COMMISSION OF THE EUROPEAN COMMUNITIES

COM(90) 218 final

Brussels, 27 June 1990

GREEN PAPER ON THE URBAN ENVIRONMENT

Communication from the Commission to the Council and Parliament

TABLE OF CONTENTS

INTRODUCTION

Dealing with the problems of the urban environment requires going beyond sectoral approaches. However useful and necessary the setting of targets for air quality, water quality, maximum noise levels, etc. in Directives and Recommendations, finding lasting solutions to the environmental problems facing our cities requires a wider view of their origins. This means addressing not just the proximate causes of environmental degradation, but examining the social and economic choices which are the real root of the problems.

The problems of the cities are an early warning signal of a more deep-seated crisis which will force us to rethink current models of organisation and urban development. Of course, not all European cities suffer identical problems, given their different levels of economic and social development, different economic functions, and geography. But they have much in common.

This Green paper is intended as a first step towards debate and reflection, and attempts to identify possible lines of action.

It may be asked why the Commission of the European Communities is taking up the problems of the cities and their environment. Why can these problems not be addressed and solved at the local level? What contribution can the Community possibly make ?

It is important to recognize that the majority of Community policies have, directly or indirectly, an influence on urban areas. Article 130r of the Treaty as amended by the Single Act makes allowance for Community action for the protection of the Environment which must include the potential of such action within urban areas. The full text of which is include in Appendix I of this document.

There are a number of existing Community actions which are targeted at the urban environment - its air, water, noise and waste - and hence at the quality of life in the cities themselves. There are also Community activities helping to preserve the architectural heritage which constitutes the cultural and artistic wealth of our cities. Community funded investments and programmes through both the Regional Development and Social Funds also have a considerable impact on cities in less developed areas and those suffering from industrial decline and high unemployment

Moreover, many sectoral, industrial and research policies of the Community in such areas as transport, energy and social affairs do have a bearing on the development of our cities. There is a need to make sure that these influences are fully recognized and controlled.

The primary focus for action to improve the urban environment is clearly the individual city. But achieving major improvements will require action at national and Community level as well, with roles and responsibilities assigned to each within a framework of cooperative partnership. At the Community level, it is important that the various sectoral policies take due account of the problems of the urban areas and converge into a Community strategy for Europe's cities.

In fact, the need for an integrated approach to the urban environment is already stressed in the Fourth Environmental Action Programme (1987-1992), which states that "One priority will be to consider to what extend the Community's existing structural funds (and notably the European Regional Fund) could be directed to comprehensive environmental programmes in inner city areas. It will therefore be of special importance to ensure that an adequate level of funding is available to enable the Community to participate adequately, along with public authorities and local industry, in urban renewal schemes which take full account of both environmental and regional policy requirements". This may require a special financial facility.

The Programme also commits the Commission to present a report to the Council "which will examine how the public and private sector and other interests can work together towards the rehabilitation of certain urban areas...".

Moreover, solving the problems of the city would make a major contribution to solving the most pressing global environmental problems, notably the greenhouse effect and acid rain. For it is in the cities that we find the greatest concentration of population and economic activity - and hence of emissions. And it is the cities which make the crucial, long-term and often irreversible decisions on infra-structure investments in energy supply, waste and water treatment, and transport.

A Community role in urban environment would also meet the growing demand by the cities themselves for greater opportunities for an exchange of information and practical experience. The Commission recognizes that other organisations, particularly the Council of Europe, have for some time been encouraging interregional cooperation on urban issues. In the development of Community policies and programmes, the Commission will take note of the work already achieved, such as initiatives on urban renovation and protection of historic buildings, or planned by the Council of Europe to ensure that initiatives are complementary and not duplicative.

The Commission can play a crucial role in facilitating such exchanges. However diverse in detail, Europe's major cities face common problems. But frequently they know little of each other's experiences and projects. The preparation of this Green Paper showed clearly that the cities look to the Community to remedy this situation.

Methodology

This Green Paper was conceived as an instrument for identifying the full range of difficulties confronting Europe's conurbations, so as to devise adequate solutions to real problems. We have thus organized a wide consultation with those responsible for managing urban problems, with technical experts, and with academics and professionals concerned with urban issues.

For this purpose, six international conferences were organized around the following priority themes :

(1) Disused Industrial Areas

Derelict industrial sites in cities with an industrial past can provide a strategic opportunity to establish services and infrastructure linked to the centre. Examples are Milan's Pirelli-Bicocca, Turin's Lingotto, the new projects for the industrial zones of Bilbao, Rotterdam, Birmingham, Barcelona and others.

Rededicating such sites often involves projecting a new role and image for the city to make it attractive for productive and residential investment - an opportunity for new ideas and a stimulus for innovation. Where some industrial activities remain, old and new functions of the city need to be harmonized.

Two conference were dedicated to this theme, one in Brussels (June 1989) and one in Terni (December 1989) concerned specifically with the problems of steel towns.

(2) The Urban Periphery

Urban growth has spawned vast built-up areas which lack essential qualities we associate with cities : history, functional differentiation, cultural and other forms of infrastructure - in short, a recognizable and unique individuality with which the citizen can identify.

These monotonous areas lay siege to the more structured parts of the city. They often harbour poverty, crime and drug abuse, problems of our modern society subject to increasing attention from authorities at all levels.

The conference of Louvain (October 1989) dealt with this theme of urban "fragmentation" and provided examples of projects which revitalized such areas and established functional and formal links with the centre, transforming them from faceless dormitories to organic parts of the city.

In the coming years, a great deal of planning and financial resources will be devoted to these two great challenges : derelict land and urban sprawl. More broadly, the city inherited from the 19th century offers great opportunities for renewal: its barracks, hospitals, railway stations, abattoirs and other 19th century relics can be replaced or put to new uses to improve the quality of our cities.

(3) The Quality of the Urban Environment, Public Spaces and Green Areas.

The "empty" spaces - the squares, parks and similar areas which lend character to our cities - are being assailed by the motorcar and bill boards, while in the periphery these urban features may be lacking altogether. Creating a quality environment requires more than putting out few benches, potted plants and waste baskets in pedestrian areas. It calls for a comprehensive approach.

The conference held in Rome (December 1989) examined a series of ongoing experiments in Britain, Barcelona, Rome and Rotterdam.

(4) Urban Pollution in Northern and Southern Europe

Two conferences, one in Avignon (December 1989) and the other in Bremen (January 1990), looked at the practical and immediately pressing problems of the urban environment and possible Community help in addressing these;

With one of the conferences dealing with the problems of the southern cities, and the other with those of the North, a comparison became possible, taking into account differences which went beyond climate to include those of history, culture and society. Both conferences dealt with air and noise pollution, urban waste disposal, water, and contaminated soils.

These six conferences have been extremely useful in preparing the Green Paper. They combined firsthand observation, information about ongoing projects and the collection of recent data.

Finally, it is important to stress the horizontal approach which has guided the preparation of this Green Paper. Treating each of the factors threatening the city environment in isolation leads to short-term solutions - mere palliatives or simple delaying action. Thus, it is not enough to worry about air quality only when, as happens every winter, inversion renders the air of many cities unbreathable. This leads to "emergency" measures which

fail to address basic causes. What is needed is a critical analysis of urban structures, their functioning and mode of development : it is here that the remedies to improve the urban environment need to be sought.

What is clear, however, is that the cities will continue to be crucial to the further economic and social development of Europe. Technological change may seem to indicate otherwise. The old steel or shipbuilding towns like Liverpool, Sheffield, Lille, the Ruhr, and Genoa do indeed suffer the effects of structural change. Non-urban areas of economic activity, linked to electronics, are emerging, for example in Flanders, southern France or the Tiber region near Rome. Moreover, global communication in the global village allows decentralized activities ranging from financial services, to research and integrated production directed by a distant computer.

But, paradoxically, the ease of long-distance information increases the need for face-to-face contacts. The cities provide this through their density and through their role as transport "hubs". The creative development of modern products and services requires the presence of a large variety of specialized inputs which the cities most easily provide. "Culture" is now recognized as a factor which extends beyond private life to playing a crucial part in economic creativity.

Most European cities have stopped growing and - like an individual in mid-life - have begun to reflect on their purpose, their assets and their choices for the future. There are exceptions to this in the South, where rural migration continues to swell the population of some cities; and in cities like Berlin, which are coping with new migrants of a different sort. But even, and perhaps especially, in these cities under stress, basic questions concerning the quality of the environment are being posed.

In general, however, population growth has stabilized. Attention is shifting from creating new districts to improving and renewing existing ones. This process involves more than ecology in the strict sense, but architecture itself. The historical centres of our cities have been savaged by the intrusion of anonymous boxes in the international style. Re-creating harmony with the old means more than mimicking superficial stylistic elements. It requires respect for fundamental traditions in the choice of materials, diversity of buildings and multiplicity of purposes. Mere zoning must be replaced by developing the city as a project which assure a new quality of social and economic life.

CHAPTER ONE : THE FUTURE OF THE URBAN ENVIRONMENT

1. City and Urbanization

From the Middle Ages to modern times, Europe's social, cultural and economic development has been based on the city : the power of the Italian city-state, the prosperity of the Hanse towns and Europe's great port cities, the sway of the capitals of principalities and kingdoms, the creativity of university towns such as Bologna, Prague, Paris or Coimbra. European cities show the traces of struggles between city and country, rulers and ruled, rich and poor - testimony to their role in social and political development which, as Leipzig proved in 1989, continues.

Their common history has given European cities a common face : the small streets and alleys of Mediaeval centres; the grand works of 18th century princes; the great transformations of the 19th and early 20th centuries; the growth of suburbs and dormitory towns, joined later by giant shopping centres; the decline of centres as dwellings for middle and upper income groups in a number of cities in favour of specialised commercial and administrative activities; and finally the invasion of traffic congestion, urban motorways, and uniform and mediocre architecture in centre and periphery alike.

As we move towards the 21th century, Europe's cities will continue to be the main centres of economic activity, innovation and culture. Managing the urban environment and the quality of life of its citizens therefore goes well beyond concern for the physical well-being of the Community's urban population. At stake is the quality of "civilization" in its most practical manifestations of economic, scientific and social performance.

Can we speak of "cities" or must we think in terms of "urban areas"? Using the vocabulary of the past may impede our understanding of new realities. The wider term seeks to describe the modern phenomenon, where a historic centre - itself greatly changed - is surrounded by a periphery of high-rise dormitories or suburban houses. Urban areas are divided and, at the same time, linked by a network of communication - motorways and railways which allow constant movement of people and goods.

There are no clear limits to the periphery, nor is its structure sharply defined. At the extreme, "urban areas" negate the concept of the city itself : they become "post-urban" phenomena, far removed from the traditional image of the pre-industrial and even 19th century city. Some experts at the OECD or UN dispense with the notion of "urbs" altogether and prefer to speak of "human settlements", no doubt in distinction to nature reserves or uninhabitable geological features.

The spread of urbanization

More than as a concept of settlement, urbanization can be understood as a pattern of individual and social behavior. Consumption patterns, information networks and social relationships are no longer those of the neighbourhood or the extended family of the pre-industrial village. In this sense a single urban life-style characterizes much of the Community.

European cities also resemble each other for a different reason : they increasingly harbour the poorest members of society in inner city ghettos or slums at the periphery. Yet this phenomenon creates its own diversity, as former city dwellers, rural migrants, European and non-European newcomers live in sometimes uneasy co-existence. Rural and "foreign" life styles blend only slowly into the uniformity imposed by modern production and consumption, and constantly renew the rich diversity which is one of the assets of urban life.

The city as a project

Has the spread of "urban areas" and life-styles made the concept of the "city" irrelevant ? True, with a few exceptions, today's cities have little in common with their 18th and 19th century predecessors. Yet the past decades have seen a rediscovery of the value of urban living and a growing appreciation of the importance of quality of life in the cities of Europe.

In part this reflects the failure of the periphery : the absence of public life, the paucity of culture, the visual monotony, the time wasted in commuting. By contrast, the city offers density and variety; the efficient, time- and energy-saving combination of social and economic functions; the chance to restore the rich architecture inherited from the past. "Urban areas" are a statistical concept. Cities are projects for a new style of life and work. "City" is the right word to use when speaking of urban ecology.

The Single Market accelerates economic activity and the process of internationalization, with consequences for the social cohesion, economic functioning and quality of life of the cities.

The role of some cities as centres for tertiary activities is being accentuated. While this is encouraging economic development and job creation it is also often reinforcing the pressure on the centres from office construction and traffic nuisance, reducing the diversity of city life and confirming the exodus to the suburbs which leaves the remaining dwellings to the poor and migrants, with enclaves for the rich.

Other cities may find themselves outside the zones of modern economic development. These includes towns which scarcely took part in the industrialization of the 19th and 20th century, and those specialising in industries which are now of declining importance in the advanced world.

