

ECONOMIC COMMISSION FOR EUROPE

TOWARDS SUSTAINABLE HUMAN SETTLEMENTS DEVELOPMENT IN THE ECE REGION



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PREFACE

Following a request by the Committee on Human Settlements of the Economic Commission for Europe, this review was prepared by Mr. Martti LUJANEN (Finland) in cooperation with the ECE secretariat as a contribution to the United Nations Conference on Human Settlements (Habitat II), to be held in Istanbul, Turkey, in June 1996. It contains a brief overview of human settlements development in the ECE region since the first United Nations Conference on Human Settlements, held in Vancouver, Canada, in June 1976.

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BACKGROUND

At its first substantive session, held in Geneva in April 1994, the Preparatory Committee for the second United Nations Conference on Human Settlements (Habitat II) stressed that the United Nations regional commissions had a central role to play at the regional level in the preparatory process, the Conference itself and beyond (decision I/2, para. 23). This role should include:

- (a) Coordinating and facilitating regional activities, including regional meetings, through a work programme over the next two years;
- (b) Enabling Member States with limited institutional and financial capacity to participate effectively in the preparatory process and in the Conference;
- (c) Liaison and preparation of a regional report on the state of human settlements, highlighting cross-sectoral and cross-country concerns.

There are various reasons why the ECE should participate actively in the preparations for the Habitat II Conference. Firstly, the suggested themes for the Conference are entirely within the scope of the two priorities of the Committee on Human Settlements: sustainable human settlements and assistance to countries in transition. Secondly, the ECE region provides an interesting framework covering a vast geographical area comprising 55 countries, some with a long tradition of market economy and others in transition from a planned to a market economy. There are relatively big differences in national income levels. The equal status enjoyed in the ECE by all European and Central Asian countries, Canada, the United States and Israel creates a good framework for a balanced regional preparatory process. Thirdly, the ECE stand is also important because of the attention generally paid to the development of this region, which includes most of the world's economically strong countries. The ECE input could be a significant contribution to substantive discussions, especially since it fosters an exchange of ideas with other regions and between different levels of government.

The first United Nations Conference on Human Settlements, held in Vancouver (Canada) in 1976, discussed the following items, among others:

- (a) Declaration of principles;
- (b) Recommendations on measures to be adopted at the national level:

Settlement policies and strategies;

- Settlement planning;
- Shelter, infrastructure and services;
- Land;
- Public participation;
- Institutions and management.

The consensus and commitments reached in Vancouver and their impact on the human settlements development in the ECE region are not the subject of a separate evaluation in this report. It is obvious, however, that levels of development, wealth and technical and scientific know-how vary from country to country, and that this diversity leads to an obvious need to diversify, and to devise flexible policies, measures, programmes and the financial means needed for resolving the complex problems of human settlements within a variable context of priorities and time-frames.

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I. HUMAN SETTLEMENTS DEVELOPMENT IN THE ECE REGION

The Preparatory Committee for the Habitat II Conference has adopted the following main themes for the Conference:

- (a) Adequate shelter for all;
- (b) Sustainable human settlements development in an urbanizing world.

Related ECE experience could be divided into the following sections:

- (a) Ecological sustainability and human settlements;
- (b) Economic aspects of human settlements development;
- (c) Social and cultural aspects of housing and human settlements;
- (d) The role of the public and private sectors and the so-called third sector;
- (e) Information systems in the human settlements sector.

Sections (a) to (c) would draw attention to the three basic dimensions of the sustainable development concept: ecological, economic and social. When supplemented with sections (d) and (e), all the issues of the main themes for the Conference would be covered.

A. Ecological sustainability and human settlements

The United Nations Conference on Environment and Development held in Rio de Janeiro (Brazil) in 1992 was based on the concern that present developments were disrupting the global ecological balance. Particular attention was paid to such alarming trends as climatic change. It also became clear that even when this concern was restricted to the national and local levels, wide-ranging discussion on ecological matters was amply justified. It is of vital importance for every one of us that the quality of the air we breathe, the water we drink and the environment we leave to our children is satisfactory and will remain so in the future.

