COUNCIL OF THE EUROPEAN UNION

Brussels, 13 January 2006

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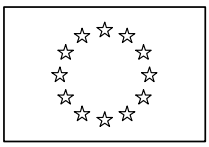
ADDENDUM TO COVER NOTE

from:	Secretary-General of the European Commission, signed by Mr Jordi AYET PUIGARNAU, Director
date of receipt:	12 January 2006
to:	Mr Javier SOLANA, Secretary-General/High Representative
Subject:	Commission Staff Working Document Annex to the communication from the Commission to the Council and the European Parliament on the Thematic Strategy on the Urban Environment Impact Assessment

Delegations will find attached Commission document SEC(2006) 16.

Encl.: SEC(2006) 16



COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 11.1.2006
SEC(2006) 16

COMMISSION STAFF WORKING DOCUMENT

Annex to the

COMMUNICATION FROM THE COMMISSION TO THE COUNCIL AND THE EUROPEAN PARLIAMENT

on Thematic Strategy on the Urban Environment

Impact Assessment

{COM(2005) 718 final}

TABLE OF CONTENTS

LEAD DG: DG ENVIRONMENT

OTHER INVOLVED SERVICES: None

AGENDA PLANNING OR WP REFERENCE 2005/ENV/038

1. EXECUTIVE SUMMARY

This Impact Assessment relates to the proposed Thematic Strategy on the Urban Environment. The Strategy is one of 7 requested by the 6th Environmental Action Programme[1]. The Impact Assessment outlines the policy context for the Strategy, the problems facing Europe's urban areas, defines the objective of the Strategy and the expected impacts of the different proposals developed to address the problem identified.

The preferred approach identified through the Impact Assessment is to encourage the widespread adoption of known and proven techniques by facilitating the exchange of good practice and information, providing guidance on key issues and making available opportunities for Commission support for specific projects and activities. The Thematic Strategy on the Urban Environment will support Member States, regional and local authorities in their efforts to improve the quality of the urban environment and reduce the adverse environmental impact of Europe's urban areas on the wider environment. The Strategy will highlight the key role of urban local authorities in achieving a high quality and healthy urban environment.

No costs are directly imposed by this approach since the measures are voluntary in nature. The costs incurred by local authorities adopting the recommended initiatives on a voluntary basis are considered to be proportionate and reasonable compared to the benefits that they can give.

The initiatives proposed contain a high degree of flexibility to reflect the diversity of urban areas across Europe. It is fundamental that the actions to improve the environment in each urban area are based on the local situation in terms of priorities, geographical and physical issues and available resources and are developed after consultation with stakeholders. This means that the scale of the impact on the quality of the urban environment as a result of the initiatives proposed cannot be precisely quantified but is considered to be beneficial. Extensive consultation with stakeholders has shown that this preferred approach is widely considered to be the most appropriate one for Thematic Strategy on the Urban Environment.

2. PROCEDURAL ISSUES AND CONSULTATION OF INTERESTED PARTIES

2.1. Organisation and timing

The Thematic Strategy on the Urban Environment is item ENV/038 in the Commission's work programme for 2005. An inter-service group was not established.

[1] Decision No 1600/2002/EC

2.2. Consultation and Expertise

The Communication "*Towards a Thematic Strategy on the Urban Environment*"[2] was the subject of Council Conclusions[3] in October 2004. These conclusions welcomed the Communication and supported the analysis of the environmental problems facing Europe's urban areas but invited the Commission to review the justification for suggested obligations in the areas of environmental management and urban transport in the light of the principle of subsidiarity, current legislation and procedures at both Community and national levels. A similar opinion was also received from the Committee of the Regions[4].

Key messages from stakeholders in the consultations[5] were support for the analysis of the problem as set out in the Communication; the importance of the four priority themes (management, transport, construction, design[6]); and a predominance of objections to obligations (the importance of the subsidiarity issue and the need to take into account local conditions (geographical, cultural, historical), local administrative systems and existing requirements).

Local authorities welcomed proposals for additional guidance on integrated management at the local level for environmental issues and urban transport, and supported the exchange of best practices, skills and knowledge. They also expressed a need for city-focused guidance, a dedicated website, and the importance of materials being available in local languages. Responses from private individuals showed widespread concern with the quality of the environment in urban areas and the perception that key concerns were getting worse (i.e. growth in private transport, noise, air quality, waste and greenhouse gas emissions). Respondents felt that improvements in public transport, promotion of cycling and walking, retrofitting of public vehicles and banning the most polluting vehicles from entering the city were priorities.

A survey of the 462 largest urban areas[7] in the EU 25 provided further data for this impact assessment. More detailed questionnaires were discussed with selected urban areas and desk research was undertaken on the latest research findings of relevance to the Strategy. The consultant's reports are available[8].

The Thematic Strategy has been developed in close consultation with stakeholders, particularly local, regional and national authorities dealing with urban environment policies as well as NGOs, businesses and researchers. Annex A sets out the main consultations undertaken. Many Member States have also undertaken consultations with their local authorities to provide input. The two formal consultation exercises (February 2004 and July 2005) both met the Commission's consultation standards. All these opinions have been taken into account in developing the final Strategy.

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2 COM(2004)60

3 http://ue.eu.int/ueDocs/cms_Data/docs/pressdata/en/envir/82253.pdf

4 http://coropinions.cor.eu.int/CORopinionDocument.aspx?identifier=cdr\comm.developpement2002-06\dossiers\deve-029\cdr93-2004_fin_ac.doc&language=EN

5 http://www.europa.eu.int/comm/environment/urban/thematic_strategy.htm

6 The term 'urban design' is taken to mean the structure of the urban settlement

7 Those with more than 100,000 inhabitants.

8 http://www.europa.eu.int/comm/environment/urban/impact_assessment.htm

3. POLICY CONTEXT

The 6th Environment Action Programme (6th EAP) requests the development of a Thematic Strategy on the Urban Environment (see annex B).

The Commission set out its analysis of the problems facing Europe's urban areas in the interim Communication based on the 4 priority themes (environmental management in urban areas, urban transport, sustainable construction and sustainable urban design). For each theme, measures were proposed for consultation with the goal of facilitating an integrated approach across different policies and levels of administration and to support the mainstreaming of good practice at the local level.

4. WHAT PROBLEM IS THE URBAN ENVIRONMENT STRATEGY EXPECTED TO TACKLE?

European urban areas face a number of environmental challenges. Although the scale and intensity of the problems varies, a common core set of challenges can be identified as follows: poor air quality, high levels of traffic and congestion, high levels of ambient noise, neglect of built environment, high level of greenhouse gas emissions, urban sprawl and generation of large volumes of waste and waste water. The impact on the quality of life is significant since 80% of European citizens live in urban areas. A detailed description of the challenges facing Europe's urban areas is given in Annex C, where the likely evolution of the problems in light of existing policy initiatives is also set out. The social and economic dimensions of these challenges are also explored.

In summary, the environmental challenges faced by Europe's urban areas are serious and have significant impacts on health and economic performance. Current trends in some issues, such as air quality, are heading in the right direction although even here, nearly half of all EU citizens live in urban areas where existing air quality limits are breached with consequent impacts on human health. Current trends for transport, noise and urban sprawl show that these problems are increasing.

Europe's local authorities employ a wide range of different approaches to tackle the environmental challenges that their urban areas face. It is widely recognised that the most successful employ integrated approaches to the management of the urban environment, for instance through initiatives such as Local Agenda 21. These initiatives involve the establishment of a *clear vision* and the adoption of a high-level, *strategic approach to management*. In this context, possible links between different policies are analysed and actions to address problems are assessed to ensure that they do not have adverse impacts on other policies – not only in the environmental sector but also in social and economic sectors. In this way, an over-arching, sustainable and integrated vision for the management of the urban environment is developed and implemented.

This is different to the traditional approach where officials in different departments develop policies with little contact to other policies and have less involvement in key decisions related to the management of the whole urban area. **The lack of an integrated approach to the management of the urban environment is the problem that the Thematic Strategy will address.**

Integrated approaches to the management of the urban environment bring benefits for the local authority (better administrative functioning, better coordination and planning of environment issues, higher staff awareness of environmental issues) and for the quality of the urban environment (more recycling, better green spaces, more nature conservation areas, lower energy use, higher public transport use). Section 7.3.1 provides more detail on the benefits of certain approaches to integrated management of environmental issues.

Expert working groups[9] and stakeholders' consultations have shown that, without adopting integrated approaches to the management of the urban environment, there is a risk that:

– initiatives are in conflict with other environmental, social or economic policies;

– local initiatives to resolve a problem lead to new problems in other places; or

– initiatives developed at the national and European level are not easily delivered and implemented at the local level.

An integrated approach to management is needed:

– across relevant environmental policies (at all levels of administration, including initiatives at national and European level);

– between environmental policies and other relevant policies in the social and economic sector such as transport (at all levels of administration);

– between different administrations (e.g. local and regional authorities and between neighbouring administrations).

4.1. Member State Policies for integrated management

Some Member States have legislated for integrated approaches to the management of the urban environment. Given the particular importance of urban transport, several have also legislated for integration to reduce the negative effects (environmental and social and economic) of urban transport.

Integrated Strategies for Environmental Management at the Local Level
Various Member States, notably Belgium (Flanders), Denmark, France, Hungary, Poland and Slovenia, have legal obligations in place which require integrated strategies for environmental management at the local level. The nature and scope of the obligations varies (see Annex D). Other Member States have legal obligations which cover local environmental issues to a lesser degree (e.g. UK).

Integrated Strategies for the Management of Urban Transport
Only very few Member States (France and UK) have legal obligations which require the preparation of integrated strategies for the management of urban transport. Both obligations are broad in nature and seek to address the problems caused by urban transport systems in an integrated way (Annex D). They include measures to address the needs of citizens that do not have access to private cars, reduce emissions from

[9] Expert working groups were established to provide input for the development of the Thematic Strategy in 2003 and 2004 on the priority themes (management, transport, construction and design).

transport, promoting public transport use, business travel plans and increasing cycling.

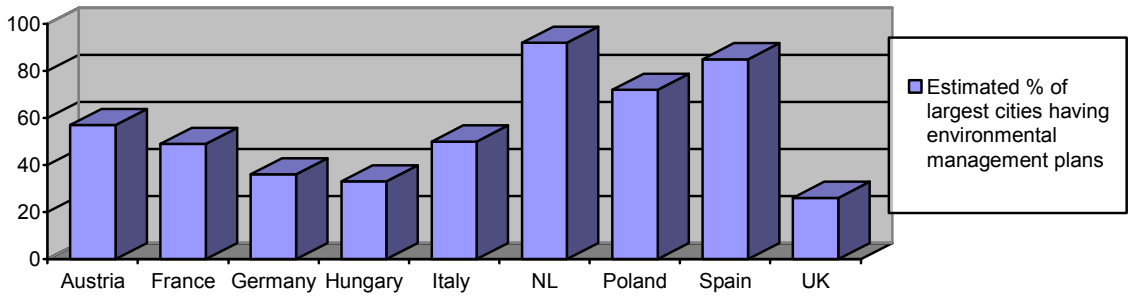
4.2. Existing Voluntary Practice on Integrated Management at the Local Level

Integrated Strategies for Environmental Management at the Local Level

European local authorities have been active in developing integrated strategies for environmental management on a voluntary basis. More than 5,000 Local Agenda 21 strategies have been developed in Europe although implementation and follow-up is often weak. More than 2,500 local authorities signed the Aalborg Charter[10] (a voluntary initiative developed by cities committing signatories to adopt an integrated approach to the management of the urban area) and more than 270 have signed the more recent Aalborg Commitments which requires signatories to put the integrated approach into practice by developing integrated action plans at the local level.

