable Development Action Plan.

Sustainable urban design

The "City of Tomorrow and Cultural Heritage" research programme supports research projects on the revitalisation of city centres and neighbourhoods (including the rehabilitation and re-use of contaminated and brownfield sites), sustainable retrofitting of urban areas such as large housing estates and on ways to reduce urban sprawl, especially through the integration of land use and transport planning. Examples include the ECOCITY project analysing the links between land use and transport, the LUTR project producing a guide to decision makers on achieving sustainability in land use and transport and the SCATTER project looking at urban sprawl. The HQE²R project aims at providing a methodology to help municipalities move towards a sustainable urban renewal and development. A cluster of five projects seeks to assess the various contributions of green spaces to urban sustainability and develop tools for their management and planning in towns and cities. A number of projects deal with the integration of cultural heritage into urban development planning. For example, the SUIT project aims to specify procedures to apply the SEA and EIA Directives in towns and cities with an important cultural heritage dimension. The UGIS project examines how urban development programmes can promote social inclusion and better urban governance. CABERNET[99] is a concerted action across 21 European countries with the aim to facilitate the development of new sustainable solutions for the rehabilitation of urban brownfields.

The Joint Research Centre is also active in this area. The MOLAND[100] database covers around 40 urban areas and monitors land use to provide data on the correlation between land use policies and demographic trends with spatial evolutions. The JRC is also working on a framework for integrating the concepts of spatial planning and sustainable urban management into a decision support system for preventing and mitigating the effects of extreme weather driven events (flooding, forest fires, landslides).

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99 www.cabernet.org.uk

100 moland.jrc.it/

Annex 4: EU Transport Council Definition of Sustainable Transport

The EU Transport Council adopted in April 2001 the following definition: a sustainable transport system:

– allows the basic access and development needs of individuals, companies and societies to be met safely and in a manner consistent with human and ecosystem health, and promotes equity within and between successive generations;

– is affordable, operates fairly and efficiently, offers choice of transport mode, and supports a competitive economy, as well as balanced regional development;

– limits emissions and waste within the planet's ability to absorb them, uses renewable resources at or below their rates of generation, and, uses non-renewable resources at or below the rates of development of renewable substitutes while minimising the impact on the use of land and the generation of noise.

Annex 5: Examples of the Use of the Structural Funds and the Cohesion Fund for Sustainable Urban Development

An underground for Athens

This was an ambitious project for a city of four million inhabitants which was also one of the most polluted cities in Europe. Athens has 1.4 million vehicles but public transport had been reduced to one over-land electrified line and an inadequate bus services. The level of use of the public transport system had effectively collapsed. However, European Union funding and favourable loans from the European Investment Bank allowed two new underground lines to be brought into service in early 2000. This reduced the number of daily trips by private vehicles by an estimated 250,000. It has helped to achieve significant savings in time and energy use, a better quality of life for residents, a better urban environment, and a better image for the city in general.

In terms of employment, 4,500 people were involved in constructing the sections currently in service, 3,000 more are working on the new extension, and the public corporation managing the new metro has created 800 permanent jobs.

Building policies for the outskirts of cities

The proliferation of large shopping centres and factory outlets centres on the edge of towns and cities has negative effects on the urban and regional balance and on the environment. It promotes the decline of city centres, increased traffic, successive encroachment of green areas and deterioration of the landscape. These consequences can have repercussions on border regions in neighbouring countries. To limit these developments and ensure coherence, regional planning policies must be coordinated in cross-border areas and be part of a long-term transnational approach.

The relevant regional authorities of North-Rhine Westphalia (Germany), the Province of Limburg (Netherlands), the Walloon Region and the Flemish Region (Belgium) and a German NGO carried out the TRADE project.. A cross-border working group brought together the knowledge needed to evaluate the applications for new retail shopping centres, introduced a system of consultation and developed common working methods. It compared the experiences of the respective authorities and studied the consequences of building the centres, particularly in border areas. Finally, it defined guidelines which all partner authorities adopted. In parallel, workshops were organised (shop owners, local authorities and other institutions) to inform them about the situation and to give them an opportunity to say what they thought about the TRADE project.

The four regions now have common principles and criteria to ensure that the building of retail shopping centres does not negatively affect local and neighbouring town centres or harm the environment. The granting of building permits is based on these references. A plan to build 7 factory outlet centres, representing a total area of 100,000 m², was subjected to these principles, and the number of centres was reduced to 2, with smaller retail surface areas. As a pilot transnational project, TRADE will lead to the creation of a transnational network for the coordination of regional policies in this matter.

Dublin: priority for buses and cyclists

With assistance from the European Union, the Dublin authorities started a series of interlinked schemes to improve traffic flow in the urban area of Greater Dublin. A network of "corridors" will be reserved for a quality bus service, pedestrian precincts and 60km of cycle tracks have been laid out and traffic has been organised to give priority to cyclists. In addition, several bicycle parks have been built in the city centre, at stations, along the principal roads into the city.