Countries in the ECE carry a great responsibility for the global ecological balance. For example, emissions of pollutants into the atmosphere are largely a consequence of energy use. The ECE countries are responsible for about 65% of global energy consumption, even though they account for only about 20% of the world population. The main concern should be to reduce the consumption of energy and raw materials in order to achieve a global ecological balance. Lower consumption levels in themselves contribute to another important goal, namely a reduction in emissions and wastes. This requires an adaptation of the existing economic models, which are mainly geared to achieving rapid economic growth through an increase in production and consumption.

The human settlements sector plays a major role in attempts to achieve a global ecological balance. The considerable growth that cities and whole urban systems have experienced in the ECE region has led to excessive consumption of land and often also to a degradation of the landscape and a loss of natural diversity. Urban forms and densities have been accepted which have contributed to urban sprawl, pushed recreation areas far from the large cities, and created barriers. Local and regional ecological balances and the heritage of both nature and the built environment have suffered as a result.

The current range of policies to improve the urban environment is extensive, encompassing urban planning, housing policies, traffic, energy and waste management, pollu-

tion control, etc. There is, however, no overall public policy or programme for the improvement of the urban environment in ECE countries. Policies to control a variety of sectoral activities which impact upon the urban environment are generally not coordinated. The prevailing decision-making process concerning town planning in the ECE region tends to separate environment and human settlements aspects. This separation influences not only the decision-making process, but also the action of all groups including government, industry, business and individuals. The need to ensure the progressive integration of environmental considerations in decision-making in all economic sectors, pursuant to principle 4 of the Rio Declaration on Environment and Development, has been widely recognized. The major challenge is therefore to effectively combine the multitude of sectoral policies which affect the quality of life of dwellers and the environmental conditions in cities and towns. As was pointed out in recent documents and policy statements of ECE, the European Community (EC) and the Organisation for Economic Co-operation and Development (OECD), a new integrated approach needs to be promoted in the planning, building and management of human settlements in an effort to reduce energy consumption, pollution and noise, provide adequate opportunities for open-air recreation, preserve the landscape and cultural heritage and help to realize the goals of sustainable economic and social development.

The integration of environmental policies with sectoral policies in human settlements requires first of all that environmental concerns are adequately considered in urban planning and management. Approaches need to be designed so as to integrate the urban infrastructure with the green infrastructure. Through environmental management of the urban space, renewal and re-use of all industrial sites in urban areas together with the replacement or rehabilitation of obsolete urban infrastructure, and a mixed use of city space, the demand for mobility can be reduced and access to essential public services and green areas increased.

Energy consumption in the human settlements sector is a critical issue; in many ECE countries it corresponds to some 50-60% of the overall energy consumption. This figure includes construction, use of buildings (heating, lighting, cooking, etc.) and the energy used in urban transport. Energy consumption in economies in transition in central and eastern Europe and the Commonwealth of Independent States (CIS) is highly inefficient and causes severe environmental problems resulting from high levels of sulphur dioxide (SO₂), nitrogen oxide (NO_x), and carbon dioxide (CO₂) emissions. The housing sector in these countries offers a high potential for energy savings. Short-term conservation and efficiency measures are estimated to save at least 15% in annual energy consumption, which translates into an annual reduction of 750 million tons of CO₂ emissions.

Since the first energy crisis, one of the main reasons for energy conservation activities in ECE member countries has been to reduce dependence on imported fuels (mainly oil). Increased awareness of the external environmental damage from the energy system has given a new dimension to energy conservation activities. This awareness led to significant energy savings in western countries when energy prices rose; in eastern countries a policy of low energy prices did not motivate enterprises or citizens to make savings. Making the use of energy more efficient is without doubt one of the most important ways to reduce the environmental impact of energy systems. The need for environmental protection should thus reinforce conservation efforts in member countries.

Health is another aspect to be borne in mind. In seeking energy savings, health could be adversely affected by, for example, undue restriction of ventilation. Also, in cold climates, there is the danger of hypothermia if old people, for instance, cannot maintain adequate temperatures in their dwellings. There are also a few examples of materials that could involve possible health hazards, either during the building process or when installed in buildings; energy conservation policies must not increase such risks.

The expected growth in *traffic* is especially alarming. Traffic already generates most CO, NO_x and VOC emissions, and its share of emissions has rapidly increased in the past 20 years. For example, transport-related CO₂ emissions have nearly doubled over the past two decades.