From the survey undertaken for this Impact Assessment, it is estimated that the percentage of Europe's largest urban areas[11] that have an integrated strategy of some sort for environmental management at the local level varies between 29% and 77%[12]. Many of these will be strategies developed under national legal obligations or voluntary initiatives such as the Aalborg Charter or Local Agenda 21. (See Annex E for definitions used.)

For selected countries[13], the graph below shows the variation in the percentage of urban areas that have environmental management plans as defined by the survey.



The effectiveness of such plans depends on their level of ambition and scope but most important is the degree to which they are implemented and this is often a weak aspect of some initiatives.

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10 www.aalborgplus10.dk

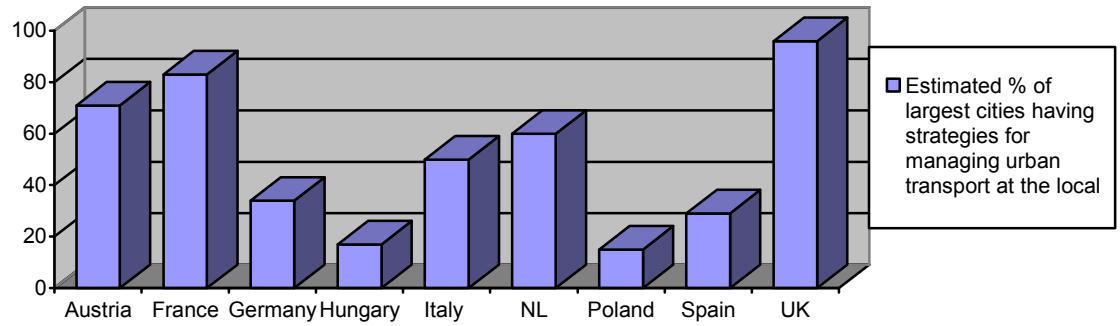
11 Those with more than 100,000 inhabitants and all capital cities (462 in total).

12 This estimation is based on the results of the survey undertaken for this Impact Assessment. Four different scenarios were used to estimate the total number of cities with plans (See Annex H). These four scenarios produce the range above for the total 462 cities. It does not show the variation according to different Member States.

13 Other countries did not have sufficient survey responses to allow a meaningful analysis and comparison.

Integrated Strategies for the Management of Urban Transport

The percentage of the largest urban areas that have an integrated strategy for the management of urban transport is estimated between 36% and 56% (see footnote 12). The distribution of such strategies reflects national policies; France and the UK have obligations to develop transport management plans at the local level.



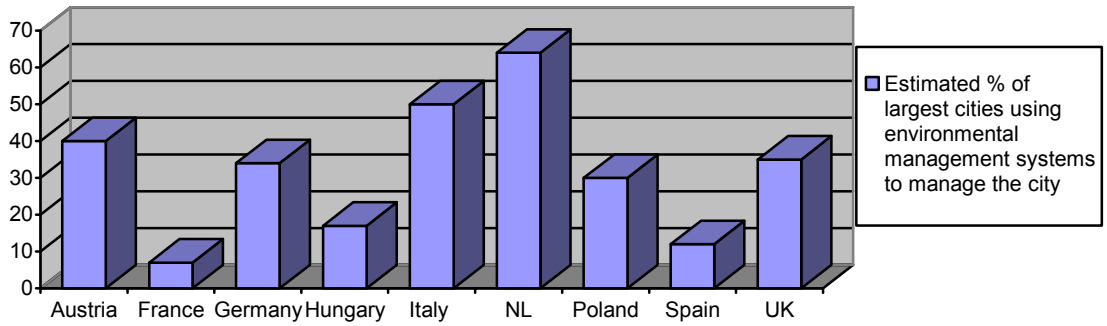
Management Systems

An Environmental Management System is a set of processes and practices that enables an organisation to reduce its environmental impacts and increase the efficiency with which environmental policies are implemented. This is done by integrating fully the environmental objectives into the overall operation of the authority. A management system therefore helps ensure that strategies or plans (e.g. environmental management plan, sustainable urban transport plan) are implemented.

The percentage of Europe's largest urban areas that use a management system to administer some aspects of their urban environment is estimated between 12% to 33% (see footnote 12). Management systems can be used to achieve improvements in the performance in a single local authority department (e.g. road maintenance) or to achieve improvements in the environmental performance of a whole urban area by using them as strategic systems to manage issues such as air quality, waste management or transport. Using a management system as a strategic system to improve performance in the wider urban area is highlighted in the interim Communication[14] and confirmed by consultation as the most important approach.

Several management systems can be used in this way (e.g. EMAS, ISO 14001, eco-budget). Approximately 170 European local authorities are EMAS registered with nearly 60 using EMAS to manage at least one aspect of the urban environment such as air quality. Many of these local authorities will be in urban areas smaller than 100,000 inhabitants.

[14] COM(2004)60 "Towards a Thematic Strategy on the Urban Environment".



4.3. Institutional issues in delivering integrated environmental management

A 2003 expert working group[15] on sustainable urban management identified the most important issues preventing the adoption of an integrated approach at the local level. These included the additional work and resources required to implement these new ways of working, the lack of political support and new skills needed. Consultations with stakeholders highlighted the need for guidance on how to manage the urban environment in an integrated way. The working group also highlighted the institutional issues that hinder the delivery of integrated environmental management at the local level.

- **Insufficient cooperation beyond administrative boundaries:** many of the problems identified in Annex C require cooperation beyond the boundary of a single local authority. This is particularly true where traffic enters the city from the surrounding region and also where an urban area is comprised of several local authorities (e.g. Athens, Brussels and London).
- **Insufficient horizontal cooperation across different policies ("silo thinking"):** the development of policies in isolation prevents links and efficiencies from being identified and risks developing solutions that work against other policies.
- **Development via short-term and isolated practices:** the lack of a long-term strategic vision can make integration difficult since no guiding principles are established for all decisions and policies to follow.
- **Insufficient public participation**: public involvement in decisions affecting the local environment helps deliver effective solutions and gain public support.
- **Insufficient vertical cooperation between different administrative levels**: authorities need to coordinate their activities to effectively address the environmental problems highlighted.

15 http://www.europa.eu.int/comm/environment/urban/sustainable_urban_management.htm; The expert working group was established to provide input to the Communication "Towards a Thematic Strategy on the Urban Environment" COM(2004)60

5. WHAT ARE THE OBJECTIVES OF THE URBAN ENVIRONMENT STRATEGY?

5.1. What is the overall policy objective?

The 6th EAP recognises the importance of integrated approaches to environmental management and sets the objective for the Thematic Strategies of achieving better integration of policies. Integration of different policies on the basis of a geographical definition distinguishes the Urban Environment Strategy from the other six Thematic Strategies requested in the 6th EAP. The other Thematic Strategies are focussed on an environmental medium (air, soil, marine) or a specific environmental issue (waste, resources, pesticides).

Based on discussion with stakeholders, this strategic objective is broken down into three broad objectives:

- Better implementation of existing EC policies and legislation at the local level;
- Improved quality of the urban environment, making cities more attractive and healthier places to live, work and invest in; and
- Reduced adverse environmental impact of cities on the wider environment.

These objectives must take into account the related social and economic issues.

5.2. Specific objective of the Thematic Strategy on the Urban Environment

The Thematic Strategy on the Urban Environment will contribute to delivery of these three broad policy objectives by facilitating and supporting the widespread adoption of known and proven techniques for the integrated management of the urban environment at the local level.

5.3. Has account been taken of any previously established objectives?

Many Community policies seek to address the issues covered by the Urban Environment Strategy but they generally adopt a sector by sector approach. In terms of the integrated management of the urban environment, the Commission has adopted 3 previous Communications[16]. The Thematic Strategy on the Urban Environment builds on these and identifies specific measures that can be taken to put into practice the policy recommendations that they make. The promotion and support for an integrated approach to management through the Thematic Strategy will improve the coherence and efficiency of other policies, support their full implementation and possibly reduce costs by avoiding overlaps and duplication.

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16 "*Green Paper on the Urban Environment – Communication from the Commission to the Council and Parliament"* (COM(90)218), "*Communication from the Commission – Towards an Urban Agenda in the European Union*" (COM(97)197) and "*Communication from the Commission – Sustainable Urban Development in the European Union: A Framework for Action*" (COM(98)605)

6. WHAT ARE THE MAIN POLICY OPTIONS AVAILABLE TO REACH THE OBJECTIVE?

6.1. What is the basic approach?

Stakeholders have confirmed that good examples of tools and techniques for the integrated management of the urban environment already exist. The basic approach of the Urban Environment Strategy is therefore to stimulate the wider use of these known and proven practices and techniques so that it is not just the 'best' urban areas that employ them. The intention is to support the raising of the standard of all urban authorities up to that of the best authorities by supporting urban authorities in learning from one another.

The interim Communication proposed a number of different initiatives to provide this support and facilitate the use of good practices by local authorities. A selection of these initiatives would form the basis of the Thematic Strategy.

In order to evaluate the likely added value that the different initiative would bring in addressing the problems facing urban areas, each initiative has been assessed for its likely benefits and costs. By assessing each initiative (including those for possible Directives on environmental management and urban transport planning) an informed choice can be made about which ones should be included in the final Thematic Strategy. The likely impacts of the different initiatives are assessed one by one (the menu of initiatives for the final Strategy). To compare this against the situation without the Thematic Strategy on the Urban Environment, a baseline scenario was developed (Baseline scenario).

> **Baseline scenario: The situation without the Thematic Strategy on the Urban Environment.** The likely evolution of the challenges facing urban areas in the absence of the Urban Environment Strategy is assessed. The impacts of existing policies and new initiatives such as those announced in other Thematic Strategies are taken into account.
>
> **Scenario for the Thematic Strategy: A package of initiatives to facilitate the use of best practice techniques in the integrated management of the environment.** The Thematic Strategy will comprise a package of initiatives to support Member States and local authorities in adopting integrated approaches to the management of the urban environment and ultimately improve the environmental performance of urban areas. The benefits and costs these different initiatives that could be included in the Urban Environment Strategy are assessed one by one (including proposals for new Directives). The impacts of the measures proposed (both positive and negative) will be described and discussed and also, as far as possible, a quantified assessment of the degree to which these contribute to addressing the problems highlighted in Annex C. From this 'menu' of initiatives, the measures for the final Thematic Strategy will be selected.

Initiatives set out in the interim Communication which have now taken place (e.g. the integration of urban environment issues into the Commission's proposals for the future Cohesion Policy) are not included in this impact assessment.

6.2. Which options have been discarded at an early stage?

It was clear from an early stage that the diversity of Europe's urban areas means that certain types of initiative would not help solve the challenges that European cities face. New legal obligations containing prescriptive targets (e.g. to specify modal split targets for urban transport systems) would not reflect the situation faced in different European cities.

Neither is it considered possible to identify a single performance standard for the urban environment as a whole. This is possible for certain environmental media, for instance freshwater where a clear legislative qualitative objective ('good ecological status') is to be achieved by a certain date.

These types of legislative proposals were therefore excluded early in the process. Stakeholders confirmed that this was the right approach in the consultation exercises.

7. IMPACTS OF THE DIFFERENT SCENARIOS

7.1. Baseline scenario - Situation without the Thematic Strategy on the Urban Environment

Many current policies and proposed initiatives will have an impact on the problems set out in Annex C by stimulating certain initiatives (for instance transport measures as a consequence of the air quality Directive). Comprehensive projections have been developed in some areas (e.g. air quality) but for others, the likely evolution of the problems is less certain. Annex C sets out the likely evolution of the main challenges facing Europe's urban areas, assuming that they are implemented in full.