Palermo is improving the local environment by increasing the efficiency and reliability of public transport

A project implemented in Palermo as part of the Urban programme is bringing new technology to transport. The result is an integrated public transport management system, known as "Saturn" (Satellite Application for Transport in Urban Nodes) which uses geostationary satellites. It records the exact position of each vehicle on the bus route and displays its precise time of arrival on electronic display units installed at each stop. Users know exactly how long they will have to wait and can plan accordingly.

Cleaner water gives new life to Szczecin

Located on the river Odra, the port city of Szczecin (population 420,000) is a major contributor to pollution in the Baltic Sea. At present, the city has only one small, mechanical wastewater treatment plant. Only 13% of the total wastewater generated in the city is treated. The quality of drinking water in Szczecin is also poor, well below EU standards. The city's water supply is largely dependent on a single pipeline from one main water source at the Miedwie lake, to the south east of the city. The rate of leakage in the water distribution system is high.In March 2000 the city completed a master plan to implement a major programme of investment, which includes two new wastewater treatment plants, up-grading the existing plant, and a major programme of sewerage extension and rehabilitation. The overall aim is to enable the city to achieve compliance with EU standards, in particular the Urban Wastewater Directive and the Drinking Water Directives.

Further information on these projects and others can be obtained from:
http://europa.eu.int/comm/regional_policy/projects/stories/index_en.cfm

Annex 6: The Urban Environment in Environmental Policy

Water: Emission control is essentially provided for by the Urban Waste Water Treatment Directive[101]. Going beyond emission controls, the Water Framework Directive[102] sets an obligation to achieve good water quality for all waters, and introduces a holistic management of each river basin and its catchment area. In terms of consequences for the urban areas, the good quality of all waters makes it easier to provide good quality drinking water, as required by the Drinking Water Directive[103], and also to provide recreational and bathing waters of good quality, as required by the Bathing Water Directive[104].

However, of much greater significance to towns and cities is the river basin management process which requires the participation and contribution of local authorities. Cities and towns own or regulate much of the water-related infrastructure and have permitting and taxation powers that could be used to considerably improve the sustainable use of water.

For example, promoting the permeability of surfaces in urban areas and the separation rainwater runoff from the sewage system, could contribute to natural groundwater recharging, reduce costs of waste water collection and treatment, and reduce flooding. They could invest in or require the renovation of the water supply system to reduce the current high levels of leakage. They could promote more sustainable use of water in households and industry via their permitting powers and could set targets for per capita consumption, generalising the implementation of water demand management, and supporting these targets with appropriate local water taxes and/or pricing.

In order to bring more cities to make more significant contributions to the management of river basins, several measures could be proposed. The general implementation of environmental management systems that cover water use, as presented in section 2.1.3, would provide the general basis for getting small cities more actively involved, but still with the freedom to set their own targets for water as appropriate locally. To support this process, the Commission will prepare appropriate guidelines on how urban authorities can implement sustainable water management and contribute more effectively to the river basin management, and could where appropriate propose more targeted measures of a binding nature.

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101 Council Directive 91/271/EEC of 21 May 1991 concerning urban waste-water treatment (OJ L 135, 30.5.1991, p. 40).

102 Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy (OJ L 327, 22.12.2000, p. 1).

103 Council Directive 98/83/EC of 3 November 1998 on the quality of water intended for human consumption (OJ L 330, 5.12.1998, p. 32).

104 Council Directive 76/160/EEC of 8 December 1975 concerning the quality of bathing water (OJ L 31, 5.2.1976, p. 1).

Climate change and energy: A number of cities, for example those in the Climate Alliance and Energie-Cities networks, are taking initiatives that support the wide range of measures the EU Climate change programme (ECCP[105]). The Commission will continue to support such networks (see section 5.1). However, their proactive approach and contributions need to be generalised, and the measure proposed in section 2.1.3 to generalise the implementation of urban management systems, covering amongst others the collective management of energy and green house gas emissions in the town concerned, is perhaps the most cost-effective way of doing so. This would encourage the towns and cities to feel responsible for the energy use and greenhouse gas emissions coming from their territory and would lead them to set their own targets for their contribution in this area.

Air: The basic framework for air quality is set by Directive 96/62, requiring, amongst others, Member States to produce detailed action plans for urban zones and agglomerations where limit values are exceeded. Limit or target values have been set by daughter Directives for SO_2, particles, CO, benzene, NO_2, NO_x, lead and tropospheric ozone (and shortly PAHs and heavy metals), and national emission ceilings have been set for SO_2, NOx, VOCs and ammonia. Various Directives set emission limits for different categories of vehicles and motor fuel quality (see section 2.2.2), and Directive 99/13[106] limits the emissions of volatile organic compounds (VOCs) from a wide range of industrial installations.