According to an estimate of the World Health Organization (WHO), millions of urban dwellers in Europe are exposed to levels of particulates, SO₂ and NO₂ in ambient air that regularly exceed the WHO quality guidelines. Winter-type smog still occurs in some cities. This leads to respiratory disorders and aggravates chronic respiratory diseases and increases the risk of cancer.¹

Noise is another form of traffic-related pollution in urban areas. In western Europe, between 10 and 20% of city inhabitants live in areas where the maximum acceptable level of 65 dB(A) is exceeded.²

A recent study prepared jointly by OECD and the European Conference of Ministers of Transport (ECMT) estimates that the volume of traffic in the OECD area will grow between 75 and 170% between 1990 and 2015.³ The report establishes that:

Building more and more roads in cities and conurbations has enabled more people to travel by car, but has not reduced peak-period congestion to any noticeable extent. As soon as new road space becomes available in large cities, it is quickly filled. Even city regions with the most extensive road networks have high congestion levels. Attempts to solve the congestion problem in this way, especially in Europe, would change cities beyond all recognition, the cost would be prohibitive and congestion would still not be eliminated.

OECD and ECMT have set the following goals for the future policies in their member countries: less congestion, reduced energy consumption, improved access for those without cars, higher environmental standards and reduced overall costs. The principal conclusion of the report affirms that:

Car dependency in cities can only be reduced by the combined effect of land-use and transport policies. The goals of such policies will need to be openly stated. Their implementation will need to be steady and long-term. An integrated policy approach is essential. Three main components of such a policy package can be identified:

(a) *Best Practice*. Raise the effectiveness of current land-use planning and traffic management measures, including road systems, pedestrian routes and parking management and provision/encouragement of alternative means of transport (electric vehicles and bicycles), to the level of those in the best managed cities. This strand is a necessary part of a coherent strategy, but insufficient to bring major benefits on its own.

(b) *Innovations*. Develop new policies to shape urban developments into less car-dependent forms and apply congestion pricing to traffic management, with the objective of bringing demand for car travel into balance with road capacity.

(c) *Sustainable Development*. Introduce at regular intervals motor-related taxation (fuel tax and subsidies for anti-pollution equipment) in order to promote less polluting and more economical vehicles, which may result in more sustainable mobility, i.e. a shift in travel away from solo driving and greater use of environmentally friendly modes.

All three components of the policy package are necessary to reduce car travel, especially in cities, and to achieve sustainable urban development.

In order to address the root causes, rather than just the symptoms, the main goal should be to reduce the need to travel. This can be achieved by means of restricting urban sprawl, promoting the mixed use of city space instead of the unnecessary separation of city functions, and by discouraging the construction of shopping centres and malls based on the use of private cars.

Furthermore, it is necessary to pursue the objective of sustainable transport development in urban areas, in particular:

—To promote the transfer of transit traffic away from urban centres;

¹ WHO, Concern for Europe's Tomorrow. Second European Conference on Environment and Health. Helsinki, June 1994.

² European Sustainable Cities, First Annual Report, European Union Expert Group on the Urban Environment; Sustainable Cities Project, Draft, May 1994, p. 143.

³ OECD and ECMT: Urban travel and sustainable development, Paris, 1995, p. 17. The OECD has also dealt with urban transport in the "Project group on environmental improvement through urban energy management", the handbook on "Good local practice in the field of urban energy management", and several country-specific "Environmental Performance Reviews".

- To promote the use of public transport instead of private cars by adapting the transport infrastructure to the size and layout of urban areas (bus lanes, tramways, underground systems, etc.) and making public transport services more attractive;
- To promote the development of information, driving aids and traffic management systems (telematics); and
- To encourage the use of less environmentally damaging travel modes (bicycles, electric vehicles, etc.).

In many ECE countries, great efforts are being made to improve the environmental quality of fuels (use of lead-free petrol, less volatility, etc.), to reduce vehicle energy consumption and to tighten standards on pollutant emissions, noise and safety (three-way catalysts, particulate traps, etc.).

Another critical area where the human settlements sector plays a major role is *waste management*. Construction, soil removal and demolition produce roughly half of all production-related solid wastes in many European countries. Also, the amount of municipal wastes is high, ranging from below 300 kilograms to over 800 kilograms per capita. Since the main waste-disposal methods are becoming increasingly difficult to apply to such high volumes, great efforts are being made to reduce the volume of wastes and to promote their separation at source and recycling. In that respect the ECE strategy on reduction at source, replacement of polluting materials by less polluting materials, recovery, recycling and re-utilization of waste, although addressing central Governments, should also be implemented at the local level.