Both accelerated development and economic decline, over which they sometime have little control, confront city authorities with difficult, sometimes impossible, tasks.

There is today undoubtedly increased competition for investment among localities of all kinds, including cities. Centrally located cities are undoubtly benefitting from the enhancement of the international service economy. In other cities concern for job creation is leading city authorities to offer not only tax advantages and green field sites, but they also often repeat the mistakes of the past in permitting development of poor environmental quality.

The essence of a European approach

Two elements form the basis for a specifically European approach to cities. The first is that the European city can still be saved. The problems it shares with cities in other continents, rich and poor alike - traffic congestion, slums in the centre and periphery, inadequate infra-structure, pollution - are present there in extreme forms rarely matched in Europe. The worst sources of pressure on cities - population growth and rural migration - are largely, if not completely, things of the past in Europe, leaving only economic growth, which can yield the financial and technological means to correct the damage it may cause.

The second specifically European element is Europe's traditional commitment to what is now called "social cohesion". The problems of poorer regions spill over to cities in the Community and it is here that efforts to create more equal and decent living conditions must increasingly concentrate. Cities have been - and, as Eastern Europe demonstrates, continue to be - where democracy develops. In the West, "Stadtluft macht frei" - the city's air sets you free - has found a new meaning for those escaping a life without jobs or prospects.

It is Europe's prosperity and Europe's economic failures which put pressures on the cities. Similarly, it is Europe as a whole which benefits form the economic efficiency, social stability and beauty of successful cities. In cooperation with national and local authorities the Community can and must make a contribution to improving a common patrimony and meeting a common responsibility.

The role of cities

Urban growth results from a combination of economic, social, cultural and political dynamics :

- the economic dynamic : the city is synonymous with proximity, providing the multiple contacts and activities that make it an information hub and creative centre. It is this ability to assemble the economic actors involved in all stages of production, research and consumption that draws firms to the urban centres.

- the social dynamic : the city brings together a wide variety of social facilities (nurseries, hospitals, social service agencies, etc.) whose role is becoming increasingly important as populations are marginalized by underemployment, unemployment and poverty. Indeed, the concentration of social problems makes it possible to define and pursue specific rather than general remedial policies. The city also concentrates employment opportunities; this is one of its great attractions. More generally, the city represents choice : of social relations, education, services and work.

- the cultural dynamic : as in the social sphere of which it is a part, the city's cultural role depends on density, proximity and choice. These factors facilitate the "production" of culture as much as its "consumption". In addition, the historic heritage of the city allows unique economic activities linked to culture, including tourism.

- the political dynamic. More than any other place, the city must respond directly to demands by its citizens for "good government". It is a place where direct participation is possible and increasingly practiced, and where the individual can develop most freely his sense of personal and civic value. It is not by accident that citizen, citoyen, cittadino, or Bürger denote the political sovereign in our languages.

Creativity

The city's economic and social importance ultimately rests on the ease of communication offered by spatial density and the sheer variety of people and institutions which can exploit this opportunity. The telephone and data-link are no substitute for many kinds of communication which go beyond the exchange of information; on the contrary, efficient electronic communication increases the demand for face-to-face contacts. This is especially true for collective decisions based on qualitative judgments and for exchanges of information which yield the unexpected, even unsought answer from which true innovation results. Physical movement and telecommunication services go hand in hand to help create the environment which attracts both business and residents to work and live in cities.

In short, urban communication yield the scientific, organisational, social and intellectual creativity which is one of the motors of development in the post-industrial age.

The enemies of this source of creativity are, on the one hand undifferentiated suburban sprawl in quasi-rural settings which isolate the individual; and highly specialised land-use policies within cities which create functional enclaves and social ghettos where like speaks to like : university campuses at the city's edge, banking districts at the centre, industrial zones deprived of simple services and far from habitations. Both suburban sprawl and specialisation are linked to the urban environment : they exist because they provide escape or protection from urban blight, poverty and pollution. Re-creating the diverse, multifunctional city of the citizen's Europe is thus a social and economic project for which "the quality of life" is not a luxury but an essential.

There is no alternative to a commitment to urban Europe. Statistics showing the reduction of some cities' populations are cited as evidence of their decline. But the suburbs which received such migration continue to depend on the cities for their social and economic vitality.

Indeed, while in some cities the move to the suburbs continues - with the centres taken over by low-income families living next to office enclaves - in others the convenience and stimulus of life in the city is being rediscovered. For this trend to continue, the noise which drives people to the quiet of the country must be reduced, the air improved, the open spaces redeemed from being parking lots and traffic islands. This is described in greater detail in the following section. The last section examines the deeper causes of urban degradation, which requires new thinking at all levels of policy making.

2. The Urban Environment

The urban environment has always known difficulties. Noise was a problem in ancient Rome; traffic blocked the streets of 18th century Paris; the 19th and 20th centuries have witnessed a proliferation of analyses of the pollution and nuisances besetting the lives of urban residents, particularly the poorer among them.

The quality of urban life has improved considerably over the past century. It was not until the end of the 19th century that homes were connected to supply mains and sewers. And it was not until the 1950's that most cities acted to reduce the air pollution from domestic coal heating. These improvements are reflected in increased life expectancy, lower infant mortality rates, etc.

Numerous problems remain, but they are often less obvious and therefore generate little concern. City-wide sewer systems have improved urban sanitation but pollute the rivers and oceans beyond the city's edges. Some types of pollution are highly visible only in certain parts of the city.

Others - such as air pollution caused by industry and cars, airplane noise, etc. - may be underestimated because they are only apparent at certain times or for short periods.

The effects of many of these pollutants are long term, and in some cases are more easily observed in the damage they do to nature or to buildings than in the slow deterioration they cause human health.

Yet the health of urban inhabitants is becoming a subject of increasing concern. Dense urban traffic is one source of health hazards. Carbon monoxide from vehicle exhaust may build up in tunnels or underground garages. This can cause respiratory system damage, inhibit oxygen absorption by hemoglobin and cause brain stroke in the elderly.

Hydrocarbons resulting from incomplete combustion react with other pollutants in the presence of sunlight, resulting in reaction products that cause eye irritation and respiratory system damage. They also react with NOX to produce ozone, which produces painful breathing, coughing and impairment of the immune system.

Lead is also a serious pollutant emitted by motor vehicles, but legislation requiring lead-free petrol should deal with this source.

Indoor pollution is a major source of health problems, the scope of which is just beginning to be understood. Lead paint in older housing has led to numerous cases of poisoning in children. On a much wider level, asbestos - widely used a insulation - has become a serious cause for concern. Inhalation of asbestos fibres causes severe lung damage and a rare - and incurable - form of cancer. This has engendered a hot debate as to whether asbestos already in place should be removed or is less of a hazard if left untouched.

Other building materials contain dangerous substances such as formaldehyde, mineral fibres, mercury, and radon. The toxic effects of these have been aggravated by the tendency towards tight insulation.

At a psychological level, noise may pose a significant health hazard to the urban dweller, creating stress-related physical symptoms and reducing the overall quality of life in the city, increasing aggressive behavior. It may also cause hearing loss.

2.1. The complexity of the urban environment

The problems facing the urban environment are legion and varied. For convenience of exposition we discuss them under three headings :

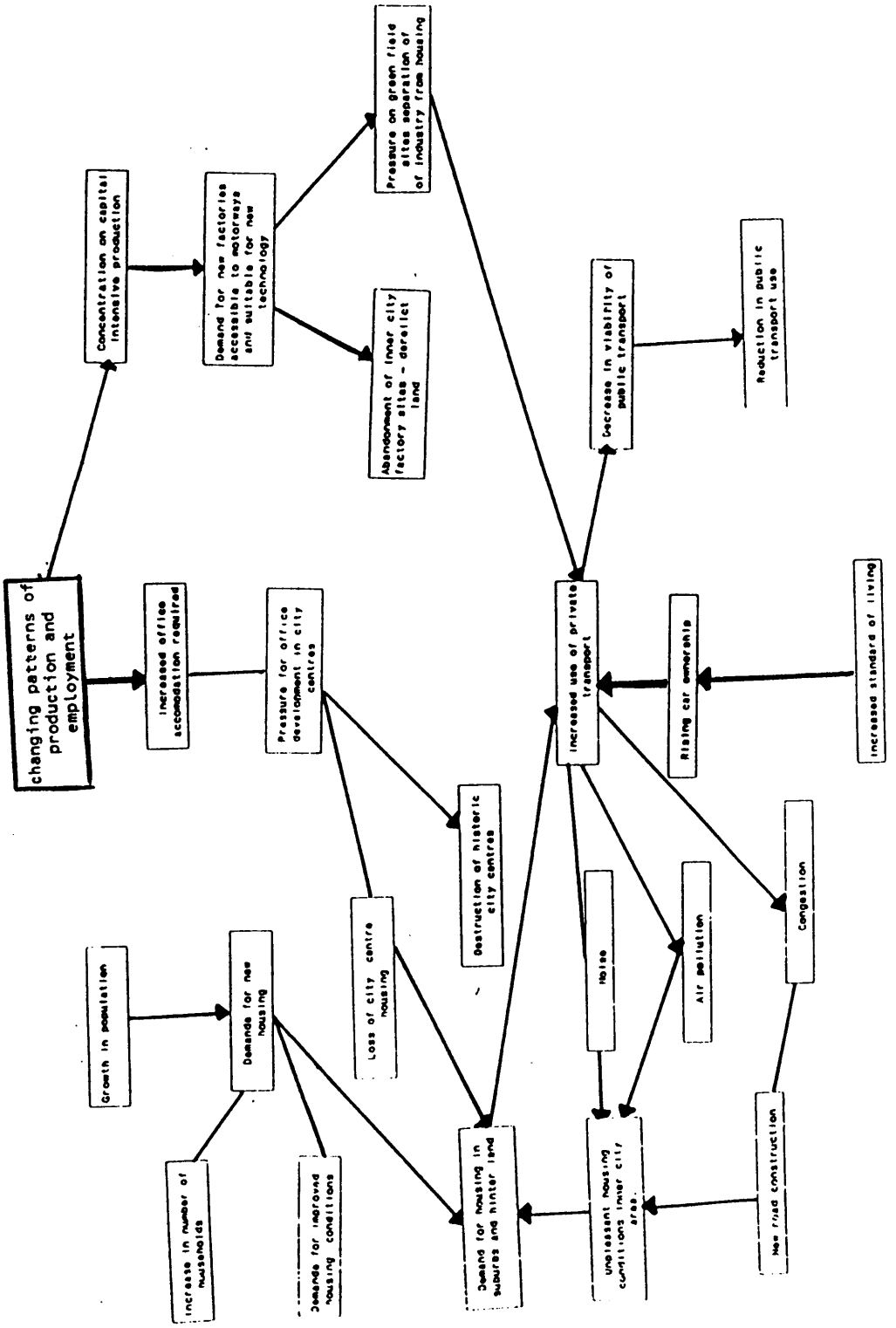
- Urban pollution : air, water, noise, soil, waste
- The built environment: roads, streets, buildings, open spaces, recreational areas.
- Nature : greenery and wildlife in the city.

In focusing on individual problem areas, it is important not to lose sight of the fact that the "urban system" is a complex and interrelated whole. A diagrammatic representation of some of the main cause-and-effect relationships influencing urban development and the urban environmental system is set out in Figure 1.

The extent of these interrelationships demonstrates the potential danger of ad hoc decision-making : the solution to one problem is often the cause of another. Effective management of our urban environment requires a strategy based on an overview of the urban system, with integrated decision-making in key areas. Few cities posses an administrative structure that can ensure such integration, most critically between land use and transportation planning. While the city is the main focus of economic activity and the associated pressures on the environment, it cannot be analysed in isolation from the region within which it is located. The interrelations between the city and its hinterland requires therefore that policies should be generated within a broad context which has a concern for the planning of the region as a whole.

Figure 1

Relationships within the Urban System



2.2. Urban pollution

Urban areas, by their very nature as centres of population and economic activity, show high concentrations of pollutants. Yet despite growing attention and extensive research into environmental issues, there is a lack of comparable data on key environmental indicators. Even where data are available, comparison and interpretation may be complicated by differences in data collection and measuring techniques.

Scientific research has, however, clearly established the negative effects on health of air, water and noise pollution, inadequate waste disposal and contaminated soils. Hence, the Commission has over the past decade established a number of environmental quality objectives. The issues involved in each of these areas are discussed in the sections below.

2.2.1. Air pollution

Urban areas are subject to a wide range of pollutants. The health effects of these pollutants, some which are carcinogens, include respiratory diseases and eye and skin irritation. In addition, they erode the built environment and damage the natural environment. Most air pollutants stem from three sources : industry, motor vehicles and the burning of fossil fuels for heating or electricity generation.

The contribution of industrial sources to air pollution varies considerably from one town to another, depending on density and type of industry in an area, its precise location and the extent to which it has adopted measures to control emissions or disperse them beyond the local environment. The effects of severe air pollution can be devastating : smog caused by SO_2 emissions caused the death of 5000 people in London in 1952.