In summary, some of the challenges faced by urban areas are likely to be reduced by policy initiatives in place or planned (e.g. air quality, waste water treatment). However, there is no certainty that the measures put in place at the local level will be coordinated and there may therefore be inefficiencies and higher costs (leading to less progress in improving the quality of the urban environment).

In terms of the likely evolution in the integrated management of the urban environment, it is estimated that between 30-75% of major EU cities already have integrated strategies for environmental management at the local level. It is expected that this number will continue to rise for the following reasons:

- Environmental obligations that are implemented at the local level create pressure for integrated and coherent strategies so that all policy objectives can be met. More EC measures will enter into force soon (e.g. ambient noise and water Directives), further increasing the need for such approaches.

- There is a trend for Member States to introduce legislative obligations or other requirements (e.g. requiring a plan as a precondition for funding) to establish integrated environmental management strategies at the local level. Belgium (Flanders), Denmark, France, Hungary, Poland and Slovenia already have obligations. Cyprus and the Czech Republic are considering introducing national schemes, perhaps on a legislative basis, and the UK is strengthening the

environmental focus of its existing legislation. Similar trends are apparent for the integrated management of urban transport. France and UK have obligations and Cyprus, Czech Republic and Hungary are considering introducing national schemes, perhaps on a legislative basis.

- The participation by local authorities in voluntary initiatives that are intended to establish integrated strategies for the environmental management of the urban area strongly reflects a high level of interest in this area (e.g. increasing numbers of local authorities signing the Aalborg Commitments). Of the 462 cities surveyed for this Impact Assessment, 8.5% said that they will adopt such strategies (*i.e.* 40 cities[17]).

- The use of environmental management systems for the management of at least part of a local authority's administration is less widespread (between 12% and 33% of Europe's largest urban areas use some form of system). However, 13% of the 462 cities responded that they intend to introduce such a system in the future (i.e. 60 cities). Cyprus, the Czech Republic and Estonia are considering introducing national schemes for environmental management systems, perhaps on a voluntary basis. Use of EMAS by local authorities is growing and around 53 of the 169 EMAS[18] registered local authorities are using it to manage at least one city-wide environmental issue. A number of other management systems have been developed independently by local authorities. This suggests a high level of interest in such systems.

7.2. Summary of Baseline scenario

If implemented, the different measures planned for the various policy areas will have a positive impact on the environmental quality and performance of Europe's urban areas. This will also stimulate additional measures at the local level. Wherever possible, the impact of these measures has been quantified in Annex C. However, there is no certainty that the measures taken under relevant policy areas will be integrated to avoid conflicts, contradictions or inefficiencies with policies in other sectors.

For instance, meeting European air quality standards is the sole objective of many current transport initiatives. The Thematic Strategy on the Urban Environment proposes that additional policy goals (e.g. reducing dependence on the private car) are integrated so that concerns over greenhouse gas emissions and quality of life are also addressed. Creating high quality urban areas where people want to live and work requires close cooperation between different policies and initiatives.

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17 Some of these will be plans drawn up in accordance with national obligations.

18 Data for September 2005

7.3. Scenario for the Thematic Strategy (a package of different initiatives to facilitate the use of best practice techniques in integrated management of the urban environment)

Following extensive stakeholder consultation, the proposed ideas in the interim Communication have been distilled to a core set of measures to facilitate the exchange of experience and adoption of good practices in integrated management by European cities. These are assessed one by one in this scenario in order to identify the impacts of each so that a final selection of all or some of them can be made for the Thematic Strategy.

The initiatives will promote the use of good practice techniques and thereby also bring about improvements in the quality of the urban environment and in the environmental performance of Europe's urban areas. As far as possible, the Scenario for the Thematic Strategy will identify the additional impact that the initiatives that could be included in the Thematic Strategy can make to the existing situation outlined in the Baseline scenario. This will enable the selection of initiatives for the Thematic Strategy to be based on a good understanding of the added value, if any, of each initiative.

7.3.1. Guidance on integrated environmental management at the local level

Stakeholder consultation and the 2004 expert working group on environmental management plans and systems has shown the need for guidance on how to deliver integrated management of the urban environment. Any such guidance could be based on good practice examples and give advice on the development, content and implementation of integrated strategies (for instance, Local Agenda 21 Strategies) for the management of the urban environment and make reference to the most relevant EU environmental legislation. The guidance would not specify the measures that cities should adopt. Local authorities could use this guidance on a voluntary basis.

Cost of environmental management plans

The cost of establishing an environmental management plan varies according to experience, scope and content of the plan, and staff costs. As a voluntary initiative, no costs would be imposed by the guidance.

Data on the cost of using the guidance voluntarily was obtained through a survey of local authorities using such plans and through desk research of previous studies[19]. A summary of the methodology is available at Annex F. Data for costs in this Impact Assessment was endorsed by the EU Expert group on the Urban Environment, which stressed that the figures were likely to be over-estimates (double-counting, inclusion of costs associated with other obligatory plans at EC or national level).

[19] The report summarising the results of the survey and the desk study research is available at www.europa.eu.int/comm/environment/urban/impact_assessment.htm

The estimated average cost for a local authority to prepare an environmental management plan is **between 215k€ and 265k€**[20]. This includes any costs associated with consultants and any additional staff engaged by the authority (45% of authorities employed extra staff to provide additional resources to prepare the plan and in a few cases to bring skills not available inside the authority).

In addition to these costs, many authorities involved other organisations (principally public sector organisations) in the development of the plan, for instance as expert advisors or during consultations. The average cost to these other organisations in preparing the management plan is estimated to be **between 11,5k€ and 17k€**.

Revisions to the management plan would generate costs in line with the extent of the revision. Most environmental management plans are updated after between 2 and 5 years (55%) but 20% are updated annually. Just 10% are updated after more than 5 years.

Benefits of Environmental Management Plans

Local authorities using management plans report benefits for the authority and for the city. The benefits are not standard and depend on the current performance of the urban area, the content of the plan and the degree to which it is implemented.

A wide range of benefits were reported for the authority from the use of management plans. To indicate which benefits were believed to be the largest, the following benefits were reported as 'large' or 'medium'. In only one area were the benefits considered to be mainly 'small'.

Largest Benefits to Authority – Environmental Management Plan	% reporting large and medium benefit	% reporting small or no benefit
Raised staff awareness of environmental issues	86%	10%
Improved coordination between different departments in the authority	81%	14%
Improvements in the planning of environmental issues	76%	19%
Improvements in the management of environmental issues	76%	19%
Improved reputation of authority	62%	34%
Raised political profile of environment issues	57%	34%
Raised profile for the authority	53%	43%
Improved coordination between the city authority and other authorities	39%	58%

(May not add to 100% - 'benefits unknown' excluded)

In terms of the environment in the city, benefits are reported in many areas. For instance, 90% report improvements in the rates of recycling; 74% report reductions in greenhouse gas emissions; 67% report improvements in the quality of freshwater and 63% report improvements in air quality and noise (see the reports[21] for the full list).

To assess the scale of these benefits, this table shows those which were reported as 'large' or 'medium' more often that they were reported as 'small' or 'no benefit'. Authorities could choose from a list of 28 different benefits (see Annex G).

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20 The methodology for estimating these costs is given in Annex F.

21 http://www.europa.eu.int/comm/environment/urban/impact_assessment.htm

Largest Benefits to the Urban Environment - Environmental Management Plan	% reporting large and medium benefit	% reporting small or no benefit
Increase in amount of waste recycled	74%	21%
Increase in green purchasing	58%	26%
Improvements to existing green space (parks, woods)	58%	37%
Increase in number of nature conservation areas in the city	58%	42%
Reduction in energy used by the city	47%	37%
Reduction in amount of contaminated land in the city	42%	42%
Improved natural water quality	39%	39%
Increase in proportion of citizens satisfied with the environment in the city	37%	16%
Reduced pesticide use in the city	37%	26%

(May not add to 100% - 'benefits unknown' excluded)

The largest benefits occur in areas where local authorities have more direct control. Benefits for more complex areas, such as air quality, are not reported to be 'large' or 'medium' more often than they are 'small' or having no benefit at all. This may reflect difficulties in measuring changes (many authorities responded 'Benefits unknown' for more complex issues such as exposure to noise or greenhouse gas emissions) or that the plan did not set out to bring improvements in these areas.

Data on the specific benefits of such plans (e.g. tonnes of CO_2 saved) is not readily available and it is difficult to separate the benefits associated with the implementation of the environmental management plan from other initiatives that were already underway (e.g. improvements in air quality due to existing European policies that affected the car fleet).

Tartu (Estonia) reported a 24% reduction in water use in the city between 1999 and 2002 and a 39% increase in recycling between 2001 and 2002[22] following the introduction of its environmental management plan in 2000. Leipzig (Germany) reported 17% reduction in CO_2 emissions for the city, 23% reductions in PM_{10} concentrations, 21% reduction in waste generated and significant reductions in waste sent to landfill (62% to 0.2%) between 1999 and 2002 following the adoption of its environmental management plan.. At the same time, energy use in the city increased 20%.

Cost of establishing a management system

Many successful local authorities have established environmental management systems to support and ensure the delivery of the objectives set out in the management plan. Different management systems exist with different attributes and elements but they all have the goal of ensuring the delivery of policy objectives.

The cost of establishing and operating a management system varies according to the size and type of organisation, staff costs, the level of ambition for the system and the type of system implemented. The estimated average total cost for a local authority to set up, implement and secure initial certification of a management system is **between 160k€ and 222k€**. This estimate is based on data from a limited number of local authorities and includes any costs for consultants. In addition to these costs, external

[22] 6,819 million litres of water used in the city in 1999 to 5,215 million litres in 2002, 54,910 tonnes of waste recycled per year in 2001 and 76,373 tonnes per year in 2002.

organisations (mainly public sector) often participate in establishing a management system, for instance to comment on objectives. The average total cost to these organisations is between **2,5k€ and 3,8k€**. These estimates are broadly comparable with results from other studies.

Operating the management system, including the annual audit or check of the system, has an estimated average annual cost of **between 55k€ and 93k€**. Around 40% of authorities said they needed to recruit more staff to establish a management system and although this based on a small sample, it is likely that authorities would often have to do this. The costs are included in the figures above. In addition to this cost, external organisations can participate in the operation of a management system but the costs are low (**between 750€ and 1,125€** per annum).

Benefits of establishing a management system

As a management tool, the benefits relate mostly to the administrative functioning of the authority using the system. Benefits tend to be larger when a management system is first introduced and better administrative functioning which may avoid accidents and mistakes (management systems function as 'insurance policies' by ensuring effective administrative management). The following benefits were reported:

Largest Benefits to Authority – Management System	% reporting large and medium benefit	% reporting small or no benefit
Improvements in the planning of environmental issues	75%	12%
Improvements in the management of environmental issues	75%	12%
Improved coordination between different departments in the authority	62%	25%
Raised staff awareness of environmental issues	62%	25%
Improved reputation of authority	62%	25%
Raised political profile of environment issues	62%	25%
Raised political profile of the authority	62%	25%
Cost savings through reduced resource use	50%	37%
Improved coordination between the city authority and other authorities	25%	62%

(May not add to 100% - 'benefits unknown' excluded)

Benefits to the quality of the urban environment or urban transport system depend entirely on the policy goals established.