The on-going CAFE (clean air for Europe) programme[107] is in the process of establishing a comprehensive scientific basis for linking air pollution and its effects on health, eco-systems and cultural heritage, in preparation for the Thematic Strategy on Air Pollution scheduled to be proposed in mid-2005. Its objective is to outline the actions needed in Europe at different levels to meet ambitious objectives to protect the environment and human health from significant negative impact from air pollution. In particular it may outline new limit values for air quality as well as emission limit values/standards for vehicles and industrial activities. Such more technically oriented solutions can be effectively complemented by the development of measures that contribute to making urban transport more sustainable (see section 2.2) and the CAFE programme will take into account such alternatives in the development of its measures. CAFE will also explore the links between outdoor and indoor air quality in urban areas, and the reporting requirements on air quality will be reviewed to allow an urban focus.

Noise: Directive 2002/49 relating to the assessment and management of noise requires Member States to map exposure to environmental noise and to adopt, at the appropriate administrative level, action plans to manage noise, amongst others for large agglomerations (initially those with more than 250,000 inhabitants and later those with more than 100,000 inhabitants). Noise maps are to be produced using common indicators, therefore allowing for comparability throughout the EU.

Nature and Biodiversity: While the implementation of the Birds[108] and Habitat[109] Directives and of the NATURA 2000 network concerns mostly non-urban areas, a number of protected

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105 COM(2000) 88 final.

106 Council Directive 1999/13/EC of 11 March 1999 on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain activities and installations (OJ L 85, 29.3.1999, p. 1)

107 COM(2001) 245 final.

108 Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds (OJ L 103, 25.4.1979, p. 1).

species and/or habitats are nevertheless found in urban areas where their protection raises specific difficulties. Guidelines are therefore needed to help the relevant authorities, including the local authorities, to deliver adequate protection. More generally, a surprisingly high proportion of species may be found in urban areas, in the parks and gardens and other green spaces, and there is an enormous potential to reinforce and develop this urban biodiversity to the benefit of both the species and the inhabitants. For example a number of cities are beginning to develop "green-corridors" to link green spaces within the town and with the neighbouring countryside, reducing the isolation of these natural urban populations. Raising the awareness of urban citizens on nature and biodiversity is also an important investment that will bring many positive benefits in the longer term. The 2001 Communication on a biodiversity action plan for the conservation of natural resources[110] foresaw, amongst others, a series of actions specifically for urban areas. The Commission will report to the Council and Parliament in 2004 on the progress in implementing the plan, reviewing the relative priorities of the different actions. The urban aspect will receive full consideration in this report. The Commission will also develop biodiversity indicators

Waste: With 80% of the population living in urban areas, an equivalent proportion of various types of waste, such as municipal solid waste, sewage sludge, commercial waste, construction and demolition waste, is generated in towns and cities, and is affected by the key environmental legislation on waste. This includes principally the Waste Framework Directive[111], which requires Member States to ensure that waste is treated without endangering human health or the environment, lays down permitting and inspection obligations and to adopt waste management plans, the Landfill Directive[112] which sets requirements for safe landfill and the reduction of waste going to landfill, in particular biodegradable waste, the Packaging Waste Directive[113], which sets recovery and recycling targets, the Incineration Directive[114] which sets emission limit values for incinerators, and the ELV[115] and EEE[116] Directives, which set recovery, recycling and reuse targets and take-back obligations for end-of-life vehicles and electronic and electrical equipment respectively.

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109 Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (OJ L 206, 22.7.1992, p. 7).

110 COM(2001) 132 final.

111 Council Directive 75/442/EEC of 15 July 1975 on waste (OJ L 194, 25.7.1975, p. 39).

112 Council Directive 1999/31/EC of 26 April 1999 on the landfill of waste (OJ L 182, 16.7.1999, p. 1).

113 European Parliament and Council Directive 94/62/EC of 20 December 1994 on packaging and packaging waste (OJ L 365, 31.12.1994, p. 10).

114 Directive 2000/76/EC of the European Parliament and of the Council of 4 December 2000 on the incineration of waste (OJ L 332, 28.12.2000, p. 91).

115 European Parliament and Council Directive 94/62/EC of 20 December 1994 on packaging and packaging waste (OJ L 269, 21.10.2000, p. 34).

116 Directive 2002/96/EC of the European Parliament and of the Council of 27 January 2003 on waste electrical and electronic equipment (WEEE) (OJ L 37, 13.2.2003, p. 34).

The Thematic Strategy on the Prevention and Recycling of Waste and the Thematic Strategy on the Sustainable Use and Management of Resources are together developing an overall strategy that will amongst others contribute to minimising the production of waste and maximising its recovery. The highly "concentrated" production of waste in urban areas facilitates its selective recovery and treatment, and provides opportunities and challenges that merit a particular urban focus on waste-related issues. Furthermore, local authorities are key players in the implementation of waste policy. In particular, a number of local initiatives aim at encouraging participation of the population and small businesses in waste planning, waste prevention and recycling. Other aspects of waste policy concerned by urban planning include location of waste collection, pre-treatment and treatment facilities and environmentally friendly transport systems such as transport on waterways. Such approaches are closely related to the implementation of Local Agenda 21s. The Commission will explore the possible role of the Community in the development of these initiatives. In particular, the urban dimension of managing certain waste flows, such as construction and demolition waste, will be taken into account in the definition of future Community policy promoting recycling.