Industrial pollution is however exclusively an urban problem, however. National and international emission standards are often set to address wider problems such as acid rain and the greenhouse effect, rather than the urban environment. It is as much through ambient "limit values" for air quality as through source emission standards that industry's contribution to urban pollution is regulated.

Air pollution problems related to city transport and buildings are more closely linked to the internal functioning of the city. The contribution of these energy-using activities to the levels of particular pollutants is set out in Table 1.

Table 1

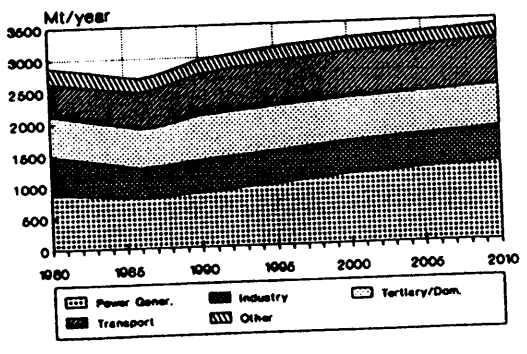
Sources of Air Pollution

Sector	CO_2	SO_2	NOX
Energy generation	37.5	71.3	28.1
(of which elec. gen.)	(29.3)	(61.5)	(24.6)
Industry	18.6	15.4	7.9
Transport	22.0	4.0	57.7
Others	21.9	9.3	6.3
Total	100	100	100
	(2.7 bill.t.)	(14 mio.t)	(9.8 mio.t.)

Source : Energy 2010 (1989)

As this table shows, depending on the energy source, space heating can be one of the most important sources of air pollution. In Dublin, for example, domestic heating is a major source of SO_2 and particulates. A gradual move away from coal has alleviated some of the worst effects of particulate and SO_2 pollution at the local level. However, a shift to electricity does not solve the problem at the global level, owing to the pollution resulting from most forms of electricity generation. In this wider global perspective, the use of all forms of fossil fuel contributes to problems of acid rain and, by increasing CO_2 levels (see Figure 2), to the greenhouse effect.

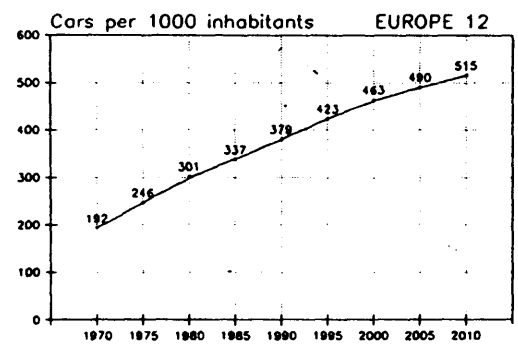
Figure 2
CO_2 Emissions, Europe 12 (1980–2010)
By sector



Source: Energy in Europe : Major Themes in Energy
Directorate General for Energy, Sept. 1989.

While the worst problems of local air pollution caused by heating have been solved, they have been replaced by increased levels of transport pollution. Automobile engines are major sources of NOX, CO, particulates and lead. As to CO_2 for instance, it is worth noting that almost half of transport combustion is estimated to be due to urban traffic. In many cities, the transport sector is responsible for almost 90% of carbon monoxide emissions. Figure 3 shows the growth of car ownership in recent years and projections in the short and medium term which indicate that this significant growth is likely to continue.

Figure 3
Car Ownership 1970 - 2010



Source : as Figure 2

The Community has over the past decade established air quality directives related to a number of key air pollutants : SO_2 and particles, NO_2, etc... These directives have established both limit values - a critical value for human health - and guide values - a value set as the objective for environmental improvement to prevent any long-term impact on health and the quality of life.

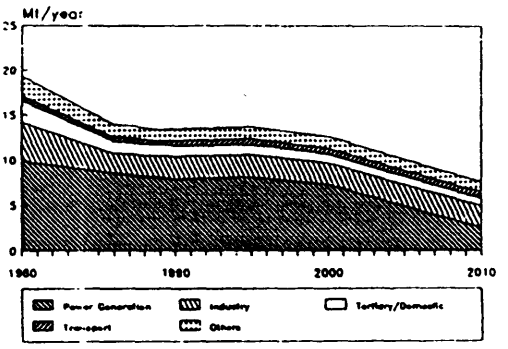
While information is not available across the Community to demonstrate the impact of these directives and associated directives aimed at controlling individual emission sources, Figure 4 demonstrates the effectiveness of measures to reduce SO_2 and NOX. Progress in NOX reduction has been less impressive. The introduction of catalytic convertors in all new cars in 1992/93 will reduce pollution by individual vehicles, but increases in road traffic and traffic congestion, including both private cars and road-handled freight traffic, may well offset this reduction.

Figure 4

SO_2 and NOX Emissions
Source : as Figure 2

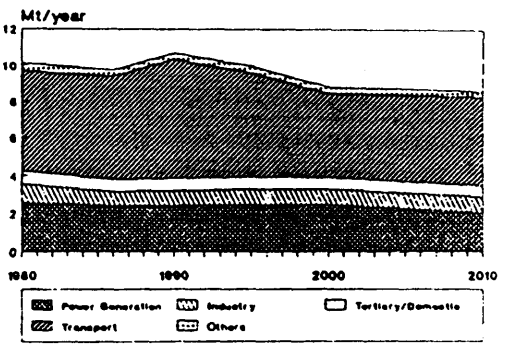
SO_2 Emissions for Europe 12

By sector



NOX Emissions for Europe 12

By sector



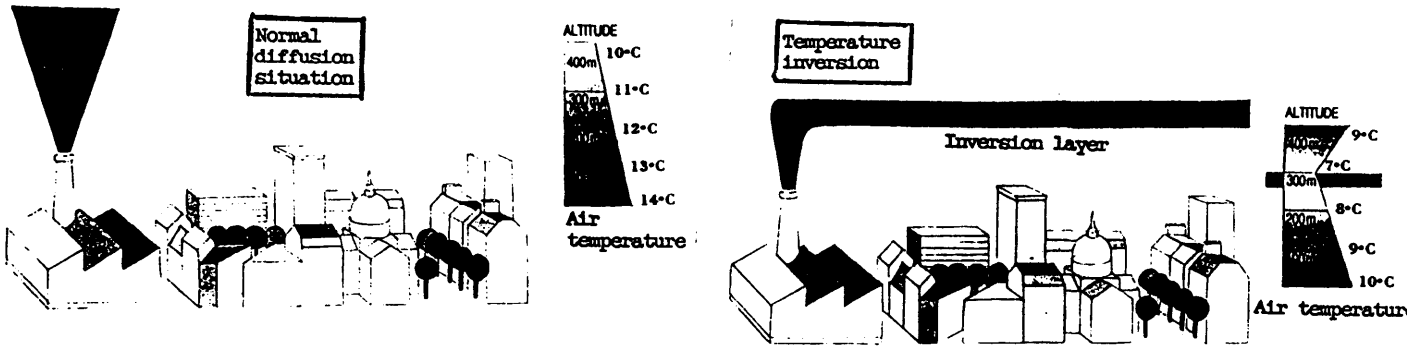
In a number of southern European cities, such as Athens and Naples, there has been significant increase in most air pollutants and a corresponding reduction in air quality. This can be traced to the major growth in population of these cities, due to an exodus from the rural areas of Southern Europe. The growth of urban industry and vehicle emissions in Athens, for example, has been so great that the authorities have had to introduce a system whereby vehicles are only permitted to enter the city centre on alternate days - and not at all when pollution levels exceed safety limits.

These measures have only succeeded in preventing the situation from worsening. They cannot be considered as long-term solutions.

Air pollution problems in urban areas are often aggravated by combinations of climatic and geographic factors which act to concentrate pollutants in the city and prevent their dispersion and dilution into the wider atmosphere. Such effects are described in Diagram 1.

Diagram 1

The Concentration of Urban Pollution

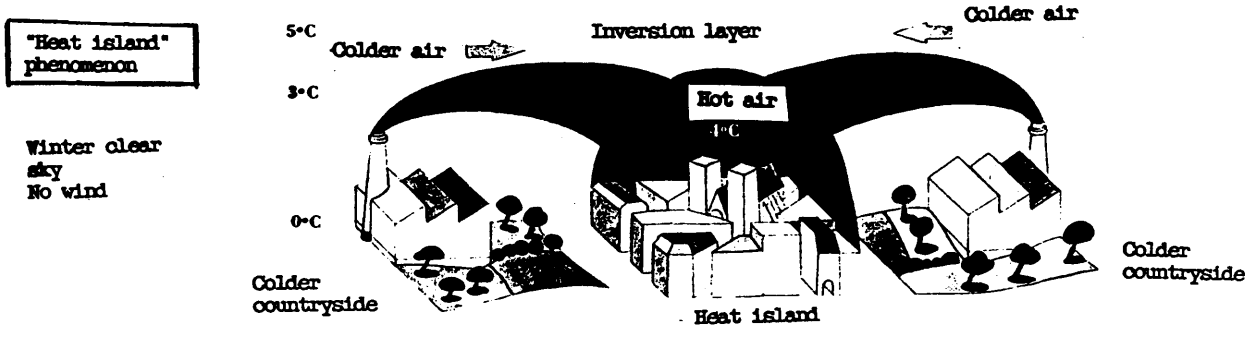


Under normal conditions, the pollutants emitted in hot gases rise higher the more they come into contact with colder air masses (normal diffusion situation).

In certain circumstances (e.g. nocturnal radiation), the temperature at an altitude of a few hundred metres is higher than the ground-level temperature.

The upward movement of the pollutants is then arrested and they are trapped in an inversion layer which acts as a heat cover. If there is no wind the pollutants increase considerably.

Apart from such cases of local pollution, pollutants and all the chemical compounds arising from them may be carried into the atmosphere by the wind over long distances before returning to the ground mixed with rain water, snow, mist and fog. This cross-frontier phenomenon of the long-range transfer of pollution is commonly referred to as acid rain.



Built-up areas are "heat islands" at the break of day, while the sorrounding countryside cools down. The hot air rises, causing a depression drawing in the colder air of the surroundings. Pollutants emitted on the periphery are transported towards the built-up area, increasing the pollution levels, sometimes substantially.

Source: French Environment Ministry, June 1989.

While cases such as Athens are widely known, it would be wrong to assume that cities in Northern Europe do not have critical problems as well. While data obtained by monitoring may indicate an overall improvement, the use of average figures from a restricted number of recording stations may well be obscuring the presence of harmful concentrations at certain specific times and locations. In Brussels, for example, rush hour traffic in road tunnels results in pollution levels many times the limit recommended by the World Health Organisation.

2.2.2. Noise

Noise is the most "urban" or all forms of pollution, affecting both the health and the quality of life of its citizens. The most significant noise problems stem from various means of transport - road traffic (especially motorcycles), aircraft, railways- and from building sites. Community action on noise has focused on combatting noise generated by the worst individual sources - e.g., aircraft, building sites and motor vehicles (as well as dealing with noise in the work place).

Important as these improvements have been in reducing the noise of extreme individual offenders, the overall noise problems created by the sum of "normal" cars, planes and trains has hardly been tackled. The likely increase in traffic in the coming years will exacerbates the problem of urban noise.

The Community proposes noise standards for motor vehicles as part of the norm-setting process of the Single Market. These standards have progressively been improved, but arguably still do not require producers to incorporate the best available technology to reduce noise generation. While more stringent standards will clearly increase costs, these must be weighed against the benefits deriving from reduced noise nuisance. The use of economic instruments might be worthy of consideration in this area.

Yet even stringent standards for individual vehicles cannot substitute for a broader approach to traffic management. Where they have been tried, so-called traffic-calming schemes have been successful. Reduced speed limits, road restrictions and integrated traffic-light controls have been introduced on local initiative and are effective provided the restrictions are subsequently enforced.

A major constraint on schemes designed to reduce the level of noise in cities is the absence of a generally accepted noise quality standard. Various Member States have adopted noise target levels, but these rarely have legislative status. The Commission is studying the concept of setting limits for ambient noise levels as a quality target similar to those set for air pollution.

This would recognise the importance of action aimed at assisting the significant numbers of people living in areas where they are subject to levels of noise which affect their health (by causing stress or disturbing sleep). It is often the poorer sectors of our society, living in the worst housing conditions, who are subjected to the highest ambient noise levels.

2.2.3. Water

Historically, the process of population expansion and industrial development in urban areas has proved disastrous to the quality of the rivers which flow through them. As towns ceased to rely on their rivers as a source of water, the rivers became waste receptacles, subjected to an increasing volume and variety of effluent harmful to both water quality and wildlife.

A further aspect of this problem is that sewage systems designed and built in the late 19th century are still in use in many cities. Present polluting discharges are markedly different from those of the last century, both in their concentration of substances and in volume of flow. Moreover, older sewers are frequently in poor repair and the cost of replacing them is prohibitively expensive.