7.3.2. Guidance on sustainable urban transport plans

Reflecting the importance of urban transport to the quality of the urban environment, guidance could be proposed to facilitate the integrated management of the transport system to reduce the adverse environmental effects and provide for an efficient transport system that meets the needs of citizens and business. The guidance could be based on good practice examples, the work of the 2004 expert working group on sustainable urban transport and give practical advice on the development, content and implementation of sustainable urban transport plans. Particular attention could be given to achieving compliance with EC obligations, for instance on air quality and noise, but would not specify the measures that cities should adopt. Local authorities could use this guidance on a voluntary basis.

Costs of sustainable urban transport plans
The main cost relates to the production of the plan and arises for local authorities. However, as a voluntary initiative, no cost would be imposed by this guidance.

The cost of establishing a sustainable urban transport plan is dependent on a number of factors: experience in transport planning; scope, content and level of ambition of the plan; and staff costs. With this in mind, the estimated average cost for preparing a plan is **between 440k€ and 545k€**. This includes any additional costs from consultants and the costs of engaging additional staff (55% of responding authorities said that they recruited more staff to prepare the plan).

In addition to these costs, other organisations also provided input into the establishment of the plan, for instance in identifying actions that could be undertaken. The estimated average cost incurred by these organisations is between **14k€ and 21k€**.

Costs will arise when the plans are updated or revised, in proportion to the extent of the update or revision. Sustainable urban transport plans are generally updated every 2-5 years (75%) with just 5% updated annually.

Benefits of sustainable urban transport plans
Benefits arise from the plans for the local authority (better administrative functioning) and for the urban area (better environmental performance). Authorities using sustainable urban transport plans reported large benefits for the authority from the use of the plans in all the areas listed.

Largest Benefits to Authority – Sustainable Urban Transport Plan	% reporting large and medium benefit	% reporting small or no benefit
Improved planning of sustainable transport issues	91%	9%
Raised political profile of sustainable transport issues	86%	14%
Raised staff awareness of sustainable transport issues	86%	14%
Improved management of sustainable transport issues	77%	23%
Improved coordination between different departments in the authority	77%	23%
Improved coordination between the city authority and other authorities	72%	23%
Improved reputation of authority	59%	41%
Raised profile for the authority	59%	32%

(May not add to 100% - 'benefits unknown' excluded)

Benefits are reported across many areas: 90% report a reduction in the number of people killed or seriously injured in road accidents; 70% report reductions in the proportion of journeys made by car; 65% report improvements in air quality and 50% report reductions in greenhouse gas emissions.

To assess the scale of these benefits, this table shows those which were reported as 'large' or 'medium' more often that they were reported as 'small' or 'no benefit'. Authorities could chose from a list of 19 different benefits (see annex G).

Largest Benefits to the Urban Environment – Sustainable Urban Transport Plan	% reporting large and medium benefit	% reporting small or no benefit
Reduction in the number of people killed or seriously injured in traffic accidents	65%	30%
Increased use of public transport	50%	40%
Improved access to public transport	50%	40%
Increase in the number of schools with travel plans	50%	35%

(May not add to 100% - 'benefits unknown' excluded)

The largest benefits are reported in areas where local authorities have more direct control over the outcome. Although benefits are reported for a wide range of issues, they are generally considered to be 'small' in scale. This may be due to uncertainty about the effect the plans have on these issues (authorities often reported 'benefit unknown' for complex issues such as improved citizen health or reduction in greenhouse gas emissions) or that the plans did not focus on delivering these improvements.

Obtaining quantified benefits from urban transport plans is difficult due to uncertainty about which benefits arise solely from the plan. The research project PROPOLIS[23] studied different measures to promote a more sustainable urban transport system and indicated that packages of urban transport measures can lead to significant social and environmental benefits and net monetary benefits of between €1,000 and €3,000 per inhabitant per year. The most effective approach is a combination of road pricing methods with additional support for public transport. The SCATTER project[24] on the links between urban sprawl and urban transport systems indicated the following benefits from a package of transport measures that could be form a sustainable urban transport plan:

- Up to a 15% reduction in total distance travelled by car;
- Up to 12% increase in the use of public transport;
- Up to 14% reduction in CO_2 emissions;
- Up to 2.6% increase in the number of households located in the urban centre; and
- Up to 3% increase in the number of jobs located in the urban centre.

Case study data shows that significant changes can occur. Bristol (UK) adopted a sustainable urban transport plan in 2000. Increases were achieved in rail use (19%), cycling (25%) and walking (10%) between 2000 and 2004 although the impact on the quality of the environment as a result has not been assessed.

7.3.3. Support for the exchange of best practices

Many of the solutions to achieving integrated environmental management are already known and it is important that local authorities exchange information, experiences and skills to learn from each another. The Thematic Strategy can facilitate the exchange of good practice between local authorities so that methods and techniques for integrated management used by the better local authorities can become widespread.

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23 http://www.wspgroup.fi/lt/Propolis/

24 http://www.casa.ucl.ac.uk/scatter/

7.3.3.1. Networking and Demonstration Projects

The Commission's proposals for the new European Regional Development Fund[25] and LIFE+[26] both envisage the exchange of good practice on urban issues by offering financial support. The Commission can offer support for the exchange of good practice through these instruments. Both the proposals for the Cohesion Policy and the Research Framework Programme offer opportunities for demonstration projects on a range of urban environment issues.

The costs would fall mainly on the Commission, both through the administration of programmes offering support (financial and technical) and also through any grants made for projects or activities. It is not possible to provide figures on the likely costs that the Commission would have to bear for these activities since the budgets for the instruments and the annual work programmes are not yet defined. Similar projects supported under the current urban legal base[27] vary from 359k€-1,528k€ each.

Analysis of the results of the urban legal base shows that involvement in the projects to exchange good practice is regarded as very valuable. Stakeholders agree. Weaknesses exist in disseminating the lessons learnt on the good practices to local authorities not directly involved in the project which need to be avoided in future.

7.3.3.2. Network of National Focal Points on Urban Issues

The Commission can evaluate the URBACT project 'European Knowledge Platform' at the end of 2006 to consider whether it could be used as a building block for a European framework programme for the exchange of experience on urban development as part of the Cohesion Policy for the period 2007-2013. The project aims to provide structured and evaluated high-quality information on urban issues to local authorities across Europe through a network of focal points in each of the Member States participating in the pilot.

As a voluntary initiative, no costs would be imposed by this network. For the pilot project, the Dutch Government has provided 800,000€ and the Commission 150,000€. Each Member State participating in the pilot project has also contributed 50,000€. Many of the costs of the pilot project are once-only costs (e.g. establishing the templates to evaluate the documents) but other costs, such as establishing a national focal are additional to these costs and fall to the Member States. If the pilot project is continued as part of the Cohesion Policy for 2007-2013, the costs associated with the network would be calculated and assessed at that time.

The added value of network is considered to be a wide range of information from across Europe, structured and evaluated in a standard way. It is not possible yet to assess the benefits of this approach to local authorities (the pilot project will assess the usefulness of the network and added value that it brings to existing methods of dissemination for information on urban issues). Consultation with stakeholders suggests that such a network would bring benefits.

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25 COM(2004)495
26 COM(2004)621
27 Decision No 1411/2001/EC

7.3.4. Commission Internet Portal for Local Authorities

At present, information such as Communications, research findings, studies and guidance is made available through a series of different Commission websites. A single internet portal would provide links to all relevant information. The Commission can assess the feasibility of establishing an internet Portal for local authorities, including an assessment of costs. Stakeholders have stressed that such a portal would be beneficial and would improve the dissemination of information from the Commission to Europe's local authorities.

7.3.5. Supporting training and development of skills

Delivering effective management of the urban environment requires specialist skills. Training is needed in issues such as integrated management, cross-sector cooperation and changing citizen's behaviour. The survey conducted for this impact assessment reveals (although based on a small sample) that additional staff were recruited or consultants engaged to provide skills not found in the authority (25% of transport plans, 5% of management plans and up to 60% of management systems). Stakeholders report that face to face training is the most effective and preferred approach through demonstration projects, staff exchanges or specific courses. Training needs to be adapted to the national situation and language.

The Commission's proposal for LIFE+ envisages support for capacity building to facilitate the implementation of Community environmental policy at the local and regional level. The Commission can support capacity building for local and regional authorities.

The costs would fall mainly to the Commission (administration and financial support). It is not possible to provide figures since the final budget and annual work programme are not decided. Providing necessary skills for the successful implementation of legislation and good practice will lead to improvements in the quality and performance of the urban environment although these cannot be quantified.

7.3.6. An obligation to develop environmental management plans

The interim Communication proposes that a Directive is introduced requiring the development of integrated plans for the management of the environment at the local level. The plan would help coordinate different policies and set out actions to deliver improvements in environmental quality and performance.

The obligation would be procedural in nature and would not specify the actions and measures that have to be taken in the cities as these would be decided through the process and be dependent on the situation in each city, the available budget and other local factors. The impacts of the obligation are therefore difficult to predict since the plans will not be standard and their outcome will vary from city to city. The costs and benefits of such plans have already been described in section 7.3.1. The total cost of the obligation is estimated in section 7.4 below.

7.3.7. An obligation to develop sustainable urban transport plans

The obligation envisaged for developing sustainable urban transport plans is also procedural in nature. The plan would have the same strategic function of coordination and providing a vision to guide future initiatives. The goal would be to reduce the negative impacts of the urban transport system and tackle the rising volumes of traffic and congestion. The measures for the plan would be identified after consultation with the local citizens. As before, the impacts of the obligation are therefore difficult to predict. The costs and benefits of such plans have already been described in section 7.3.2 (total cost estimated in section 7.4).

7.3.8. An obligation to establish a management system

To help ensure implementation of the plans above, the Communication proposed that local authorities should be obliged to establish a management system. No Member States have legal obligations requiring the adoption of management systems although systems exist in several countries which fulfil some elements of a management system (e.g. the Comprehensive Performance Assessment in the UK). The costs and benefits of such plans have already been described in section 7.3.1 (total cost estimated in section 7.4).

7.4. Summary of impacts of the measures listed for the Scenario for the Strategy

7.4.1. Environmental impacts

The Baseline scenario reveals that the use of techniques for integrated management of the urban environment measures is likely to grow. The guidance will facilitate and encourage this and may stimulate additional cities to adopt such plans but this cannot be quantified. Environmental management plans bring benefits in better administrative functioning (decisions with large environmental impacts may be avoided) and in issues such as recycling, green purchasing, improvements to green space and nature conservation. Benefits in areas such as air quality and noise exposure are generally considered to be 'small' in scale. Benefits of other measures are likely to be positive and deliver improvements in the quality of the urban environment for instance through facilitating the implementation of the existing legislation.

The scale of benefits from sustainable urban transport plans differs according to a variety of factors. Large benefits are reported for the management of urban transport issues and for issues such as safety and use of public transport. Introducing transport plans brings benefits in addition to measures adopted under air quality legislation since they achieve a wider range of benefits than improving air quality alone.

The measures considered in the Scenario for the Strategy that are obligatory (i.e. the possible Directives) would result in wider use of these management techniques since all large European cities that do not have environmental management plans, sustainable urban transport plans and management systems would be required to adopt them. This would result in between 109-378 new environmental management plans, between 205-297 sustainable urban transport plans and between 310-408 new management systems.

The nature of the obligation proposed (leaving the content to be decided at the local level) means that the benefits from such plans and systems cannot be assessed in quantitative terms. The main benefits reported from the plans and systems are outlined in section 7.3. Importantly, it would be possible to focus the plans on issued that are not currently well addressed. For instance, existing benefits for air quality are reported as 'small'. The obligations could focus efforts on improving air quality thereby increasing their contribution to helping compliance with EC legislation.