In the ECE region, there are great differences in the coverage and quality of waste-water management including sludge treatment and disposal. In some countries, practically all sewage is conducted to treatment plants, in others only a minor part. A number of particular circumstances have led to the present situation in countries in transition. In the first place, communal water-supply projects were implemented at a rate substantially surpassing that at which sewer networks were installed. Secondly, the construction or expansion of sewer networks was not accompanied by measures aimed at providing adequate treatment capacity for municipal waste waters. Industrial waste waters are frequently discharged into the sewer network or directly into the recipient waters without any proper pre-treatment. Moreover, many municipal treatment plants in central and eastern Europe and the CIS are only mechanical-biological plants. Treatment plants are often overloaded and improperly operated, and they use inappropriate treatment technologies. The degree to which the load of pollutants is reduced is therefore often smaller than expected.

Another problem is the quality of water-supply and sewer networks, which are deteriorating in many urban areas. This has resulted in heavy losses of drinking-water from the distribution network or the input of hazardous substances into waters due to leakages from the sewer systems. The treatment of storm water in cities is becoming more difficult because of the large quantities of hazardous substances it contains.

In recent years, a growing number of countries have also reported on the ongoing pollution of surface water and groundwaters in urban catchment areas. Surface run-off from sealed areas is not collected through the sewer systems. The above-mentioned leakage from the sewer system and the overflow of storm sewers are the most common causes of diffuse pollution associated with urban areas. These run-off and seepage waters usually have a high biochemical oxygen demand. A number of hazardous substances, such as lead, cadmium, mineral oils and pesticides, are also present in these waters. The high content of suspended solids in urban surface run-off and its bacterial contamination may pose additional problems.

Another source of diffuse pollution in urban areas is the broad use of herbicides. For decades, these substances have been considered as a very effective and also inexpensive way to control weeds on non-agricultural land, such as roads, railway tracks, airfields

and other hard surfaces, grass verges and amenity areas. A number of these herbicides are persistent and have a high mobility in soil water. They have already been found in groundwaters with concentrations exceeding the maximum permitted levels for drinking-water use. For these reasons, some countries have recently taken action to restrict and even prohibit the use of some herbicides, such as atrazine and simazine. Other control measures include rotating the use of contact (foliar) herbicides and timing the application correctly. In some ECE countries, guidelines for the control of weeds on non-agricultural land were drawn up.

Owing to the problems related to the management of solid and liquid wastes, outbreaks of severe diseases, such as hepatitis, salmonellosis, and even cholera, have been reported in some countries. Successes and failures in waste treatment greatly affect the chances of success in the protection of water resources, which has become a serious problem.

Salt and chemical build-up from de-icing and anti-skid products, tyre and road surface abrasions, as well as seepage from stored chemicals are commonly regarded as other sources of diffuse pollution in urban areas. Better spreading techniques and a ban on the use of additives which contain hazardous substances constitute efficient measures to reduce the adverse effects which the run-off of de-icing compounds and anti-skid chemicals from streets and highways have on inland waters. In some countries, it has also become common practice to install systems for the collection and appropriate disposal of storm-water run-off from motorways crossing groundwater protection zones or other sensitive areas. Due to sealed surfaces in urban areas, there is also a possibility of decreased groundwater recharge. At the same time, growing water use has increased the demand on groundwaters and the danger of overuse of groundwaters.

At the same time, technological innovations have been developed, such as:

- (a) Water-saving flush toilets and closed water systems in industrial processes decreasing the total amount of sewage;
- (b) Experiments to separate storm-water drainage from the "normal" sewerage system and use this "grey water" for purposes where lower-quality water is acceptable.

ECE countries are making great efforts to restore natural *fresh-water resources* to a target state of high ecological quality and to ensure that water demand and supply are brought into equilibrium with due regard to local conditions. Nevertheless, stringent control measures are needed to prevent any further deterioration of surface waters and groundwaters in urban areas.