The urban environment itself causes problems for sewage systems and their receiving waters. The city's impermeable surfaces telescope urban runoff following rainfall, both in terms of the peak discharge and the length of time needed to reach that peak. In certain cases, increased urbanisation in a catchment area can increase the downstream flood risk. Indeed, the canalization of many urban rivers exacerbates this situation. It should also be noted that the runoff from tarmacked surfaces will carry with it a cocktail of pollutants normally present on urban surfaces.

While water treatment prior to reuse is usually adequate to ensure conformity with Community water quality standards, the amenity aspect of water quality has received comparatively little attention. Where significant improvements have been achieved, it has often been in cases where the quality of a river has become an issue of civic pride, associated with the image of the city. This is very much the case for London and the River Thames, which has received considerable investment for improvements over the past few decades and is now claimed to have one of the cleanest estuaries in the world.

Rivers such as the Rhine, which are influenced by a large number of towns and cities in various States, demonstrates the impact cities may have on each other, as well as the need for cooperative action at the international level.

2.2.4. Waste

As with other forms of pollution, the specifically urban problems related to waste result from a combination of high population density with a wide variety of economic activity : hospitals, large and small produce markets, debris from demolition and packaging discarded by transporters, retailers, and shoppers, to mention a few.

The local authorities must in fact solve three related tasks :

- street cleaning
- refuse collection
- waste disposal

The disposal of vast and ever-growing volumes of domestic and industrial waste poses an enormous problem for those administering Europe's cities. Table 2 indicates the volumes of waste generated and how these are treated, by country. The simple solution of landfill, even in controlled conditions, is becoming increasingly difficult for many cities, either because of the scarcity of available land within reasonable distance of the city or as the result of opposition from residents in surrounding areas.

Table 2
Urban Solid Waste Treatment, Selected Countries, 1985/1986

NATION	R.S.U. Million T.	DUMPING Legal	/ Illegal	INCINE-RATION	OTHERS
Denmark	1,4	22	—	70	8
Holland	4,4	53	—	37	10
France	17,0	44	10	36	10
Sweden	—	80	—	35	5
Germany	32,0	70	—	27	3
United Kingdom	20,0	90	—	9	5
Belgium	3,2	70/80	—	20	10
Italy	15,0	30	55	11	4
Spain	10,0	—	—	5	15
Greece	—	80	20	—	—
Ireland	—	65	35	—	—
	110,0				

Source : Recupero Alluminio in Forma di Lattine, Conzorzio dei Produttori di contenitori in Alluminio-Bresso (MI) - IT.

Incineration is proving to be a problematic alternative. It is difficult to find suitable sites and their partly toxic emissions have led to Community legislation setting emission limits for municipal incineration plants. Progress in waste reduction and recycling has been achieved in some Members States, particularly Germany and the Netherlands, but even the most optimistic estimates generally give a 30% reduction as the highest target that can be achieved.

The Commission's recently published waste management strategy* sets two priorities : prevention and recycling. Prevention is above all a matter for industry. For instance changes in packaging could greatly ease urban cleaning and waste management problems. For urban authorities recycling is a major option. This requires sorting at source (and the necessary containers), and specialized collection services. Future planning parameters for large apartment and office buildings can also incorporate facilities for sorting waste for recycling purposes.

2.2.5. Soil pollution

The pollution of soil by indiscriminate tipping of toxic substances is now recognised as a major concern in urban areas. While there is increasing interest to reclaim existing land within urban areas, soils contaminated by decades of tipping prevent the reuse of such land for either habitation or new economic activities.

Given the local and very specific character of each individual case, it is difficult to establish general policies or technical solutions. Yet while the immediate impact of contamination is often local, there is a medium-term threat to groundwater.

2.3. The built environment

While the landscape of the countryside is formed by natural features, the townscape is formed by buildings, with trees and green spaces providing important accents. The environmental quality of townscape is to some extent a matter of subjective taste. Nevertheless, most people show a similar appreciation of the quality of towns and cities - historical buildings and street patterns, open spaces and trees, activity.

The historical centres of European cities, where they remain intact, represent an important link with the city's past culture and heritage. In a world increasingly dominated by international styles of architecture and building technology, historical centres provide a unique sense of place which differentiates one town form another.

---

*SEC 89(934) final : Community Strategy for Waste Management.

The past few decades have seen major changes in the planning and management of our cities. Most have undergone a process of suburbanization, with fewer and fewer people living in the genuine centres, which are increasingly taken over by offices and shops.

Enormous development pressure from these activities has resulted in the destruction of much of the historical fabric of our cities, which has been replaced with new buildings, often of indifferent - if not poor - quality. Very little of the construction of the present period is likely to be regarded by future generations as being the stuff of which heritage is made.

Quantification of this destruction on a European scale is difficult, since official classification and listing systems vary widely. The U.K. has one of the most exhaustive such systems, with several hundred thousand buildings listed according to set criteria related to their age and condition. The Netherlands also has a wide classification scheme for individual houses. In Italy, whole historical centres are classified by local ordinance and national law. Belgium, in contrast, has far fewer classified buildings and uses more restrictive criteria.

While classification of a building does not necessarily guarantee its protection, an exhaustive listing process does have the merit of ensuring that the heritage value of a historic building is reasonably weighed against any proposals for redevelopment. At the international level, recognition of the importance of areas is provided by the Council of Europe Diploma system. While this does not provide legislative protection, it undoubtedly influences local decision-making.

Unfortunately, the problems faced by the historical centres of our cities are not restricted to those of demolition and renewal. While the more affluent either stayed or are returning to the centre, middle-income families continue to move to suburban areas, with large parts of inner city housing given over to rental accommodation for the less affluent groups of our society. While such housing is conveniently located, close to employment opportunities in the city centre, the revenue generated by these buildings is often not considered sufficient to maintain them, or is not used for that purpose. The result is decay.

Historical buildings are also threatened by the high level of air pollution in European cities. Buildings are not only being covered by layers of soot from particulate pollution, but chemical reactions with pollutants such as SO_2 cause a deterioration in the structure of stone. This is particularly serious and expensive to remedy, in the case of the decorative carvings on the more important public buildings and monuments.

The growth of car ownership and urban traffic also poses considerable problems for historical towns centres, which usually have narrow street patterns quite unsuited to motor vehicle use. Even cities such as Paris, historically subject to urban planning, including the introduction of wide boulevards, have

found that current levels of traffic significantly exceed capacity. Apart from the physical problems caused by traffic congestion, parking in streets and squares not designed for such use is extremely intrusive visually and disrupts pedestrian use of the street.

It is fair to say that in the past decade there has been a greater recognition of the importance of historical town centres - the pace of demolition has slowed, and a number of restoration schemes have been undertaken.

Traffic calming measures and pedestrian zones in parts of the city centre have been widely adopted and have proved popular, with citizens enjoying a safer and more relaxed shopping environment. Nevertheless, pressures arising from development, derelict areas and the impact of motor vehicles continue, and the future of parts of the historical centres of many European cities still hangs very much in the balance.

The same pressures also have often resulted in the loss of open space within city areas to parking lots or road-widening schemes. High property values make it extremely difficult for public authorities to acquire land for the creation of new public open spaces in city centres, just as citizens are becoming more aware of the importance and value of such space.

One possible approach to this problem is through the intelligent management of the abandoned land that exists in all cities. Changing patterns of employment, manufacturing and freight transport have left their mark on the physical structure of our cities - predominantly in the form of wide swaths of derelict land comprising abandoned docks, factories and barracks. While some cities have undertaken imaginative renewal projects which demonstrate the potential of these areas to create a new image for the city, others have left derelict land untouched - a blight on the urban environment.

Ironically, the problems associated with the built environment of our cities are not restricted to the adaptation - poor or otherwise - of historical towns to 20th century life-styles. Equally serious problems have been identified in some of the new developments designed to replace inner city schemes.

The late 1950s and 1960s saw a Europe-wide trend towards the construction of massive public housing schemes on the edges of our town and cities, often involving high-rise blocks of flats. Far from urban facilities, poorly served by public transport and frequently inadequately maintained, these areas often became the slums of the late 1970s and 1980s. The absence of commercial and economic activities and opportunities in these areas has contributed to high unemployment levels and has tended to restrict further the mobility and opportunities of their inhabitants.

2.4. Nature in the city.

The value of natural features within urban areas has long been recognised. Parks, gardens and avenues of trees have been traditional features of town design. The visual contribution of such features is extremely significant; even a very small number of mature trees considerably softens the harshness of an otherwise totally built environment. In addition, such features have a symbolic value for many city dwellers, providing a psychological link to nature and the countryside.

In recent years, a widening interest in nature conservation has led many people to explore the habitats and wildlife of their immediate urban and suburban surroundings. Areas of abandoned land and seminatural habitats have often proved to be surprisingly rich in their variety and abundance of wildlife. The importance of such natural habitats in urban areas has grown as increasing pressure has been placed on wildlife in the countryside by the use of intensive agricultural practices over the past few decades.

In a number of cities, detailed inventories of wildlife habitats have been drawn up and active volunteer groups formed, seeking to protect these sites from development and ensure their sound management. While in absolute terms such sites may not always have a wildlife value comparable to that of a truly natural habitat, their location in or close to urban population centres gives them a special value and relevance. They also form an important resource for educational activities and nature familiarization.

A general increase in leisure time has made citizens increasingly aware of the value and importance of such open spaces in or close to the city. As land use within the city changes, public authorities frequently have the opportunity to create new public spaces. But, as already stated, this is often a costly exercise due to the value of such land for development purposes.

Open spaces and seminatural habitats on the city's edge, with ease of access for urban residents, are also of great importance. Many cities- such as Brussels, Berlin and Luxembourg - have large areas of forest adjacent to city boundaries; these provide a habitat for wildlife and recreational opportunities and are a resource for commercial forest production. With the priorities for agricultural production changing within the Community, the concept of developing such areas adjacent to other cities merits consideration.

3. The Root Causes of Urban Degradation

The city's problems are hidden by its obvious improvements - in the health of its inhabitants, better equipped housing, shiny new buildings and motorways. The notion that collateral effects are a necessary "price to be paid" may seem persuasive. Moreover, negative effects, while no less "real" than these improvements,

take much longer to become visible - rising crime, chronic health problems, the gradual build-up of traffic, noise and pollution; they thus rarely produce the clear moment of crisis which is usually required for political action.

However, the political maturity of a society is measured by its ability to think in the long term. European unity itself is an example. This cannot be achieved by bureaucratic and technocratic projects which fail to inspire large parts of the population. The European city cannot be saved by regulation or money alone. Its improvement requires above all a broad understanding of the deeper causes of its problems, forming the basis for a consensus which allows local, national and European action towards a shared goal. This will entail the exchange of ideas and cooperation between cities on a wide front.

These causes frequently are to be found in the way we organise work, production, distribution and consumption, and in often rigid and outdated notions of planning. These - and other - causes interact, reinforcing each other. The enumeration below does not imply a hierarchy.

Functionalism

Current urban planning often still reflects the principles of functionalism expounded in "The Charter of Athens", theory of planning set out in the 1940's, and also to be found in the earlier British Garden Cities movement. Both these theories expounded the merits of a system of town planning based on a rigid compartimentalization and location of activities on the basis of function. Thus, housing, industry, commercial areas, green spaces, etc. are all physically separated and linked by an extensive road and transport network. Functional separation may sometime be useful when applied, for example, to industry. In other areas, however, as was pointed out by Karl Gruber, the practice of strict zoning ignores the patrimony and geographical reality of the city. "Functional exactness" destroys the flexibility of the city and its buildings; these, conceived as architectural objects, are unable to adapt to changing conditions and therefore prevent the city from functioning as a dynamic, organic whole.

Production and the organisation of work

While even the industrial city was largely an extension of the traditional town, the internationalisation of the economy has caused a break with the past. Investments - and their location - are made from distant headquarters with scant regard for local effects. Products are conceived in one place and made in another.

City planning is often orientated towards the encouragment of development : new communication infrastructures, industrial parks and office buildings, frequently replacing inner city housing.

Each city seeks to attract corporate headquarters, international institutions, international service activities and industrial investment. This is now taking place in a context of increased competition between cities. In all this the environment, and the quality of life of the inhabitants, often come a poor second.

At the same time it must be recognised that environmental quality is an asset in international competition. Farsighted cities are seeking to attract high value-added activities by increasing the quality of life in the city or by establishing attractive science parks - with increased tourist revenue as a bonus.

Firms, research centres and other institutions seeking to recruit the top personnel and skilled workforce on which their success depends increasingly take the attractiveness of a potential site as seriously as its conventional efficiency. The environment and quality of life for inhabitants and for promoting economic development should therefore be a primary issue for city planning and management.