7.4.2. Economic impacts

The voluntary measures in the Scenario for the Strategy do not impose additional costs. The likely costs that would be incurred should an authority decide to implement the guidance are reasonable and better planning can lead to better use of existing resources with only a marginal increase in costs. For instance, the costs for preparing the transport plan for Bristol (UK) amounted to approx 0.7% of the total 5 year budget for the transport system it was designed to manage. The difference in costs between planning by 'traditional' means and planning using an integrated approach will be only a part of this.

Other economic impacts relate to the improved attractiveness of the urban area and its ability to attract employment and investment. Whilst this cannot be quantified, it is a recognised impact.

The measures for obligations to establish environmental management plans, sustainable urban transport plans and management systems would give rise to clear costs to public authorities. It is not expected that the obligations would give rise to direct costs to business or industry.

Some of the measures that may be included in the plans may give rise to costs for business (e.g. road pricing) but since the obligations would not prescribe which measures have to be set out in the plans, these costs are not directly attributable to the possible imposition of the obligations. The objective is to influence the way that existing and future funds are spent, rather than provide new resources for new investment in urban environment measures.

To estimate the total costs of the measures for obligations, four scenarios have been elaborated using survey data from 462 largest urban areas in the EU where current use of environmental management plans, sustainable urban transport plans and management systems was analysed (see Annex H for the Scenarios). The response rate was 35% - high for a survey of this sort.

Based on the four scenarios and the different cost ranges for each plan and the system, the estimated range of total costs for the EU 25 for the possible obligations is:

Environmental management plan	**24.71€ million – 106.59€ million**
Sustainable urban transport plan	**92.89€ million – 168.18€ million**
Management system:	
Establishment cost	**49.68€ million – 90.77€ million**
Operation cost	**20.74€ million – 38.09€ million**

These figures are the maximum cost since it is assumed that it would be necessary to create each plan and system in full. In reality, many local authorities already have elements of these plans and systems in place and so the cost of establishing the plan is lower that the full costs outlined above.

7.4.3. Social impacts

Number of jobs

The measures relating to the guidance on management plans and systems could create jobs. Responses to the survey reveal that 40% of local authorities employed additional staff to help establish and operate the environmental management system, 45% employed additional staff to develop the environmental management plan and 55% of authorities employed additional staff to develop the sustainable urban transport plan. There may be some double counting in the percentages for the environmental management plan and the environmental management system. Many local authorities have also used external experts in establishing their plans and systems.

The measures relating to obligations would be more likely to create jobs. Assuming that each authority currently without plans and systems employs just 1 additional member of staff, it is estimated that the obligations would directly create between 295 and 497 new jobs. It is likely that some authorities would employ more than 1 person for these tasks.

Social inclusion and cohesion

One of the objectives of the sustainable urban transport plan would be to provide better access to shops and services for those without private transport. This is reported as a 'small' benefit. Improvements in the energy performance of buildings or the quality of the urban environment would bring positive impacts, particularly for poorer and disadvantaged groups which suffer more from these issues.

Impact on governance and participation

Effective public consultation and stakeholder consultation are highlighted by experts as key elements in the development of environmental management plans and urban transport plans. The voluntary use of the guidance and the obligations would both increase opportunities for citizen involvement in the management of the urban environment at the local level (any obligations would include consultation requirements in accordance with the standards set out in the UNECE Aarhus Convention).

An expert working group recommended that the environmental management system contains provisions to provide the public with regular information on the improvement in the environmental quality and performance of the urban area. The system would therefore provide citizens with the information needed to participate actively in the management of the urban area.

Impact on public health and safety

To the degree that the Scenario for the Strategy brings additional benefits to existing policies (such as air quality and exposure to noise), it will also deliver positive impacts on human health. However, the impact on human health and safety cannot be quantified.

Safety is a key issue for the sustainable urban transport plans to address and it is expected that the benefit would be large (90% of authorities using such plans report reductions in the number of people seriously killed or injured). Obligations for transport plans could produce large positive benefits.

7.4.4. External impacts

There are unlikely to be any impacts outside the EU. However, some Commission initiatives are being used outside the EU (e.g. the results from the City of Tomorrow and Cultural Heritage research key action with UN Habitat).

7.4.5. Subsidiarity and proportionality

Most of the measures in the scenario for the Strategy are voluntary in nature and do not raise any issue of subsidiarity and proportionality. The obligations proposed leave decisions on the type and scale of actions for each city to the local level since it is not possible to set standard solutions for the diversity of situations in Europe's urban areas. By establishing a procedural framework for the development of plans to deliver integrated management of environmental issues and transport systems at the local level, these 2 legislative proposals would respect the principles of subsidiarity and proportionality.

7.4.6. Synergies with other Community Policies

The initiatives proposed under the Scenario for the Strategy support and reinforce many other Community policies such as those on air quality, energy efficiency, greenhouse gas emissions, waste recycling, clean urban transport and regenerating urban areas. The exact contribution that the voluntary measures proposed in the Scenario for the Strategy make to these policies cannot be quantified. The voluntary use of the guidance may bring small benefits to key policies such as air quality and benefits to other issues such as higher levels of public transport use. The obligations could contribute more to the implementation of other policies such as air quality by requiring a particular focus on these areas.

8. COMMISSION DECISION AND JUSTIFICATION

8.1. What is the final policy choice and why?

The Commission identifies a Thematic Strategy based on the voluntary elements of the Scenario for the Strategy as the best choice at this stage. Therefore, the following set of actions will be proposed:

- guidance on integrated environmental management at city level;
- guidance on sustainable urban transport plans;
- support for exchange of best practice :
  - networking and demonstration projects;
  - network of focal points on urban issues;
- Commission internet portal for local authorities;
- support for training.

The predominant view of stakeholders is that obligations for environmental management plans and systems, and sustainable urban transport plans are not appropriate. The procedural nature of the obligation and the difficulty of establishing clear, measurable improvements in environmental performance for urban areas to achieve as a whole mean that the final outcome of such obligations is uncertain. In addition, Member States that have obligations comparable to those proposed stress difficulties in the assessment of their effectiveness. This is particularly true in relation to delivering improvements in the environmental quality and performance of urban areas. The estimated cost of establishing a plan (e.g. for urban transport) is only a small percentage of the costs of the measures and initiatives set out in the plan. However, the Commission does not consider it appropriate to impose the principle of plans in the absence of a clear objective standard to reach for the quality of the urban environment. The detailed measures for the plan to contain cannot be defined at the EU level (they need to be developed in response the situation in urban area which will vary) and therefore the likely benefits of an EU obligation are uncertain.

The other elements of the possible Scenario for the Strategy will facilitate the adoption of good practice approaches to the integrated management of the urban environment by urban areas across Europe and the exchange of best practice and skills. Stakeholders welcome this support. As voluntary initiatives, they do not impose costs.

The Impact Assessment shows the potential benefits that can arise from the voluntary adoption of initiatives such as environmental management plans by Member States, regional and local authorities but as voluntary measures, this cannot be guaranteed. However, by providing support, guidance and facilitating the exchange of good practices and skills, the voluntary elements in the Scenario for the Strategy meet many of the needs expressed by stakeholders. They will also remove some of the barriers (i.e. lack of knowledge) that currently prevent the adoption of these good practices. A Strategy based on the voluntary elements therefore offers considerable benefits over the Baseline scenario.

Previous support offered by the Commission to networks of cities to undertake projects has facilitated cooperation and the exchange of ideas and skills between local authorities.

8.2. Why was a more/less ambitious option not chosen?

The obligatory elements in the Scenario for the Strategy represent a more ambitious approach in that they would require all large urban areas in the EU to adopt such integrated management techniques if they have not already done so. The Commission believes that integrated approaches to environmental management at the local level are beneficial and should be adopted by local authorities but for the reasons above, the Commission is not convinced that formulating a Directive is the right approach.

8.3. Which are the trade-offs associated to the chosen option?

The emphasis on providing support and facilitating the exchange of good practice and skills means that positive impacts are less certain than for an approach based on obligations. However, the nature of the proposed obligations (procedural in nature without specifying which measures should be taken or being able to specify a clear environmental outcome or performance standard to be achieved) means that the likely impacts for obligations are also uncertain. On balance, the Commission considers that providing support to Member States, regional and local authorities with European level support is the best option.

8.4. Proportionality and subsidiarity

The Thematic Strategy on the Urban Environment is a requirement of the Community's 6th Environmental Action Programme. The Strategy, whilst focusing on environmental issues in urban areas, achieves the right balance between local action and action at the EU level. Local authorities have a decisive role in improving the environmental performance of their urban areas and the diversity of situations in each urban area (history, geography, climate, administrative and legal conditions) calls for locally developed, tailor-made solutions for the urban environment.

The measures proposed demonstrate the added value of further European action in addition to what is already undertaken at national, regional and local levels. Many solutions already exist in certain EU cities but are not sufficiently disseminated or implemented. The EU can best support Member States and local authorities in learning from each other. Supporting action by Member States is essential. The final choice for policy action shows that the subsidiarity principle was fully respected.

9. MONITORING AND EVALUATION OF THE RESULTS AND IMPACTS OF THE THEMATIC STRATEGY ON THE URBAN ENVIRONMENT

At present, there is no systematically available data on the overall quality of the urban environment and performance of Europe's urban areas. To monitor the effectiveness of the Thematic Strategy there is a need for up to date, accessible urban data.

With the help of the EEA and in close cooperation with the Member States, the Commission will work to improve existing data on urban environment issues (e.g. air quality, water, etc.) at the European level without increasing the burden for national, regional and local authorities, in order to be able to evaluate over time and in a satisfactory manner the environmental performance of European urban areas

Changes have already been made as regards the Urban Audit, a voluntary survey of a sample of European cities covering social, economic and environmental aspects, to ensure that it better reflects the priority environmental challenges in urban areas. Proposals are also under consideration for the Transport and Environment Reporting Mechanism, an assessment of data designed to reveal the environmental impacts from the current trends in transport.

The Commission will undertake a 2006 Urban Audit based on the revised set of indicators and issue a report describing the living conditions in a number of EU cities, which cover the economic, social as well as environmental aspects.

Many of the measures included in the Strategy require cooperation with authorities at national and local levels and so their views will be important in assessing the impact of the Strategy. To assess the impact of the measures proposed in the Thematic Strategy, Member States, regional and local authorities will be invited to submit their views on a regular basis.

To ensure that the views of all urban environment stakeholders are collected and that the process is transparent, a consultation exercise will be organised in 2009 as part of a review of the 6th Environment Action Programme in 2010.

ANNEX A
Consultation with Stakeholders

The Thematic Strategy on the Urban Environment has been developed in an open and transparent way. The table below summarises the consultations that have taken place.