The most appropriate measure to control water pollution from urban sources is the construction, upgrading or effective management of existing drainage and sewer systems. Effective control measures include, where appropriate, the construction of retention ponds for storm-water storage and infiltration basins. Control measures also cover regulations concerning the siting, design, construction and maintenance of facilities, including provisions to keep urban ground-cover clean as well as to prevent erosion through paving, grassing and appropriate street design. Additional measures include regulations concerning the storage and discharge of litter, prohibitions of dumping of toxic substances such as organohalogen solvents into municipal sewers, prohibitions of waste disposal into storm sewers, and approval of snow removal and dumping procedures by local authorities.

As a number of human settlements border transboundary rivers and international lakes, the protection of waters in urban areas should also become an activity of joint bodies, such as international river commissions, established by countries riparian to the same transboundary waters. In particular, the Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Helsinki, 1992) contains binding obligations to protect waters from urban activities. These include the prevention, control and reduction of water pollution at source, the use of best available technology for the treat-

ment of hazardous substances and nutrients contained in industrial and municipal waste waters, the use of at least biological treatment or equivalent processes to treat municipal waste waters, and the imposition of stricter requirements, even leading to a ban in individual cases, when the quality of the receiving water so requires. Moreover, the Convention lays down stringent measures to control the input of substances from diffuse sources, which may also result in a total or partial ban of the production and use of hazardous substances that pollute waters.

The *green structure* in cities is receiving much more attention than before. It should meet people's need for recreation and their need to have part of nature in their immediate neighbourhood. There is also increasing understanding of its importance for the local climate and for preserving some biological diversity in the city; sustainable local development can come about only if the green structure is regarded as an essential part of the urban environment. It should be noted that the role of the green structure becomes much more important than before if higher land-use densities are applied as recommended, for instance by the Commission of the European Communities.⁴

Conclusions

In short, many ECE countries have been able to make the use of energy and raw materials more efficient and to reduce emissions and wastes, with improved technologies.

However, recent developments have shown that environmental problems cannot be dealt with merely by upgrading technology. Questions related to consumption patterns and lifestyle and to what extent and how these can be changed are becoming more acute. These considerations are highly relevant in the human settlements sector, where lifestyle developments are reflected directly in spatial planning, use of public transport, attitudes towards issues such as indoor temperatures or reduction of household wastes, etc.

Many ECE countries are already making efforts to address these issues. It is evident that to change public values and everyday habits, several simultaneous measures are needed, usually a combination of awareness raising, restrictions, and economic incentives and disincentives. An example is the increased tax levied on petrol, and the deposit required on bottles and cans to promote reuse and recycling. Also, the rapid rise in the price level of heating fuel in the market economy countries in the 1970s and in the former socialist countries of central and eastern Europe in the beginning of the 1990s encouraged energy saving. Many countries have initiated information campaigns in order to increase environmental awareness and influence public attitudes. School curricula have been revised and study programmes are being implemented to impart the basics of sustainable development to all age groups in school.⁵

B. Economic aspects of human settlements development

The significance of building construction in the national economy is often underrated. However, the development which took place in the ECE countries after the Second World War is clear evidence of the important role which construction can play in this respect. After the war, many ECE countries were gripped by recession and high unemployment. Strong growth in construction was one of the central impulses for the upturn in their economies and for the long period of general economic growth that followed.

At present, when nearly 30 million people in western Europe and North America and some 15 million in the countries in transition are out of work, house-building may have a powerful impact on employment because, in addition to jobs at building sites, it creates roughly the same number of jobs in the building materials industry, trade and trans-

⁴ Commission of the European Communities, *Green Book on the Urban Environment* (Brussels, 1990).

⁵ This section is based on the aforementioned studies, OECD national reviews of environmental performance, and on the ECE *Guidelines for sustainable human settlements planning and management* (ECE/HBP/95).

port. New housing also has an important influence on spending by consumers on household goods. The significance of house-building can also be illustrated by the fact that today in many ECE countries it accounts for over half of all investments.

Even these figures do not fully reflect the economic significance of building construction, since do-it-yourself building or renovation is not covered by the statistics. This labour input is not lost elsewhere. Therefore, increases in do-it-yourself construction can boost the building materials industry and building materials trade and thereby the country's economic development in general.

Furthermore, in addition to building construction, building and maintenance of infrastructure (roads, streets, water-supply, sewerage, electricity and telephone networks) in human settlements generate numerous jobs. The assets created are, of course, also of vital importance to society. Conversely, defects in infrastructure hamper everyday life and, hence, the economic development of the area.