Distribution and consumption

The age of mass consumption has had a profound impact on the spatial organisation of the city. One such phenomenon is the large shopping mall at the far periphery, accessible only by car; similarly, the access routes to the city are lined with speciality shops, garishly advertised, whose collective visual impact is more reminiscent of the industrial zone than of the traditional High Street.

Meanwhile, high-class shops take over the most picturesque parts of the old centre, depriving its inhabitants of shops for their daily needs. Other central areas are taken over by pedestrian zones, crammed with a narrow range of clothing and similar shops, which reduce variety and convenience for inhabitants and attract large amounts of traffic to surrounding parking garages.

There is thus a link between single-purpose public spaces and urban monoculture generally: the pedestrian area creates shopping precincts; the urban motorway, office ghettos. What is lost is the equilibrium resulting from many uses and many modes of transport co-existing: the pedestrian, cyclist and public transport creating a multifunctional environment which neither depends on nor totally excludes the private driver.

Hotels, restaurants and housing

Hotels and restaurants can be an extension of city life, oriented to serve local inhabitants. To an increasing degree, however, they are mere extensions of the office culture, serving its needs but crowding out local inhabitants and attracting traffic to the centre.

Increasingly, the centres are inhabited by three groups: older people with modest means, immigrants, and young professionals, well-off and without children, benefitting from private or public urban restoration in what is known as "gentrification".

The neighbourhoods surrounding the centre, built in the second half of the 19th century, show a greater diversity of age and social groups. They are, however, assailed by traffic passing to the centre, and by encroachments from office development.

Further on the periphery, housing estates often represent extremes of monoculture, both as regards the social status of their inhabitants and the absence of multiple urban services and activities.

While the growth of these dormitory towns can in part be explained as a response by public authorities to a pressing need, they also follow a doctrinaire view developed before World War I which saw the "garden city" as an ideal. This attempt to provide the city's inhabitants with air, quiet and space has unfortunately too often resulted in urban sprawl and further decentralization.

The price, however, is the need for a massive transport infrastructure whose main effects are felt by districts closer to the centre; and, for the individual, long travelling times. Moreover, suburban housing is nothing if not self-sufficient. Its gadgets are an effective substitute for services exhanged within neighbourhoods - and hence contribute to isolation.

These effects have contributed to create a movement of "return to the city". Impatience with long commuting times and the desire to profit from the cultural diversity of the city are reinforced by two contemporary needs : as industry and services increasingly work around the clock, key technical personnel or executives must be instantly available. In addition, the frequent uprooting from house and social life associated with increased job mobility can be avoided by living in or close to the centre. The demand for attractive urban housing suitable for families is beginning to be met by a still often experimental supply of roads with traffic restrictions where children can play and adults mingle, small but well-planted parks and play areas, replanted courtyards, roof gardens, etc.

These experiments show that the "mixing" of urban uses - of living, moving, working - is possible and, increasingly, necessary. This new concept takes as its model the old, traditional life of the European city, stressing density, multiple use, social and cultural diversity. Different social, professional and age groups living together also create the basis for a civil coexistence which is undermined by growing mutual ignorance and distrust.

However, the housing estates of the periphery, increasingly suffering from vandalism and crime provoked by limited occupational choice, monotony and isolation also have to be urbanized in this new-old pattern: by creating greater heterogeneity, centres of greater density, life, and variety of uses.

Tourism

The constant increase in tourism in certain cities characterized by a very rich cultural heritage, numerous examples of outstanding architectural beauty and sophisticated or specific types of urbanization may, in the absence of effective controls, undermine the quality of life of the inhabitants. Historic centres are being turned into monofunctional areas as a result of the proliferation of hotels, the rise in property values, the disappearance of corner shops, overcrowding, and the relocation of small firms, including craft businesses. This transformation, disrupting the fragile equilibrium of the urban environment, is bound to affect the overall dynamics of historic centres, since an excessive concentration of visitors may result in the deterioration of the heritage itself.

However, the cities and regions attach high hopes to the development of tourism and leisure activities. It is therefore essential that a planning strategy for urban tourism be elaborated in order to avoid the negative effects of tourism and to channel the proceeds into renovation of the urban fabric, restoration of the cultural heritage, development of leisure facilities and green spaces and, last but not least, improvement of public spaces.

Communication and mobility

Some futurologists have concluded that modern communications technology could allow those now living and working in congested cities to disperse throughout the country. Everything argues against such a vision for all but a few independent professionals : the sheer number of people relative to the land available, the destruction of the environment involved, the implied waste of existing urban infrastructure.

Personal mobility thus remains an essential - indeed, the

essential - atribute of the city. As argued above, spatial separation dictated by functionalist doctrine leaves, in the absence of effective public transport networks, little alternative to the motor car.

Yet adding roads, tunnels, etc. to accommodate growing traffic has the perverse effect to slowing it down during construction, while increasing pollution and noise even further. Once such infrastructure is completed, traffic quickly increases to recreate the previous levels of congestion. For the centre, however, the increase is real : pressure on space for parking spills over onto pavements, squares and parks.

Outright prohibition of the car is rarely the answer. As stated earlier, it may accelerate the monofunctional quality of the centre. it may force detours which increase overall traffic and hence pollution, or shift the problem of parking to the edge of the protected centre.

Generally, the objective must be to make the car an option rather than a necessity which is created - indeed, forced on the individual - by the separation of the city into monofunctional segments. The multifunctional, creative city, which is also the more livable city, is the one that pollutes the least. In turn, by limiting the car's contribution to noise, unsafe streets and air pollution, the city's attractions can grow and its economic, social, and cultural potential be realized.

Concretely, this leads to three convergent orientations:

- avoid strict zoning in favour of mixed uses of urban space, favouring in particular housing in inner city areas;
- defend the architectural heritage against the uniform banality of the international style, respecting rather than imitating the old;
- avoid escaping the problems of the city by extending its periphery: solve its problems within existing boundaries.

Lastly, it is important to stress the role of regulation while warning against certain modes of planning. Regulation regarding environmental targets is essential. Planning without broad participation by, and concern for the city's inhabitants will result in a narrow view of its efficiency, which ultimately condemns it to sterility.

CHAPTER TWO: TOWARDS A COMMUNITY STRATEGY FOR THE URBAN ENVIRONMENT

1. Targets for Urban Environmental Improvement

The primary objectives of urban environmental policy and management are the creation, or re-creation, of towns and cities which provide an attractive environment for their inhabitants, and the reduction of the city's contribution to global pollution. However utopian this target may appear, it is one which meets today's concerns and tomorrow's responsibilities.

The analysis of the previous section traces urban environmental problems primarily to two factors.

The first of these is the uncontrolled pressure placed on the environment by many of the activities which are concentrated in the cities.

The second - and not unrelated - factor is the spatial arrangement of our urban areas. In the past few decades, planning philosophy and development practice have radically altered the organization of towns, in many cases giving rise to an almost clinical separation of land uses. This physical separation, often between areas not linked by public transport, has required urban populations greatly to increase their mobility, and thus their reliance on motor vehicles in general and private transport in particular.

This has in turn led to the development of extensive suburban residential areas which are economically difficult to service by public transport. The environmental implications of such spatial reorganization of our cities may be seen in terms of

- Adverse effects on specific areas within towns : congested or decaying city centres; peripheries turned into dumping grounds for land uses considered undesirable for the city - waste tips, industry, social housing;

- Generally high levels of air and noise pollution, caused in part by the mobility imposed by spatial differentiation.

Moreover, this pollution spills over into the country and the global environment. By their very concentration, cities are major contributors to acid rain and - via CO2 emissions - to the greenhouse effect. Higher smokestacks are thus not the answer.

Growing concern over the environment in general and the urban environment in particular has led public authorities at all levels to initiate remedial action. While such actions have undoubtedly helped to improve environmental quality or prevent its further deterioration, much remains to be achieved. There are few objective measures for evaluating the environmental quality of urban life. But with growing awareness of the issues, citizens are seeking more than prevention of further deterioration; they are demanding positive improvements.

The experience provided by past successes and past failures provides useful guidelines for future action. An analysis of the efforts made during the past few years to tackle urban environmental problems suggests that these have been constrained by a number of important factors which can be addressed in a Community programme of action.

2. Constraints on effective environmental management

There is growing understanding that effective environmental management requires replacing the piecemeal approach to problems by a high degree of integration, if displacement of problems is to be avoided. However, issue integration must also be matched by procedural integration : between policy-making, problem analysis and impact assessment, planning, financing, and implementation - precisely because of the wide scope of the issues involved. Even at the end of the process, however, results will be transitory if the public is not helped to acquire the awareness needed to recognize environmental problems on a day-to-day basis and structures found which translate this awareness into action.

(i) Coordination

This is essentially an institutional problem which affects all levels of public administration. The traditional approach to urban environmental problems has been essentially sectoral - in other words, individual measures aimed at reducing the effects of specific problems.

Yet given the complexity of urban systems, decisions made in almost any individual sector will have repercussions elsewhere. The division of responsibility of urban management between different levels of government and various agencies operating at the local level involves difficulties of integration which are both "vertical" and "horizontal".

Few cities posses an institutional framework which permits genuine coordination of investment, development and environmental decision-making. The implications of this are most easily seen in respect to transport planning. Despite their significant environmental implications, decisions affecting public transport on the one hand and road construction on the other are rarely integrated into a single, comprehensive transportation strategy.

(ii) Resources

While limited budgets undoubtedly constrain many environmental programmes, environmentally sensible solutions can often be achieved by the more efficient use of existing resources.

(iii) Information
As discussed above, the lack of accurate and consistent data on many environmental factors acts as a constraint on programme development. It is difficult to set objective targets for improvement without a clear recognition of the scope of a particular problem. In the past few years, greater efforts in the field of environmental monitoring, together with public pressure for access to collected data, have generated demands that higher priority be given to improvement programmes.

(iv) Technical Knowledge
With the growth of concern for environmental issues, there has been concomitant growth in environmental techniques and technologies. This has already yielded results in many areas of noise and pollution control, which will gradually be implemented over the coming years. These successes have made clear the importance of ongoing research and development in environmental technology.

(v) Problem Displacement
One of the shortcomings of the current sectoral approach is that the solution to one problem often proves to be the cause of another one. Thus, the construction of new urban roads to ease congestion may stimulate more traffic and thereby increase pollution. Attention must therefore be paid to potential secondary effects of solutions. Electric cars will be quieter and cause less direct pollution than motor vehicles, but the problem of CO2 pollution resulting from the generation of electricity by burning fossil fuels remains. Most electricity in Europe is generated in this way, and the situation is not likely to change in the near future.

(vi) Environmental Improvement vs Economic Growth
A significant restraint on many measures for environmental improvement has been concern for their impact on economic growth. It is not surprising that economies which have in recent years been been faced with high inflation and unemployment are reluctant to burden industry and consumers with higher environmental standards. This conflict between environment and economy is, however, a false one since in the long term the protection of environmental resources is a basic condition for sustained economic growth, which can itself contribute to environmental improvement.

In the short term, the weakness of our present environmental legislation and policies is such that economic growth is likely to lead to increases in pollution and pressure on the environment. Analysis of the projected future patterns of growth within the Community indicates that it is likely to cause severe environmental problems related especially to transport, energy and waste. More positive measures to overcome these impacts are required not just to protect the environment but also to ensure that the benefits of this growth are sustained. Economic integration provides positive opportunities for the application of environmental improvements throughout the entire Community.

Indeed, one of the major difficulties in judging the balance between environment and economic development concerns the timescale. Current environmental management far too often responds to short-term crises rather than engaging in long-term planning.

At the heart of the conflict, however, is the fact that the market economy currently doesn't "internalize" the environmental costs. It does however have the potential to do so. While research carried out by the OECD, among other organisations, has already fully documented these costs, this is yet to have a significant impact on public policy.

Consumer and producer choices can be guided through economic and fiscal measures which rely on market forces. Although this policy option is only beginning to be explored, it has considerable potential as means of contributing towards compatibility between environment and economic growth.

3. Guiding Principles for Urban Environmental Improvement

From this discussion, a number of themes arise as guiding principles for Community action in improving the urban environment.

(i) Coordination-integration
The complexity and interrelationships among urban problems calls for greater integration in policy and investment decision-making to economic development, social policy (the reinforcement of social and economic cohesion), transport and environment.

(ii) Responsibility
Accepting responsibility for the consequences of our activities at all levels - of the individual, the company and public administration - is an important prerequisite for environmental improvement. This in turn presupposes understanding and knowledge of these consequences, which is often lacking. While informed choice alone will not solve our problems, it will contribute to this end.

For the city itself, it is perhaps useful to suggest the objective of the non-polluting city - assuming the responsibility to prevent pollution of the surrounding countryside. An example is the project "Seine Propre", by which Paris aims to treat 100% of the waste water discharged into the river Seine.

(iii) Sustainability
The long-term objectives of environmental and economic sustainability must be accepted along with that of environmental quality in the short term. The World Commission on Environment and Development, in its 1987 report, commonly known as the Brundtland report, developed as an important principle "sustainable development": that the use of resources and the environment should not reduce the potential of these resources for succeeding generations. Its implications for urban environmental management need to be explored in detail.