Group	Purpose and Group Members (Number)	Date
Consultation Group	To identify priority issues for the Thematic Strategy to address – MS, NGOs, Cities, academics, business (25)	2001-11-27
EU Expert Group on the Urban Environment	Initial discussions on the Thematic Strategy themes – Member States, 2 city representatives, representative of Sustainable Cities and Towns Campaign (SCTC) (20)	2002-01-11
	Initial discussions on the Thematic Strategy – Member States, 2 city representatives, representative of SCTC (20)	2002-05-24
	Launch of 4 working groups on priority themes of the Thematic Strategy – Member States, 2 city representatives, representative of SCTC (20)	2002-11-15
Expert Working Groups	4 expert working groups on sustainable urban management, urban transport, sustainable construction and urban design – mix of experts from MS, cities, NGOs and academia (20-25 each)	Met during 2003 – 4 times each
EU Expert Group on the Urban Environment	Interim findings of 4 working groups – Member States, 2 city representatives, representative of SCTC (20)	2003-05-21
Stakeholder Consultation Group	To discuss problems, opportunities and ideas for the Thematic Strategy –participants from MS, AC, cities, regions, city networks, business, NGOs, academics (100)	2003-06-23/24
EU Expert Group on the Urban Environment	Draft final reports of 4 working groups – Member States, 2 city representatives, representative of SCTC (30)	2003-09-17
Stakeholder consultation	Internet based consultation exercise for stakeholders on interim Communication "Towards a Thematic Strategy on the Urban Environment" COM(2004)60 (104 responses received)	2004-02-11 to 2004-04-15
Informal Meeting with Member States	Informal discussion on the ideas proposed in the interim Communication (Feb 2004) - EU 15 and AC 10	2004-02-23
EU Expert Group on the Urban Environment	Initial comments on the interim Communication, launch of 3 working groups on key ideas for the Strategy – EU 25 MS and 75 other stakeholders from cities, regions, city networks, business, NGOs, academics (100)	2004-04-07
Informal Meeting with Member States	Informal discussion on the ideas for the final Thematic Strategy - EU 25 MS	2004-05-26
Expert Working Groups	3 expert working groups on environmental management plans and management systems, urban transport plans, and research and training needs – mix of experts from MS, cities, NGOs and academia (20-25 each)	Met during 2004 – 4 times each
EU Expert Group on the Urban Environment	Interim findings of 3 working groups – Member States and 75 other stakeholders from cities, regions, city networks, business, NGOs, academics (100)	2004-09-24
Bilaterals with MS	Informal meetings with MS on detailed understanding of national situations (6 MS)	Autumn 2004 / Spring 2005
EU Expert Group on the Urban Environment	Final reports of the working groups, results of surveys on the needs of cities re guidance and training - Member States and 75 other stakeholders from cities, regions, city networks, business, NGOs, academics (100)	2005-05-17
Stakeholder and citizen consultation	Internet based consultation exercise to help in the finalisation of the Thematic Strategy on the Urban Environment (2,800 responses received)	2005-07-21 to 2005-09-21

NB: In addition to the above, many bilaterals have been held with key stakeholders such as individual Member States, city networks and associations, cities and NGOs. Specific projects have been launched to support the process such as a study of the situation in the new Member States.

ANNEX B
The Requirements of the 6th Environment Action Programme

Article 7(h) of Decision 1600/2002/EC of the European Parliament and of the Council of 22 July 2002 laying down the Sixth Community Environment Action Programme requests the development of a Thematic Strategy for the Urban Environment:

"promoting an integrated horizontal approach across Community policies and improving the quality of urban environment, taking into account progress made in implementing the existing cooperation framework[28] *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 to bring about a significant decoupling of transport growth and GDP growth;*
- *the need to promote the use of low carbon vehicles in public transports;*
- *the consideration of urban environment indicators."*

[28] 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)

ANNEX C
Environmental Problems Facing Europe's Urban Areas and Their Consequences

This Annex sets out the current situation with regard to the environmental challenges that European cities face, the policy responses in place and the likely evolution of the situation.

Most European urban areas experience a number of environmental problems. On the basis of previous Community policy documents, reports such as 'European Sustainable Cities'[29] from the EU Expert Group on the Urban Environment and consultation responses from stakeholders, poor air quality, high levels of traffic and congestion, high levels of ambient noise, neglect of the built environment, greenhouse gas emissions, urban sprawl, waste and waste water are identified as the key environmental challenges. Factors such as climate, history, city size and the policies in place strongly influence the nature and scale of the environmental problems experienced.

As some 80% of European citizens live in urban areas, the health effects of many environmental problems are also concentrated in Europe's cities. Estimates for the impacts on health are available for some policy areas but it has not been possible to estimate overall impacts on health for all of the issues identified.

Additional policy responses are planned, notably in the other 6 Thematic Strategies[30] which will all bring about further improvements in the challenges listed. However, there is no certainty that the measures taken at the local level to give effect to these new policies and obligations will be integrated to avoid conflicts or contradictions with policies in other sectors. Without this, the impact of the proposals may be reduced; implementation may be less efficient and more costly.

Poor air quality

Air quality is improving and pollutants such as lead and sulphur dioxide are no longer significant concerns in urban areas. However, severe problems remain with pollutants such as particulate matter (PM), nitrogen oxides and ozone. Major sources of these harmful air pollutants in urban areas are road transport and domestic heating (industry and shipping are significant in some cities).

These pollutants are harmful to human health and can damage natural ecosystems. Due to the high concentration of people and sources of emissions, exposure to these pollutants is concentrated in urban areas. The limit value for PM in EU legislation entered into force in January 2005 (daily concentrations shall not exceed 50ug per m3 more often than 35 times a year). Based on previous years reported data it is likely that 45% of Europe's total population live in cities where PM concentrations exceed limit values and up to 30% live in cities where ozone concentrations are above target levels for protecting human health[31]. In 2003, in many urban areas, the limit value was exceeded more than 100 times per year and for a significant number, more than 200 times per year.

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29 "European Sustainable Cities" EU Expert Group on the Urban Environment, 1996

30 Thematic Strategies on Air Pollution (adopted 21/09/2005), Prevention and Recycling of Waste, Protection and Conservation of the Marine Environment (adopted 24/10/2005), Soil, Sustainable Use of Pesticides, Sustainable Use of Resources

31 EEA Signals 2004.

The Commission's Clean Air for Europe programme and the World Health Organisation's Systematic review of the health aspects of air pollution in Europe show that there is no safe level below which adverse health impacts cannot be detected for exposure to PM and ozone. Environmental and health problems will persist in 2020 even with full implementation of existing laws. Health impacts will be equivalent to 272,000 hastened deaths in 2020.

Member States are responsible for meeting existing air quality obligations. Initiatives on urban transport are usually taken which can be either short term (e.g. the one-day transport restrictions in Paris in 1997) or longer term (e.g. permanent access restrictions for heavy duty vehicles based on age and emission performance in Malmo, Göteborg and Stockholm since 2002). In both cases, the transport measures are usually focussed on achieving improvements in air quality and not overall reduction in traffic volumes.

The Thematic Strategy on Air Pollution[32] identifies an appropriate level of improvements based on environmental and health impacts taking into account the costs and benefits. New measures[33] aim to cut the annual number of premature deaths from air pollution-related diseases by almost 40% by 2020 (based on figures in 2000). The Strategy pays special attention to particulate matter (particularly the smaller fraction - $PM_{2.5}$), and ground-level ozone pollution as these pose the greatest danger to human health. The Commission proposes to start regulating $PM_{2.5}$ which penetrates deep into human lungs. The Strategy highlights the need to address urban transport sources of air pollution. The Directive proposed in the Strategy requires Member States, to the extent feasible, to ensure that plans drawn up to meet air quality targets are consistent with plans drawn up under the Noise Directive.

High levels of traffic and congestion in urban areas

Private car ownership, private car use and the length of car journeys have all increased significantly. The resulting traffic congestion, most of which occurs in urban areas, is estimated to cost more than 0.5% of Community GDP.

More than 3 million cars are added to the car fleet in Europe every year (a 300% increase in number of cars in Europe in the last 30 years). Increases in car ownership are greatest in central and eastern Europe (61% between 1990 and 1999) which gives rise to corresponding declines in public transport use. However, overall levels of car ownership are still only around half of the EU 15 average[34].

The average number of trips per person per day by private car increased 10% for the EU 15 and 70% in the EU 10 in the 1990s. Tallinn experienced growth of 170%.[35] Use of public transport has reduced correspondingly.

The length of the average journey by private car in an urban area increased by 20% in the 1990s11. Urban sprawl is driving this process – the highest increases in journey length (80%) are from the centre to edge of the urban area. Journeys within the periphery also showed significant increases (36%).[36]

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32 COM(2005) 446

33 These measures will be subject to impact assessment.

34 Europe's Environment – the Third Assessment (2003)

35 European Conference of Ministers of Transport "Implementing Sustainable Urban Travel Policies" 2002

36 INSEE-INRETS – data for French cities above 50,000 inhabitants between 1982 and 1994, all modes.

Private car use has higher emissions per capita than communal public transport. Key environmental concerns from the growth of private road transport are overall emissions of air pollutants (even though individual cars are increasingly clean), greenhouse gas emissions (over 10% of all EU CO_2 emissions come from road transport in urban areas) and noise. In terms of quality of life, high levels of traffic can prevent streets being used as places for social interaction.

The number of kilometres travelled in urban areas by road transport is predicted to rise by 40% between 1995 and 2030. Levels of car ownership in EU10 are still not at the same levels as for EU15 suggesting further growth. If nothing is done, road congestion is expected to increase significantly by 2010 and the costs attributable to congestion will increase to approximately 1% of Community GDP.

A number of urban areas are implementing innovative measures to tackle congestion (e.g. road pricing in London) and between 36%-56% of Europe's largest urban areas have management strategies for urban transport in place. A further 10% of cities responded that they intended to introduce them in the future (i.e. 46 cities). The UK and France already have legislative obligations for integrated urban transport planning and Cyprus, Czech Republic and Hungary are all considering introducing national schemes for such plans.

It is likely that achieving compliance with existing and proposed EU air quality standards in view of the rising use of private motor vehicles in urban areas will stimulate further measures for integrated management of urban transport at the local level. It is not possible to quantify this.

High levels of ambient noise

The World Health Organisation (WHO) reported that exposure to continuous road traffic noise affected 160 million people in the EU-15 (40% of the population) at a level above 55 dB(A) (a level associated with significant annoyance). A further 80 million people (20% of the population) were exposed to continuous road traffic noise above 65 dB(A), which may be associated with cardiovascular effects. Continuous night-time road traffic noise affects 120 million people at levels above 55 dB(A), the threshold at which WHO considers sleep may be disturbed.

Road traffic is the dominant source of exposure in major agglomerations. In busy streets average noise may even reach 70-80 dB(A) during daytime and 60-70 dB(A) during night time. Exposure to railway and aircraft noise comprises noise peaks reaching 50-65 dB(A) L_{Amax} inside bedrooms. WHO recommends limiting the number of events above 45 L_{Amax} to limit sleep disturbance. Figures are not available for the EU-10.

Directive 2002/49/EC relating to the assessment and management of environmental noise requires competent authorities designated by Member States to produce strategic noise maps and action plans for major transport infrastructures and major urban areas (over 250,000 inhabitants from 2008 and all those over 100,000 inhabitants from 2013).

Noise maps must be based on harmonized indicators and put a special emphasis on noise emitted by urban transport (roads, railways). Action plans must prevent and reduce environmental noise particularly where it is harmful for human health; they must also protect quiet areas. European cities envisage actions such as traffic calming zones where speeds are moderated and through-traffic discouraged; laying low-noise road surfaces and improving railway rolling stock.

The Directive does not establish limit values or target values for noise. The 6EAP states that the policy goal for noise is to substantially reduce the number of people regularly affected by long-term average levels of noise, in particular from traffic.

Current trends concerning road saturation (more stop/start driving) and distance travelled (more vehicle kilometres and more areas affected) might lead to increased exposure to road traffic noise in cities. The effects of noise emission legislation for road vehicles have already been undermined by growth in the volume of traffic[37]. As a direct consequence of modal shift policies, rail freight traffic might increase and lead to railway noise exposure, particularly during night-time. Exposure to air transport noise is expected to increase significantly around airports (between 2002 and 2015: 10-50% increase in people exposed to levels above 65 dB(A) Lden)[38].