(iv) Subsidiarity
This principle applies specifically to actions by the European Community. In defining the division of responsibilities between different levels of government, it assigns a role to the Community when policy objectives can best be achieved by acting at the European level. The full text of the Treaty which covers Community involvement in environmental matters is set out in Appendix I.

With reference to the urban environment, the basis for Community action is to be found in:

(a) The international implications of pollution originating from urban areas. Many of the activities which cause problems within urban areas also contribute to cross-border air and water pollution and to global environmental problems such as global warming.

(b) The commonality of problems within the urban environment. This argues for cooperation among Member States in the search for solutions.

(c) Recognition of a European dimension of the historical and cultural heritage of our towns and cities.

(d) The necessity to consider potential impacts on the environment, and in particular in urban areas, of Community policy in all sectors.

4. Instruments of Community Action

City authorities, and the national governments which provide the legislative and financial framework within which cities operate, have the major responsibility to improve the urban environment.

The Community already, through a variety of policies and actions has a significant impact on urban areas. The main instruments of Community action are described below with reference to how these are already being used to contribute to the improvement of the urban environment. In considering how the Community can usefully extend its activities in this policy area, these are the main types of action which are available.

(i) Legislation
The Community has assumed a major role in environmental management by establishing quality objectives and emission standards for a number of environmental factors - particularly air, water and noise pollution. With improvements in environmental technology, emission standards will have to be continuously reviewed to ensure that they are in line with the application of the best available technology. The importance of this role has grown with the approval of norms in the context of the Single Market.

Community legislation requiring catalityc converters, which significantly reduce emissions of pollutants such as NO2, to be fitted to all new cars sold in the Community from 1993 is a good example of legislation which will contribute to improving the urban environment.

The Community has also adopted legislation requiring a detailed environmental impact assessment for major development projects, the aim of which is to ensure that decisions are made with full knowledge of the environmental implications of different options.

Consideration is currently being given to the possibility that this legislation be extended to require such an analysis for policies, plans and programmes. This requirement will improve the coordination of objectives between different sectors and hence result in plans and policies that are more sensitive to the multiple needs of urban dwellers.

(ii) Recommendations and Guidelines
While in certain areas it is inappropriate for the Community to produce a legislative framework, the commonality of problems between Member States is such that the Community is an appropriate forum for discussing and developing guidelines for action.

(iii) Research, Demonstration and Training
Improved methods and techniques of urban management can potentially benefit the entire Community. It is therefore appropriate that the Community financially encourage such experimentation through demonstration and pilot projects which might serve as models for wider application. In the same spirit, the Community can serve a useful role in disseminating information about the practical results obtained to date throughout the Community. The Community is already active in these ways in many areas of urban management.

In the field of Research, existing examples of relevant Community programmes include the "DRIVE" programme which is developping a comprehensive range of instruments for the provision of information services to managers and users of the urban transport system. It will provide the tools for improved planning and management of traffic, including the control of congestion, pollution and noise, and the efficient use of public transport and parking space. Research is also being carried out into the impacts of atmospheric pollution on the structure of historic buildings. The Community is currently supporting pilot projects in a number of areas which can contribute to improve the urban environment, including for example a network of 12 cities being supported in the development of urban energy planning.

(iv) Financial Assistance
The Community already finances considerable investment in urban areas through the structural funds, notably the Regional Fund, by loans from the European Investment Bank, loans and grants from the ECSC and by other financial instruments.

Some of these investments directly or indirectly affect the urban environment; this includes direct environmental improvements, recognised as often being a precondition of economic development.

The reform of the structural funds in 1988 has brought a new dimension to their involvement in urban areas. This reform has emphasised the need to concentrate resources in defined priority areas and to co-ordinate the actions of the various funds.

Submissions for support are made within the context of a Regional Plan. After negociation, a Community Support Framework is established which forms the basis for financial support. For urban areas, the two following objectives are relevant :

- Objective 1 areas : regions whose development is lagging behind (i.e. where capita G.D.P. is less than or close to 75% of the Community average).
- Objective 2 areas : areas of industrial decline.

Objective 1 areas include many major cities and urban areas including Athens, Belfast, Dublin, Naples and Lisbon. The Commission has influenced the choice of actions in the Community Support Frameworks for Objective 1 regions. These regions often lack infrastructure such as sewage or water treatment plants, or adequate public transport, the absence of which affects economic development and the environment. The actions for these regions under the CSFs are designed to improve their economic potential while at the same time taking account of the environment.

Examples of actions for cities which will have specific environmental gains include:

- the Athens metro to help reduce the dependence on the motor car and reduce the chronic levels of air pollution in the city

- in Lisbon, under the programme "Lisboa Norte", there are proposals for water and sewage works. These include the construction of an "interceptor" sewer and sewerage treatment plants and the purification of water from industrial areas

- in Naples, a priority has been given to linking sewer system with treatment plants and the construction of a new water purification and sewage treatment plant.

All Objective 2 regions are characterised by the decline of traditional industries with a legacy of derelict land and contaminated sites, and are therefore predominantly urban. A key priority under the Community Support Framework for Objective 2 regions is the reclamation and redevelopment of former industrial sites. Additionnaly, other actions deal with the disposal of waste, treatment of water and sewerage and atmospheric pollution. It is estimated that 20% of current funding in these areas have a specific environmental benefit orientation. Environmental actions are being linked with other actions designed to create jobs and new opportunities. Some examples of the type actions intended are as follows :

- Research and advice, as well as measures, specifically linked to the disposal and recycling of industrial waste (UK, Spain and Bremen).

- Insistence that industrial development should not, where possible, take place on "greenfield" land. The CSFs stress the need to redevelop already derelict land (UK and Berlin).

- Emphasis on the development of public transport systems rather than further road infrastructure spending (UK).

- Inclusion of measures relating to "clean technologies" in the research and development priority (UK) and investment aids to SME's for non-polluting production plants (Berlin).

- Measures to combat atmospheric pollution (Spain).

In all, about 40 percent of major cities of the Community are covered by the actions of Objective 1 and 2 areas. Since many of the problems related to unemployment and re-training are concentrated in urban areas so, too, is the action through the Social Fund.

Apart from the Community Support Frameworks, Community initiatives can tackle some environmental problems as well as promoting economic development. The RESIDER programme for steel areas or the RECHAR programme for coal mining areas are examples of specific programmes which, while primarily focussing on combatting the severe unemployment created by the decline of these industries, also include important elements which relate to the improvement of the environment and image of these areas.

Another Community initiative, ENVIREG, allocates 500 MECU over the period 1990-1993 specifically related to environmental actions to reduce pollution in coastal areas, mainly in the Mediterranean, and the management of hazardous and toxic industrial waste in objective 1 areas. A priority is in urban areas of less than 100,000 inhabitants.

Under article 10 of the ERDF regulation, urban pilot projects of an innovatory character and which have demonstrative potential for other cities may be co-financed, for example the London and Marseille pilot actions launched in February 1990.

The Regional Development Fund is, with few exceptions, limited to those areas of the Community which are considered to be economically disadvantaged and, within these areas, to projects which will lead to economic development.

These limitations currently prevent the Community from assisting environmental measures in urban areas not covered by Objective 1 and 2 and projects which cannot be regarded as leading to

economic development. If the Community wishes to be able to support environmental actions in urban areas throughout Community, it will, therefore, need to consider the creation of a new financial facility.

At present finance available for specifically environmental projects is very limited. The "Medspa" programme is the most significant of the current proposals. With a budget of 9 million ECU in 1990 this programme is intended to provide technical and professional assistance with the preparation of plans for the treatment of urban sewage and waste to small communities, with less than 100,000 population, in the Mediterranean Basin.

(v) Economic and Fiscal Measures
The scope for Community action to encourage environmental improvement by economic and fiscal measures has yet to be explored in detail. Such measures aim to incorporate environmental quality within the economic system by operating on the market in ways which encourage environment friendly production techniques and products.

(vi) Urban Impact Assessment
The Commission makes policy in a wide range of sectors which may have consequences for the urban environment. Such policies should be carefully analysed to ensure that adverse effects on the environment are avoided.

5. Areas of Action

The first chapter of this document has identified the main problems facing urban areas and their causes. The limitations of the existing sectorial approaches to the solution of these problems have also been identified. In presenting suggestions for future lines of action, it is important therefore to orientate these towards addressing the causes of the problems rather than simply their symptoms. This section discusses potential solutions to the problems and from these identifies a range of suggested lines for future Community action. These suggestions, which relate to actions best achieved at the Community level, respect the principle governing the role and competence of the Community as set out in the Treaty.

As discussed in the first section of this chapter, the main targets for future action for urban environmental improvement at all levels are seen to fall into two priority areas:

- Policies which concern the physical structure of the city, specifically with regard to :

  - Urban planning;
  - Urban transport;
  - Protection and enhancement of the historical heritage;
  - Protection and enhancement of the natural areas within cities;

- Policies concerned with reducing the impact of urban activities on the environment :

  - Urban industry;
  - Urban energy management;
  - Management of urban waste;
  - Water management.

It is also important that the development policies in this area are based on accurate and comparative data on the state of the urban environment. Consideration is therefore also required of information needs and how these are to be met.

In addition to these main priority areas, there is also scope for the Community to assist a range of initiatives at the local and regional level which can contribute to the improvement of the environment and quality of life in urban areas. These include initiatives related to :

- information
- social action
- interregional co-operation.

5.1. Urban planning

Encouraging greater diversity and avoiding urban sprawl.

The strict zoning policies of the past decades which have led to the separation of land use and the subsequent development of extensive residential suburbs have in turn stimulated commuter traffic, which is at the heart of many of the environmental problems currently facing urban areas.

We therefore need a fundamental review of the principles on which town planning practice has been based. Strategies which emphasize mixed use and denser development are more likely to result in people living close to work places and the services they require for everyday life. The car can then become an option rather than a necessity. Strategies of this kind have already been put in motion in countries such as The Netherlands;they merit wider consideration.

Redeveloping urban waste lands

The many tracts of abandoned land, disused industrial sites, railway sidings, docks and military facilities in urban areas offer valuable opportunities for redevelopment - saving existing recreational and open space within cities and its outskirts from encroachment by development. Many cities have already accepted this priority in their planning strategies. However, the problems posed by contaminated land and complex ownership patterns are such that it will often require a firm lead from public authorities.

Revitalizing existing city areas

Revitalizing existing housing areas within the city is also important. The quality of life in such areas can be dramatically improved by carrying out environmental improvements and, specifically, by reducing the noise and pollution from traffic. This requires local strategies that give priority to the needs of pedestrians and inhabitants rather than to drivers passing through an area. Such environmental improvements may well provide the impetus for private investment in improvement of housing stock.

The need for revitalization is not restricted to areas within the city. Many urban peripheral housing estates, particularly those constructed as social housing, are showing symptoms of urban decline more traditionally associated with rundown inner-city areas. In London and Marseille, the Commission is already involved in pilot projects aimed at improving economic and social development in such areas. The problems experienced by their inhabitants are often aggravated by their physical isolation from the economic, social, commercial and cultural life of the city.

Expanding the uses and activities of these areas, and thus the opportunities available to their residents, is part of a strategy aimed at integrating these housing estates into the city, and improving their environment and the quality of life of their inhabitants.

Urban design

Urban environmental quality is as much a product of building design as of spatial differentiation. Protecting the visual quality and historical identity of our cities thus requires attention not only to the protection of historical buildings but also to the design of new buildings being inserted into the urban fabric. Urban planning should therefore incorporate this third dimension, encouraging architectural innovation but ensuring that new buildings are compatible with existing urban character and do not destroy or render useless the city's open spaces.

Suggested lines of action :

- That the Commission, in cooperation with Member States and local authorities, should evolve guidelines for the incorporation of environmental considerations into town planning strategies - a detailed investigation and elaboration of the principles outlined above. Such guidelines will attempt to influence town planning practice and provide an important complement to the proposed directive on environmental assessment of policies, plans and programmes.

- That further research into the treatment of contaminated soils, which so often hinder redevelopment of existing city sites, be encouraged.

- That further financial assitance be given to pilot projects aimed at revitalizing less favoured urban areas by introducing a greater mixture of uses and hence access to urban facilities. At the same time, such actions should aim to protect and assist existing residents in these areas. The Commission should also consider how it can extend this action building on lessons learnt from these pilot projects.

- The Community should consider the question of whether it wishes to extend financial support for urban renovation and environmental improvement schemes beyond the types and areas of support permitted by the current structural funds and if so, how this could be achieved.

5.2. Urban transport

As stressed throughout this report, the dramatic rise in private vehicle ownership over the past few decades has provided greater convenience for many, but it has also led to congestion, negative impacts of urban motorways, loss of open spaces to parking, air pollution and noise. The dramatic increase in the amount of freight moved by lorry has contributed to these problems as well. Urban traffic is a major contributor to acid rain and the greenhouse effect.

There is growing recognition that the situation is serious and action needed. While the development of environment friendly vehicles could bring some relief, meaningful solutions will involve a significant shift in the balance between modes of transport, favouring public over private transport and reducing the level and impact of motor traffic in our inner cities.

At the Community level it is not possible to provide details of the strategy that would be appropriate for a particular city. But it is possible to identify a number of areas where progress would contribute to reducing the impact of vehicle traffic on the city.

(a) Private Transport

Improving current technology

Existing and proposed Community legislation seeks to apply the best available technology to reduce the noise and pollution traditionally associated with motor vehicles, notably the switch to less polluting fuels, tougher standards on noise levels and the use of catalytic convertors. These controls apply to new vehicles. They will not, however, reduce the emission of CO2, which is one of the most important greenhouse gases.

Moreover, to be effective these measures must be maintained throughout the life of the vehicle. This can be accomplished by adding environmental conformity controls to existing technical (safety) controls.

The Commission should be encouraging research into the further reduction of noise and pollution from motor vehicles and keep under review its directives in this area to ensure application of the results of such research.

Even within existing technology, certain vehicles are recognised as less environmentally damaging than others. The Federal Republic of Germany has recently adopted a differential taxation system related to emission levels. The Commission could consider a wider application of such a system within the Community.

Public authorities responsible for the acquisition and maintenance of a substantial number of vehicles within the urban areas for various functions should set an example both in the choice and the use and maintenance of their vehicles.

Electric vehicles

There is a growing interest in electric vehicles as a potential solution to the noise and air pollution problems posed by petrol and diesel engines. The Commission has already expressed interest in the development of these vehicles and has assisted in the creation of an intercity association aimed at encouraging development cooperation.

While such vehicles would undoubtedly contribute significantly to lowering pollution levels, they cannot be regarded as an absolute solution. They will not overcome congestion or relieve the pressures on urban space. Moreover, they rely on electricity largely generated by burning fossil fuels.

Bicycles

The bicycle is the ultimate environment friendly vehicle. However, few cities have seriously attempted to incorporate the bicycle into an overall transport strategy. Indeed, existing traffic presents pollution and safety hazards that strongly discourage the use of bicycles within the cities.

Pedestrians

The hazards facing bicycles are equally daunting to that most private means of transport - walking. In areas of heavy traffic, the pedestrian is assailed by noise and fumes, leading to immediate discomfort and long-term respiratory and eye irritations. Moreover, such areas tend to resemble obstacles courses. The pedestrian may have to navigate around parked cars blocking crossing and, in some cases, pavements, avoid metal poles bearing traffic signs, traffic lights, parking meters; rush across streets where the "pedestrian walk" signal may be as short as four seconds; watch for cars going through or turning on a red light, etc.

Too often, street planning focuses on the efficient circulation of motor vehicle traffic, leaving pedestrians to fend for themselves. Walkers must be put back into the planning equation - not as an endangered species to be set aside in special pedestrian areas, but as major users of the city's streets.

(b) Public Transport

While the contribution of public transport to reducing urban traffic has long been recognised, few cities have succeeded in significantly shifting private to public transport.

While the use of private cars has increased, public transport has remained rather static. Experience has shown strong owner attachment to cars - often defying economic logic - and that only a powerful combination of incentives and restraints can shift the balance to public transport. A number of issues call for consideration in this connection.

(i) Public transport, land use and transport planning

Urban transportation planning should consider the potential of all forms of transport and take decisions within a long-term strategy which relates it directly to land use planning and includes environmental objectives. At present, many cities seem to take important transportation decisions in an ad hoc response to increased demand.

Thus, the response to increased car traffic has too often been new roads, which have in turn encouraged yet more traffic. A policy of favouring public transport must inevitably involve difficult decisions. Catering for all the demands of increased traffic is not an adequte response; congestion represents in some cases a useful tool of dissuasion.

(ii) Improving public transport

A common complaint - or excuse - is that the quality of public transport makes it an inconvenient alternative to the car. Clearly, operators face significant economic problems. Improved services imply increased costs for vehicles, rolling stock, personnel and infrastructure such as track and passenger facilities.

Unless such decisions are taken within the context of an integrated transport plan based on a clear decision to develop attractive new public transport services as an alternative to new roads, there is no guarantee that improved services will attract a sufficient number of passengers to cover costs. Attention must also be given to the potential of park-and-ride schemes and links between intercity transport and internal networks.

(c) Traffic Management

The management of city traffic can be significantly improved by traffic management systems which can include high technolgy information and informatics systems such as are currently being developped under the Commission's DRIVE research programme. While traditionnally the main objective of traffic management has been to ease congestion and improve traffic flow, it can also be applied to the improvement of environment conditions. The encouragement of new techniques raises therefore the question as to whether they are to be used to encourage more traffic or to reduce environmental impact. Traffic management policies should give full weight to environmental and safety considerations, taking account of longer term implications at both the local and global level, while still reflecting the need for mobility which is essential to a healthy urban economy. Within the framework of these considerations, the aim should be to reduce traffic congestion but not encourage greater use of the city areas for motor traffic.

A variety of measures which restrain the use and impact of the private car are available. These include local area schemes aimed at traffic calming, involving speed restrictions; road narrowing; and pedestrian zones. Such local measures if well designed and implemented, are probably the most effective way to reduce noise. The Netherlands and Germany have had considerable success with these techniques. In addition to encouraging greater use of public transport, measures of this type form an integral part of schemes to revitalize inner city areas, making them more habitable and "reclaiming the street" for pedestrians.

(d) Restrictions on parking

Parking restrictions have a major dissuasive effect on private car use within the city. Attachment to car use is often so great that drivers will accept considerable inconvenience before they are willing to change to public transport. In those cities where public tansport is still important, the availability of parking is severely restricted, either by accident or by design.

(e) Taxation of road use in urban areas

A number of cities within the Community are proposing the use of road pricing or area licensing to influence the balance of private and public transport. Such measures are already applied outside the Community, in cities such as Singapore and Oslo. The justification for this type of economic instrument is that it forces the user more directly to assume the wider social and environmental costs of car use. These systems have the potential to discourage car use and to contribute financially to the development of alternatives but must be handled sensitively to avoid negative impacts on the city centre.

Suggested lines of action :

The Community should :

1. Encourage city authorities to incorporate decisions about the coordinated future development of public transport and road construction into their plans for land use and transportation. The Commission should expect future submissions for structural fund assistance towards transport infrastructure to demonstrate that such an analysis has been carried out.

2. Encourage innovative approaches to the use of public transport and the environmental management of urban traffic by contributing to the cost of pilot projects and monitoring their effects. Research programmes should attach high priority to environmental considerations and should include innovative public transport, environmentally friendly vehicles and advanced traffic management systems. This should not lead to the encouragement of the greater use of urban areas for motor traffic.

3. Encourage the Community-wide exchange of information in urban traffic management to maximize the benefits of a wide range of experience.

4. Consider in detail, possibly by financing pilot projects, the potential for using economic instruments such as road pricing to help solve the environmental problems generated by urban traffic.

5.3. The protection and enhancement of the historical heritage of European cities

The historical character of our European town and cities - their buildings, monuments, squares and street patterns - establishes an identity and sense of place specific to individual cities. Our cities are an important symbol of the Community's rich cultural diversity and its shared historical heritage. Interest in protecting a city's historical character is therefore not restricted to that city's own citizens.

The development pressures of the past several decades have gravely threatened Europe's urban heritage. Many towns and cities have introduced planning schemes which provide significant protection for these areas and encourage their restoration through imaginative area improvement schemes.

The Community has to date played a minor role in financial terms, but important in terms of increasing the public awareness of their architectural heritage. This role is primarily oriented towards assisting in the conservation of momuments illustrating the richness and the diversity of the European architectural heritage.

Suggested lines of action :

1. That the Community provides more substantial finance for the conservation of historical buildings and areas of European significance.

2. That consideration be given to the potential benefits of a Community system of recognition of the historic and cultural significance of individual buildings and parts of urban areas.

5.4. Protection and enhancement of the natural environment within our towns and cities

With growing environmental awareness the wealth of the natural habitats that lie within the confines of our towns and cities has been recognized. While the value of such areas is rarely comparable to that of more natural habitats in the countryside, their proximity to a large population gives them a special value in improving the quality of urban life, providing opportunities for informal recreation and for informal education in natural history and environmental issues.

The protection and improvement of open spaces and habitats and the planting of trees enhance the visual pleasure provided by urban areas, and can also help to combat the microclimatic effects which concentrate pollutants within the city, and the pollutants themselves.

Many cities have adopted "green plans" which aim to protect and enhance the potential of open spaces and to encourage citizens to plant trees and to carry out other environmental improvements.

The growth of leisure time and increasing demands of space for sports and recreation has placed great pressure on the existing open spaces within urban areas. There are few cities which could genuinely claim to have made adequate provision for such space. While the creation of new urban parks poses many problems, city authorities should be encouraged to take up opportunities provided by derelict and unused land. In many European cities, "recreation" forests on the edge of the city also provide very significant recreation opportunities for city dwellers.

Suggested lines of action :

1. The Commission should consider a programme of pilot projects across the Community to demonstrate the benefits of green plans and programmes of action.

2. City authorities should be encouraged to review their provision of public open spaces and seize oppportunities where available to extend such provision.

5.5. Water management

A current proposal for a directive on municipal waste water sets the objective of achieving a high standard of treatment for all waste waters originating from urban areas. The necessity for this initiative, as well as the improvements it could potentially realize, are clear. A 1984 survey of urban waste water and treatment facilities in 10 Member States showed that less than half of the total organic load was being treated at this time.

At a more fundamental level, a project is currently under way at the Commission to produce a directive on the ecological quality of waters. Unlike previous EC quality objective directives, this will in principle apply to all Community waters. Moreover, it is likely to require Member States to put improvement programmes into place to attain specific ecological goals. Although this project is still in an early phase, its impact should eventually be to produce major biological and aesthetic improvements in both urban and non-urban bodies of water.

5.6. Urban industry

Industry is a major source of air and noise pollution in urban areas and surrounding areas, particularly where these are residential. The traditional response to this problem has been to relocate industry to the urban fringe or beyond. This policy of "out of sight out of mind", while offering some immediate relief to the local environment, is not a comprehensive solution.

For large industrial operations, such moves are often desirable, since new premises facilitate the application of modern production technology. For small and medium sized operations, where individual skills are often more important than mass production techniques, such a move will frequently entail considerable financial cost as well as limiting access to customers and suppliers, notably of services.

While it is true that some industrial processes are undoubtedly best located away from other land uses, existing policies have relied too heavily on exclusion rather than compatibility. The Commission has already developed a range of directives limiting emissions and noise from industrial operations. Further development of such legislation and of technical applications to avoid these nuisances should provide a more flexible framework for local planning authorities considering the location of compatible industrial activities within urban areas.

Such industries can be of benefit to local inhabitants in providing job opportunities which do not require lengthy commuting.

Suggested line of action :

The Community should undertake measures to promote the growth of small and medium sized entreprises in a harmonious way within the overall fabric of the urban environment and should provide assistance, where appropriate, to enable them to comply fully with regulations and good practice in considerations relating to the environment.

5.7. Urban energy management

Energy consumption in urban areas is closely related to air pollution from transport, heating, lighting and air conditioning of buildings. A more efficient use of energy could significantly help in reducing urban air pollution and, consequently, the cities' contribution to the greenhouse effect. As transport has been discussed in detail above, this section focuses on energy use within buildings. Potential improvements in this area include:

(a) Building design

In recent years there has been considerable interest in the concept of ecological housing - self-contained units which create little demand for energy and cause minimal damage to the environment. Research has demonstrated that considerable energy savings may be achieved by incorporating simple "passive" solar heating and other energy-saving principles in housing design, and by considering factors such as orientation and proximity in producing a more efficient urban layout.

(b) Standards of insulation in new construction

The technology available for energy conservation - wall insulation, double glazing, etc. - is not being uniformly applied in new building construction across the Community. While geographic differences may account for some of the variation in standards, the improvement and harmonization of such standards is worth further consideration. Standards and regulations for construction materials and products should also be put in place, taking into account what is now known about the problems of indoor pollution.

(c) Improvement of insulation in existing buildings

While there is little precise information on the insulation standard of the existing building stock within the Community, it is fair to assume that it is for the most part quite poor and that there is scope for considerable improvements in energy conservation in this area. Many Member States now encourage such expenditure by financial and fiscal incentives.

(d) Efficiency of heating plant

The efficiency of individual heating plants is greatly influenced by standards of maintenance. In the FRG, property owners are obliged to have their furnaces checked on an annual basis. It may be possible to link such inspections to fuel supply or home insurance contracts.