Neglect of the built environment

Some 40% of citizens in the larger urban areas in the new Member States (Malta and Cyprus excluded) live in poor quality housing estates. The percentage is even higher in the Accession States (80% in Bucharest). Estimates suggest that three fifths of the homes need major renovation due to low energy efficiency, poor maintenance and related health problems.

The uniform nature of these housing estates with their lack of basic services and shops mean that they are not popular neighbourhoods to live in and many are suffering depopulation as citizens seek a higher living standard elsewhere. This may lead to areas of the city with extreme depravation and encourage urban sprawl.

Measures are being taken to improve the quality of large-scale, poor quality housing estates in the new Member States but no figures were available on the rates of renewal.

Greenhouse gas emissions

Up to 40% of all energy used is consumed in the built environment (heating, cooling, hot water, use of electrical appliances and equipment). Urban transport accounts for around 40% of all road transport related greenhouse gas emissions. A city of 1 million people is estimated to generate 25,000 tonnes of CO2 per day[39], but there is considerable variation between cities depending on the fuel used to generate electricity.

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37 INCE - 2001 - 'Noise emissions of road vehicles - effect of regulation - final report'

38 Anotec study on noise exposure around Community airports

39 Europe's Environment, EEA 1995

The EU and the Member States have implemented a number of policies and measures to reach their objectives under the Kyoto Protocol. At the EU level, these relate in particular to the development of an EU wide emissions trading system, promoting renewable energy, improving energy efficiency of appliances, industrial processes and vehicles, tackling non-CO_2 gasses (e.g. landfill directive and proposal on fluorinated gasses) and integrating climate change in specific policy areas such as research, transport, energy, rural development and the structural funds. Nevertheless, Kyoto targets should only be considered a first step as long-term global reductions will need to be considerably larger to slow down and halt climate change.

Some of these efforts will have a clear impact on urban areas. For instance, the energy performance of buildings Directive is predicted to save up to 30-45 MT of CO_2 per year by 2010. Given the concentration of buildings in urban areas, most of this improvement in energy performance will take place there.

Urban sprawl

Urban sprawl means the unstructured expansion of urban areas into the surrounding countryside. Each development is likely to be properly planned and authorised but the overall vision of a high density, mixed use urban area is not maintained. Development takes place at low densities in a sporadic way.

A dispersed pattern of settlement requires higher levels of resource use, and therefore incurs a higher cost (e.g. greater fuel use to transport goods over longer distances). Urban sprawl establishes a dependency on the private car for access to goods and services which can disadvantage people without cars. It results in soil sealing, loss of natural habitats affecting biodiversity and can lead to greater flooding.

There has been an 11% increase in built-up area for just a 2.5% increase in population over the last 20 years[40]. Urban sprawl has expanded significantly during the 1990s in many areas, including Italy, the Netherlands, eastern Germany and Ireland[41]. Regions such as Madrid, Dublin and Mediterranean coastal areas have experienced 10% increases in soil sealing. Sprawl is generally greater around the largest urban areas (over 500,000 inhabitants) with housing and industrial or commercial uses the dominant new land uses.

The Thematic Strategy on Soil Protection is likely to address the issue of the rehabilitation and reuse of brownfield sites in order to limit soil sealing. At this stage, this Strategy is under development so it is not possible to quantify the likely results of such considerations.

The Commission has proposed that Community assistance is offered for the rehabilitation of contaminated sites and land under the future Cohesion Policy[42]. The Member States decide their own priorities for Community assistance and so it is not possible to predict what effect this inclusion will have in preventing urban sprawl.

It is likely that these measures will have a positive influence on the rate of soil sealing but the magnitude cannot be quantified.

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40 2004 EEA Signals Report

41 Corine Land Cover Report 2005

42 See in particular the Proposal for the European Regional Development Fund COM(2004)495

Generation of large volumes of waste

Urban areas generate large volumes of waste from households and construction and demolition activities. Overall volumes of waste are growing. Levels of municipal solid waste generation per capita grew by 26% between 1990 and 2000 for the EU15, whilst GDP rose by 23%. Overall levels of waste continue to grow (1995-1997 average was 400 kg/person/year, 1998-2000 was 500kg/person/year, current average is now 550kg/person/year).

The volume of construction and demolition waste is estimated to have almost doubled between the late 1980s and the late 1990s in the EU15 and a similar trend is emerging in the EU-10.

Progress is being made in reducing the environmental impact of waste through higher levels of recycling and reuse but the performance across the EU is extremely varied (54% of solid waste was recycled in Copenhagen in 2001 compared to less than 1% in Athens[43]).

The OECD predicts that municipal solid waste generation will continue to grow until 2020 although at a slightly slower rate. The Joint Research Centre predicts an increase in municipal solid waste generation of 42.5% by 2020 compared to 1995 levels. Growth in the EU-10 is predicted to be faster.

Predictions for future generation of construction and demolition waste from urban areas are not possible. Growth in the past has however been dramatic (almost a doubling between the late 1980s and the late 1990s in the EU-15 with a similar trend emerging in the EU-10).

The Thematic Strategy on the Prevention and Recycling of Waste set out additional measures to reduce the environmental impacts associated with waste generation and management including a stronger focus on waste prevention measures and recycling. Waste plans will be prepared at the appropriate administrative level (in many cases the local level). They are expected to have a positive impact on the management of municipal and construction and demolition waste in urban areas and decrease the environmental impacts associated with the use of resources.

Urban waste water

The volume of untreated waste water continues to fall as compliance with the Urban Waste Water Treatment Directive is improved. The number EU15 large cities (i.e. those having more than 150,000 population equivalent) without any waste water treatment fell from 26 to 17 between 2002 and 2003. However, 222 cities from the 571 covered by the obligation in the Directive for treatment above 150,000 inhabitants failed to apply the required secondary and/or tertiary treatment to their waste water.

Untreated waste-water from urban areas causes significant water pollution which has a serious effect on biodiversity and is a threat to human health.

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[43] Urban Audit 2004 (www.urbanaudit.org)

Compliance with the Directive is expected to continue to improve but it is still a significant challenge reach full compliance. Compliance with the Directive for EU-15 cities is currently only 54% for cities with more than 150,000 population equivalents. The last deadline for the implementation of the Directive in the EU-15 expires at the end of 2005. Each of the new Member States has a different transitional period for the implementation of the Directive with the last being end 2015. The Commission's proposals for future Cohesion Policy include Community support to achieve compliance with the Directive and each of the new Member States (except Poland and Malta) had developed special implementation plans. It is estimated that compliance with the Directive for the EU-10 requires 15 Billion €.

The Water Framework Directive established a framework for previous water legislation, introducing an integrated approach for water quantity and quality management (i.e. connecting emission limit values and water quality standards) and establishing standards for water through innovative and water-body-based river-basin management approaches. All waters (surface and ground-waters) must achieve "good ecological and/or chemical status" by 2015.

Economic and social issues raised by urban environment problems

It is clear that many of the environmental problems facing urban areas have implications for economic and social issues.

Congestion – poor management of transport can give rise to high economic costs through congestion. The cost of road traffic congestion (not just in urban areas) amounts to 0.5% of Community GDP, rising to 1% by 2010[44].

Higher costs for cities – management approaches for urban areas which lead to poor quality environments can also have negative impacts on the economic performance of the city. For example, the cost of transport for the community varies from 5% of GDP in densely populated towns with strong public transport use to more than 12% in less densely populated towns (urban sprawl) where the car is virtually the exclusive mode of transport[45].

Unattractive cities less able to secure investment and skilled workers – the Communication "Cohesion Policy in Support of Growth and Jobs: Community Strategic Guidelines, 2007-2013"[46] recognises that companies and skilled workers want to locate in attractive urban areas.

Poor health – poor quality environments can have a direct impact on health. Annual impacts of PM alone across the EU 25 are estimated at 348,000 premature deaths.

Social exclusion – Dependence on the private car excludes certain citizens from goods and services that are not accessible by other means (for example, in Ireland, 54% of women and 37% of men do not have driving licences[47]).

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44 COM(2001)370 'European Transport Policy for 2010: Time to Decide'

45 "Mobility in Cities Database" International Association of Public Transport 2005

46 COM(2005)299 of 5 July 2005

47 Irish Dept. of Justice, Equality & Law Reform 2000

What are the underlying drivers of the problems?

The environmental challenges identified have many different drivers and causes which are often inter-related. Research reveals the likely benefits that could come from changes in some policies (e.g. the SCATTER[48] project for land-use changes) but any wider interpretation of the direct contribution from each of these drivers to the main environmental problems listed is not possible.

Poor land-use policies

Land use is one of the strongest determinants of an urban area's character and its environmental performance. High density, mixed use settlement patterns can offer many environmental advantages over dispersed and segregated patterns of settlements. Land use policies which encourage urban sprawl can lead to dependence on private car use, greater land-use per capita and correspondingly higher levels of resource use. Urban areas can become more vulnerable to rises in the cost of fuel.

However, the quality of life in urban areas can be compromised by noise or poor air quality when land-use densities are too high and priority is not given to ensuring a high quality of life in these areas. The trend for citizens to vacate city centres and live on the edges of the city instead is in part due to the quality of life experienced in poorly managed city centres (other factors such as cost and availability of housing stock are also important).

A detailed understanding of the different environmental performances (e.g. in terms of resource and energy use) of different land-use patterns is not yet available.

Growing dependence on private car

The growing dominance of the use of the private car in urban areas generates many adverse environmental effects. The growth is in part fuelled by land use policies, but changes in lifestyle and expectations are also important.

Increasing resource use per capita / Lifestyle changes

Changes in lifestyle are contributing to the rise in resource use. People are increasingly living in individual households which tend to be less efficient, requiring more resources per capita than larger households. For instance, a 2-person household uses 300 litres of water per day, 2 single households use 210 litres each. A 2-person household will use 20% less energy than 2 single person households. The number of households grew by 11% between 1990 and 2000 and the trend towards smaller households increases land use and acts as a driver for expansion of urban areas.

The general trend is for greater consumption of resources per capita with an associated growth in environmental impact. About 60% of large European cities are over-exploiting their groundwater resources and water availability[49]. Household waste grows 3-4% annually.

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48 http://www.casa.ucl.ac.uk/scatter/download/SCatter_summary_report.pdf

49 Europe's Environment: The Second Assessment (EEA1998)

Demographic changes

Demographic changes are a key driver for urban issues. It is expected that Europe's population with increase until around 2020 and then it will stabilise and then decline[50]. Numbers of working-age population will decline earlier and there will be a sharp increase in the numbers of older people (65 and over) who have special needs as regards housing and transport. In addition, changes in the pattern of population mean that some European regions will experience considerable growth (e.g. south east England) and others are experiencing decline (e.g. eastern Germany). Managing changes in urban population whilst maintaining a high environmental quality will be a key challenge for many urban areas. Prague lost 2% of its population and Katowice 7% during the 1990s[51].

Who is affected?

Urban citizens and those who work or visit urban areas are directly affected by poor quality environments, notably in terms of health effects. Poor quality environments (run-down and badly managed neighbourhoods) can also produce feelings of insecurity and fear. Such impressions can have a clear and direct impact on the attractiveness of an area for living in or investment. The quality of the urban environment is increasingly recognised as a factor in assessing where businesses wish to relocate and invest.

50 Commission Green Paper "Faced with demographic change, a new solidarity between the generations" COM(2005) 94 of 17 March 2005

51 http://europa.eu.int/comm/regional_policy/sources/docoffic/official/reports/coheter/coheter_en.pdf

ANNEX D
Scope of Obligations in the Member States

Country	Region or authority concerned	Air Quality	Water Use and Treatment	Waste disposal	Greenhouse gas emissions	Noise	Nature / Biodiversity	Energy usage	Land quality	Litter	Urban sprawl	Transport and mobility	Sustainable construction
Belgium (Flanders)	Municipality level	✓	✓	✓		✓	✓						
Denmark	Municipality level		✓	✓		✓	✓	✓			✓	✓	✓
France	Urban areas + towns/communities situated less than 15 km from an urban area. Towns/communities > 50,000 inhabitants that are outside the 15 km limit are also affected	✓	✓						✓		✓		
Hungary	Municipality level	✓	✓	✓		✓		✓		✓		✓	
Poland	Municipality level	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Slovenia	Municipality level	✓	✓	✓		✓	✓	✓	✓	✓		✓	

Scope of Obligatory Sustainable Urban Transport Plans

Country	Region or authority concerned	Increasing Public Transport use	Increasing Cycling	Increasing walking	Reducing car use	Increasing access to Public Transport	Reducing traffic accidents	Reducing traffic noise	Reducing transport emissions	Reducing traffic congestion	Reducing journey times	Reducing the need to travel	Employer/employee travel plans	School travel plans
France	Cities with more then 100,000 inhabitants	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	
UK	Local transport authority	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

ANNEX E
Definitions for Survey

For the survey of Europe's largest urban areas, the following definitions were set out in the questionnaire to provide a standard understanding of the following plans and systems.

Definition of an Environmental Management Plan

*An **Environmental Management Plan**:*

- *covers the whole town or city;*
- *links different environmental 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 quality of life as a whole) in an integrated and co-ordinated way; and*
- *provides information on the current environmental situation, sets targets for improvement, and actions to meet those targets.*

Definition of an Environmental Management System

*An **Environmental Management System:***

- *is a clear procedure to manage environmental goals and targets*
- *is a system that includes target setting, consultation, review, auditing and reporting*
- *defines the organisational structure, responsibilities, procedures, processes and practices needed to achieve environmental goals and targets*
- *provides regular reports to the public*
- *can be used to implement an Environmental Management Plan*
- *can also be used to help improve a town or city authority's own internal environmental performance*

Examples of Environmental Management Systems include formal, accredited schemes such as ISO 14000 and EMAS, as well as informal schemes specifically developed for a town or city's purposes.

Definition of a Sustainable Urban Transport Plan

*A **Sustainable Urban Transport Plan:***

- *covers the whole town or city;*
- *covers all types of transport;*
- *deals with the environmental, social and economic aspects of transport*
- *tries to promote public transport, cycling and walking*
- *tries to serve all of the town or city's citizens*

*(NOTE: A Sustainable Urban Transport Plan is **NOT** simply a transport plan that aims to improve traffic flows within and around the city/town. A Sustainable Urban Transport Plan will include measures to ensure that the social and economic development of the town or city is balanced against managing the environmental impacts of transport).*

ANNEX F
Methodology for Estimating Costs

The costs and benefits associated with the preparation and adoption of Environmental Management Plans (EMP), Sustainable Urban Transport Plans (SUTP) and Environmental Management Systems (EMS) were based on data from a variety of sources. The data was collected as follows:

- Identification of all capital cities and cities with more than 100,000 inhabitants in the EU25
- Identification of cities that already have the plans and systems
- Assessment of the costs of preparing/adopting these plans and systems based on data provided by individual cities
- Assessment of the benefits to *city authorities* of adopting the plans and systems
- Assessment of the benefits to *cities as a whole* of implementing the plans and systems
- Review of supporting evidence from previous research into the costs and benefits associated with plans and systems and combinations of options typically included in the plans.

The capital cities and cities with more than 100,000 inhabitants in the EU25 were identified using official national census data for each of the 25 Member States (462 cities in all). A simple survey questionnaire was prepared asking these city authorities to provide details of whether or not they already have these plans and systems in place (and if not, whether such plans/systems had been considered in the past or for the future). In total, 159 cities with more than 100,000 inhabitants responded to this first questionnaire (a 34.4% response rate).

The cities that responded to the questionnaire and indicated that they had a plans or a system were sent a more detailed questionnaires. These questionnaires included questions on the following topic areas:

Environmental Management Plans:
Scope of the city's EMP
Costs of preparing the city's EMP
Involvement of other organisations in the preparation of the EMP
Qualitative information on the benefits to city authorities of adopting an EMP
Qualitative information on the benefits to cities of adopting an EMP

Sustainable Urban Transport Plans
Scope of the city's SUTP
Costs of preparing the city's SUTP
Involvement of other organisations in the preparation of the SUTP
Qualitative information on the benefits to city authorities of adopting an SUTP
Qualitative information on the benefits to cities of adopting an SUTP

Environmental Management Systems
Description of the city's EMS
Costs of implementing the EMS
Costs of operating the EMS
Costs of certifying the EMS
Involvement of other organisations - implementation, operation & certification
Benefits to city authorities of implementing an EMS
Reductions in resource use due to the implementation of an EMS

Selected cities were also approached for more detailed information, including data on the costs of schemes included in their plans, and quantitative data on the benefits that have been achieved due to the implementation of the plans (e.g. tonnes of pollutant emissions abated, reductions in the tonnage of waste generated, etc). Information was collected from these cities using a combination of detailed pro-forma questionnaires combined with telephone or face-to-face interviews with representatives from the relevant city authorities. The information gathered from these questionnaires and interviews was then used to prepare individual case studies (detailing the costs, benefits, and wider impacts of introducing plans and systems) for each of the selected cities.

Additional data were also collected from monitoring reports prepared by individual cities to track progress against targets in their EMPs and SUTPs, and other data were collected from a range of published studies.

Data on staff time spent on plan preparation and additional preparation costs collected from different cities have been used to estimate a set of average costs for the preparation of a plan and system. Different wage rates were used to cover the variation across the MS. Estimates of the likely number of cities that do not have plans and systems have been made in order that the average plan preparation costs can be factored up to provide estimates of the total costs for the EU25 associated with a possible requirement for all capital cities and cities with more than 100,000 inhabitants to adopt plans and systems.

The assessment of the benefits of plans and systems was in parts: the benefits to city authorities (typically these are organisational and efficiency benefits), and the benefits to cities as a whole (e.g. reduction in the environmental impacts of the city's activities). The assessment of the benefits to city authorities was a completely qualitative study because it is very difficult to quantify the organisational benefits that may have been achieved, and because it was thought unlikely that many cities would have carried out a comprehensive assessment of these benefits. The assessment of the benefits to cities as a whole was carried out at two levels: primarily qualitative in nature (due in part to a lack of consistency in the methods used by cities to report on performance against targets in their plans and also because different cities will naturally have very different situations such as geography, population, traffic congestion that make it very difficult to compare and aggregate the benefits achieved). In practice, it is not possible to say that the preparation and adoption of plans and systems will lead to a defined set of benefits because the scale of what can be achieved depends to a large extent on the baseline situation before the plan was implemented, the scope of each city's plans, and the year in which the plan was implemented. For all of these reasons, rather than providing an average quantified estimate of the benefits that could be achieved, a case study approach has been used; data obtained from individual cities has been used to provide an overview of the quantified benefits that have been achieved in those particular cities.

In addition to data from city authorities, further research was conducted to review the outputs from previous research projects that have attempted to assess the costs and benefits associated with these types of plans and systems. Where possible, data from previous research has been used to cross-check the cost estimates prepared for this study, and to provide further quantified data on the scale of environmental, social, and economic benefits that could be achieved from implementing additional environmental management and sustainable transport measures.

ANNEX G
Possible Impacts listed in the Questionnaire to Cities.

Possible Benefits of Environmental Management Plans

i. Improved air quality (reduction in pollutant concentrations – e.g. NOx, PM10, CO, SO2)
ii. Improved natural water quality
iii. Reduction in the amount of waste generated by your city
iv. Reduction in Greenhouse Gas Emissions (reductions in emissions of CO2, CH4, etc)
v. Reduction in the number of households exposed to noise above 55 dB(A)
vi. Increase, or no reduction in the number of different animal and plant species
vii. Increase in the number of nature conservation areas in the city
viii. Reduction in the amount of energy used by your city
ix. Streets in the city are cleaner
x. Urban sprawl has been reduced.
xi. Increase in the number of buildings constructed using sustainable construction techniques
xii. Improvements in the quality of drinking water
xiii. Increase in the proportion of energy from renewable sources generated or used in your city
xiv. Increase in the amount of waste material sent for recycling
xv. Reduction in the amount of water used by your city
xvi. Reduction in the ecological footprint for your city
xvii. Protected buildings
xviii. Reduction in the amount of pesticide used by your city
xix. Improved quality of life
xx. Increase in the proportion of citizens satisfied with the city's environment
xxi. Improvement in indoor air quality
xxii. Improvements to existing green space / open space (local parks, wooded areas, public common recreation areas)
xxiii. Increase in the amount of green space / open space (local parks, wooded areas, public common recreation areas) in the city
xxiv. Reduction in the amount of contaminated land in your city
xxv. Reduction in the number of incidents of flooding in your city
xxvi. Increase in the amount of green purchasing in your city (includes energy efficient electrical equipment, low pollution vehicles, etc)
xxvii. Reduction in the amount of graffiti in your city
xxviii. Reduction in the number of journeys made in your city.

Possible Benefits of Sustainable Urban Transport Plans

i. Increased public transport use
ii. Reduction in the proportion of journeys made by car
iii. Reduction in congestion or reduction in average journey time
iv. Increase in bicycle use
v. Increase in walking as a travel mode
vi. Improved access to public transport (e.g. reduction in average distance between households and nearest bus stop or train station)
vii. Reduction in the total number of journeys in your city by all modes of transport
viii. Reduction in the number of people killed or seriously injured in traffic accidents
ix. Improved air quality (reduction in pollutant concentrations – e.g. NOx, PM10, CO, SO2)
x. Reduction in Greenhouse Gas Emissions (reductions in emissions of CO2, CH4, etc)
xi. Reduction in the number of households exposed to noise above 55 dB(A)
xii. Increase in the number of employers with travel plans
xiii. Increase in the number of schools with travel plans
xiv. Reduction in the amount of freight carried by road transport
xv. Reduction in the amount of land used for transport infrastructure
xvi. Increase in the average number of passengers per car (increase in car sharing)
xvii. Improved access to shops and services
xviii. Improvements to the health of citizens (e.g. reduction in the number of people hospitalised due to transport-related air pollution)
xix. Increase in the proportion of vehicles using alternative fuels or power sources (e.g. battery-electric vehicles, natural gas, LPG/Autogas, bio-ethanol, bio-diesel, etc)

ANNEX H
Estimating the Total Cost of the Possible Obligations

The 4 scenarios used to estimate the total costs of the obligations on sustainable urban transport plans, environmental management plans and environmental management systems were:

- Assume that all cities that did not reply do not have such plans or systems (this scenario gives rise to the highest cost for the obligations)

- Assume that the cities that did not reply have the same level of plans and systems as that did reply (if 30% of the responding cities for a MS said they has a management system, 30% of those that did not respond are assumed to have such a system).

- For MS where such plans are a legal obligation, assume that all cities in those MS will adopt plans in due course. All other cities that did not respond are assumed not to have such plans and systems.

- A combination of the third and second assumptions (all cities in MS where it is an obligation will adopt the plan regardless of the Directive and for the rest, the use of such plans is on the same ratio as for the cities that responded). This assumption gives the lowest cost for the obligations.