(e) Combined heat and power

Combining district heating with electricity generation is highly efficient in itself, while the proximity of producer to user also reduces energy loss during transmission. The Commission has on a number of occasions issued recommendations supporting such systems.

(f) Heating/energy audits of buildings

Energy audits prior to a property sale may be one instrument for increasing public sensitivity to energy consumption. Such a system already exists in Denmark, where it is linked to the role of a local energy consultant who provides advice on the costs and benefits of various energy conservation investments.

(g) Energy planning in cities

Energy planning in cities can reduce the energy requirement considerably.

This is a preventive means of avoiding pollution at the same time. It is based on an analysis of the energy consumption structure as well as the possibilities for exploiting local energy resources. Integrated energy management concepts resulting from such planning include many measures of the kind mentioned under points (a) to (f) and have generally very positive effects on the pollution level and economic development of cities. However, many cannot realise the existing possibilities because they are integrated in institutional frameworks which do not give enough freedom for corresponding energy policies to be developed.

The Commission is already promoting energy technology projects in many of the above areas.

Suggested lines of action :

1. That the Community continue and intensify its activites in urban energy management, seeking in particular to encourage and assist the cities to take steps towards urban energy planning measures, to disseminate useful advice on appropriate means in this framework, e.g. on building design for energy saving and further to demonstrate the benefits of various energy conservation techniques by pilot projects.

2. While Community legislation on product norms defines standards for insulation materials for building construction, there is currently no Community legislation requiring that specific standards be actually applied in new construction. While the Community has previously made recommendations in this area, it may now be appropriate for the Community to consider legislation.

3. That the use of economic instruments to encourage energy conservation in buildings be the subject of a detailed report and proposal.

4. That public authorities be encouraged to set a good example by the adoption of energy conservation measures in the buildings they operate.

5.8. Urban waste

The Commission has recently published a comprehensive strategy for the management of urban waste, placing the major emphasis on the avoidance of waste, reuse and recycling (see Chapter One, Section 2.2.4.). The strategy includes a wide range of proposals for implementation.

Its main orientation have been approved by the Council of Ministers at their meeting of 22-23 March 1990.

We do not propose to repeat these proposals within this document, but merely to underline the close link between that strategy and the concepts presented in this Green Paper. The following additional proposals illustrate the link between waste management and the wider issues of urban management.

Suggested lines or action :

1. The Commission should encourage city authorities to take into greater consideration constraints linked to waste management in drawing up short and medium-term plans for urban management: designated sites for collecting sorted household waste and setting up treatment plants.

2. The Commission should encourage, by means of financing, research and projects aimed at making people aware of the importance of sanitation; developing urban and architectural design that favours the sorting of waste at source, as well as sorted collection; finding new uses for urban waste, particularly that resulting from construction.

3. The Commission should encourage the exchange of information and experience in the field of sanitation, especially as regards cleaning technologies, sensitization of the population, legal instruments and the recycling of urban waste.

5.9. Comparative information on the state of the urban environment.

As discussed above, one of the difficulties in producing the analysis section of this paper has been the absence of information of many subjects which permit an objective and comparative analysis of the state of the urban environment. Improvements in comparative data are already being put in hand by programmes within the CORINE project, particularly related to air quality data. It is anticipated that the programmes, which will be taken over by the European Environment Agency, will improve knowledge in this area. Further improvements will however be necessary in other subject areas if the Commission is to have an adequate information base for the further evolution of urban environment policy. Such information should be made available not only to policy makers but also to individual citizens.

Suggested line of action :

That the Commission consider how it can improve the availability of comparative data on the state of the urban environment. This could be achieved either by giving the new Environment Agency a specific remit in this respect or by supporting the development of such data systems within a research institute or university, or a network of such institutions.

5.10. Informations initiatives

The urban environment is primarily the concern of all those who live and work in the cities and without whose participation no urban policy can succeed. These urban actors - inhabitants, shopkeepers, consumers, manufacturers, trade groupings - contribute to urban deterioration, but they also suffer its effects and benefit from improvements.

In implementing an urban environmental policy, it would be in the Community's interest to create structures to encourage dialogue, shared thinking and cooperation among the actors within individual cities and among the cities themselves. Such structures would also serve to facilitate the exchange of information and opinion with the Community.

Suggested lines of action :

The Commission should help the envisaged creation of a network for urban local initiative centres. These centres should be organized in cooperation with those public agencies that already exist to provide information and planning for the urban environment. A certain number of such centres are being planned this year as pilot projects in various cities. The role of these centres would be to :

1. Inform different sectors of the population of the Community's policies and measures and how these apply to the various factors that make up the urban reality;

2. Stimulate and facilitate dialogue, shared planning and cooperation among urban groups, with a view to improving the urban environment;

3. Facilitate the exchange of information among the cities of the problems they face and of their experience in dealing with these problems.

5.11. Social initiatives

Efforts must be made to ensure that the least privileged sections of the population are not isolated in the most run-down areas of cities.

Preventive social policies are possible in the context of operations to protect the physical environmental and should comprise both social integration measures and job schemes, e.g. in connection with the restoration of subsidized housing.

Suggested lines of action :

1. The Commission will support recruitment and vocational training schemes in keeping with environmental protection which create an economic and social development dynamic.

2. The Commission will encourage technical assistance to pilot projects and the transfer of know-how to involve the least privileged social groups in the protection of the environment.

5.12. Interregional co-operation

The Commission supports and co-finances a wide range of schemes for interregional co-operation and the development of networks. Cities are benefitting from actions which involve close contacts with regional and local authorities and their representative bodies - Assembly of European Regions, Council of European Municipalities and Regions of Europe and International Union of Local Authorities. A number of initiatives have been lauched which include for example co-financing of the POLIS project (related to improved traffic management) under a group of cities known as "Eurocities" and a co-operation project involving 10 ports in relation to action on marine pollution.

Suggested line of action :

That the Commission should continue to support such actions and seek where appropriate to extend co-operation and the exchange of information between cities.

6. Resume of priority suggested lines of action

This section pulls together the suggestion lines of action for the following key priority areas.

Urban planning

Suggested lines of action :

1. That the Commission, in cooperation with Member States and local authorities, should evolve guidelines for the incorporation of environmental considerations into town planning strategies - a detailed investigation and elaboration of the principles outlined above. Such guidelines will attempt to influence town planning practice and provide an important complement to the proposed directive of environmental assessment of policies, plans and programmes.

2. That further research into the treatment of contaminated soils, which so often hinder redevelopment of existing city sites, be encouraged.

3. That further financial assitance be given to pilot projects aimed at revitalizing less favoured urban areas by introducing a greater mixture of uses and hence access to urban facilities. At the same time, such actions should aim to protect and assist existing residents in these areas. The Commission should also consider how it can extend this action building on lessons learnt from these pilot projects.

4. The Community should consider the question of whether it wishes to extend financial support for urban renovation and environmental improvement schemes beyond the types and areas of support permitted by the current structural funds and if so, how this could be achieved.

Urban transport

Suggested lines of action :

The Community should :

1. Encourage city authorities to incorporate decisions about the coordinated future development of public transport and road construction into their plans for land use and transportation. The Commission should expect future submissions for structural fund assistance towards transport infrastructure to demonstrate that such an analysis has been carried out.

2. Encourage innovative approaches to the use of public transport and the environmental management of urban traffic by contributing to the cost of pilot projects and monitoring their effects. Research programmes should attach high priority to environmental considerations and should include innovative public transport, environmentally friendly vehicles and advanced traffic management systems. This should not lead to the encouragement of the greater use of urban areas for motor traffic.

3. Encourage the Community-wide exchange of information in urban traffic management to maximize the benefits of a wide range of experience.

4. Consider in detail, possibly by financing pilot projects, the potential for using economic instruments such as road pricing to help solve the environmental problems generated by urban traffic.

The protection and enhancement of the historical heritage of European cities

Suggested lines of action :

1. That the Community provides more substantial finance for the conservation of historical buildings and areas of European significance.

2. That consideration be given to the potential benefits of a Community system of recognition of the historic and cultural significance of individual buildings and parts of urban areas.

Protection and enhancement of the natural environment within our towns and cities

Suggested lines of action :

1. The Commission should consider a programme of pilot projects across the Community to demonstrate the benefits of green plans and programmes of action.

2. City authorities should be encouraged to review their provision of public open spaces and seize oppportunities where available to extend such provision.

Urban industry

Suggested lines of action :

The Community should undertake measures to promote the growth of small and medium sized entreprises in a harmonious way within the overall fabric of the urban environment and should provide assistance, where appropriate, to enable them to comply fully with regulations and good practice in considerations relating to the environment.

Urban energy management

Suggested lines of action :

1. That the Community continue and intensify its activites in urban energy management, seeking in particular to encourage and assist the cities in order to take steps towards urban energy planning measures, to disseminate useful advice on appropriate means in this framework, e.g. on building design for energy saving and further to demonstrate the benefits of various energy conservation techniques by pilot projects.

2. While Community legislation on product norms defines standards for insulation materials for building construction, there is currently no Community legislation requiring that specific standards be actually applied in new construction. While the Community has previously made recommendations in this area, it may now be appropriate for the Community to consider legislation.

3. That the use of economic instruments to encourage energy conservation in buildings be the subject of a detailed report and proposal.

4. That public authorities be encouraged to set a good example by the adoption of energy conservation measures in the buildings they operate.

Urban waste

Suggested lines or action :

1. The Commission should encourage city authorities to take into greater considration constraints linked to waste management in drawing up short and medium-term plans for urban management: designated sites for collecting sorted household waste and setting up treatment plants.

2. The Commission should encourage, by means of financing, research and projects aimed at making people aware of the importance of sanitation; developing urban and architectural design that favours the sorting of waste at source, as well as sorted collection; finding new uses for urban waste, particularly that resulting from construction.

3. The Commission should encourage the exchange of information and experience in the field of sanitation, especially as regards cleaning technologies, sensitization of the population, legal instruments and the recycling of urban waste.

7. The next steps

This document represents the first manifestation of the Commission's commitment to achieve real improvements in the quality of urban environment within the Community. The Commission is keen to see as wide as possible discussion of the ideas and suggestions set out in the document.

In addition to its discussion by the European Parliament, Council of Ministers and Economic and Social Committee, the document will be sent to the Mayors of major towns in Europe and to professional and voluntary groups interested in urban management issues for their comments.

Following detailed study of the results of this consultation, the Commission will consider which of the suggested lines of action merit further action and fall within the Community's competence and how this can be best achieved.

The implementation of such proposals will ensure that there is co-operation with, but no duplication of the activities of other international organisations active in the field of urban environment, seeking, whenever possible, common action.

* * * * * * * * * *

APPENDIX I

ARTICLES OF TREATY COVERING ENVIRONMENT

Subsection VI - Environment

Article 25

A Title VII shall be added to Part Three of the EEC Treaty, reading as follows :

TITLE VII
ENVIRONMENT

Article 130 R

1. Action by the Community relating to the environment shall have the following objectives :

(i) to preserve, protect and improve the quality of the environment;

ii) to contribute towards protecting human health;

iii) to ensure a prudent and rational utilization of natural resources.

2. Action by the Community relating to the environment shall be based on the principles that preventive action should be taken, that environmental damage should as a priority by rectified at source, and that the polluter should pay. Environmental protection requirements shall be a component of the Community's other policies.

3. In preparing its action relating to the environment, the Community shall take account of :

i) available scientific and technical data;

ii) environmental conditions in the various regions of the Community;

iii) the potential benefits and costs of action or of lack of action;

(iv) the economic and social development of the Community as a whole and the balanced development of its regions.

4. The Community shall take action relating to the environment to the extent to which the objectives referred to in paragraph 1 can be attained better at Community level than at the level of the individual Member States. Without prejudice to certain measures of a Community nature, the Member States shall finance and implement the other measures.

5. Within their respective spheres of competence, the Community and the Member States shall cooperate with third countries and with the relevant international organizations. The arrangements for Community cooperation may be the subject of agreements between the Community and the third parties concerned, which shall be negotiated and concluded in accordance with Article 228.

   The previous paragraph shall be without prejudice to Member States' competence to negotiate in international bodies and to conclude international agreements.

Article 130 S

The Council, acting unanimously on a proposal from the Commission and after consulting the European Parliament and the Economic and Social Committee, shall decide what action is to be taken by the Community.

The Council shall, under the conditions laid down in the preceding subparagraph, define those matters on which decisions are to be taken by a qualified majority.

Article 130 T

The protective measures adopted in common pursuant to Article 130 S shall not prevent any Member State from maintaining or introducing more stringent protective measures compatible with this Treaty.

ISSN 0254-1475

COM(90) 218 final

DOCUMENTS

EN 15

Catalogue number : CB-CO-90-276-EN-C
ISBN 92-77-61187-1

PRICE	1 - 30 pages: 3.50 ECU	per additional 10 pages: 1.25 ECU

Office for Official Publications of the European Communities
L-2985 Luxembourg