The ECE experience also corroborates the importance of sectoral policies. Since fluctuations in the building industry are greater than those in other sectors, the building industry plays a major role in economic cycles; it both strengthens the fluctuations and is one of the sectors which suffers most during recession. At the same time, the housing policy, for instance, can directly influence the volume of new construction and renovation in the country. Another example is the savings schemes for home-ownership, which in addition to providing funds for housing finance can increase available domestic investment funds by raising the level of household savings. This was often used in ECE countries in the post-war period when the shortage of capital was a central problem in the development of national economies.

Recent trends in housing production in most eastern European countries and in the Commonwealth of Independent States (CIS) have been disappointing: production is much lower than demand, housing shortages have escalated. Economic hardship has reduced consumer demand, while macroeconomic measures have cut public housing construction, at the same time inflation has increased construction costs. For countries in transition, it is very important to succeed in housing market reforms, since improvements in the housing sector of the economy would not only meet housing requirements and improve the quality of life for the population, but would also improve macroeconomic performance and the situation in other sectors of the economy. Economic sustainability of human settlements in these countries will to a great extent depend on the financial possibilities of the population and related State policies and on instruments to support renewal and modernization activities that are vital to the preservation of the value of the existing housing stock for future generations.

Another example of the economic importance of building is the renovation and upgrading of the building stock, especially housing, which has increased since the rise in energy prices in the early 1970s. Extensive programmes have been implemented in many ECE countries to improve the energy efficiency of buildings and thereby reduce energy costs. In this respect, the building stock of the former socialist countries represents a special challenge and the economic yield of the investment in improved energy efficiency can be substantial. There are cheap and efficient ways to save energy, such as sealing windows properly and improving the heat regulation system. The economic significance of energy-saving measures is found not only in lower heating costs; a reduction in energy consumption will increase the opportunities for enlarging energy exports or lessen the requirements for energy imports and will have a positive impact on the balance of trade.

Indeed, increased attention has lately been directed at assessing the overall efficiency of the development and use of human settlements, paying attention not only to construction costs but also to operation and maintenance costs, including expenditure on heating and transport. The pattern of urban development determines the building and operating costs. In particular the dispersal of the settlement structure and the related urban sprawl raise costs. First, dispersal increases infrastructure costs (such as roads, pipelines and

networks). Second, and more important, the functioning of split communities takes a heavy toll in terms of increased commuter traffic and distribution costs, longer travelling hours, and increased expenditure for the use of private cars. Infrastructure maintenance costs also increase with the extension of networks.

Improved housing conditions may also have very positive psychological effects. If people believe that they can, by their own efforts, improve their quality of life, this conviction will boost the work morale of society and, hence, the development of the national economy.

Thus, it can be stated that the significance of human settlements for the overall development of the economy is decisive. Most economic and cultural activities are based in the communities. Consequently, any deficiencies in their functioning and management will immediately be reflected in the economy.

It is most appropriate to address the problems related to the economic aspects of sustainability of human settlements and cities of the region with a particular emphasis on the instruments and indicators that help to evaluate the situation, guide the development process and measure the effectiveness of different policy instruments.

C. Social and cultural aspects of housing and human settlements

The strategy of many ECE countries in dealing with their post-war housing problems was to raise housing production to an extremely high level. Later, especially in the 1970s, increased attention was paid to upgrading the housing stock so as to bring older dwellings up to the new, ever-rising standards demanded. As a result, the general standard of housing in ECE countries rose rapidly. Nevertheless, none of those countries can be said to have solved their basic housing problem in a socially sustainable way.

In fact, it can be concluded from the experiences of the most developed ECE countries that a high level of housing production and a high volume of upgrading alone cannot solve the housing problem. It has also become clear that to alleviate housing problems efficiently attention should be paid to the specific problems of each population group and policy instruments should be planned accordingly.

In this respect the information base is important. The problems of special groups easily remain invisible if housing conditions are assessed only through statistics based on arithmetic averages. Therefore, most ECE countries lay great emphasis on collecting distribution data reflecting the housing conditions of various population groups.

Below is a brief overview of population groups which are generally disadvantaged in the housing markets and the instruments used to alleviate their problems.

Young people, first-time buyers and families with children often still have severe housing problems. Frequently they spend a higher percentage of their income on housing than the older age groups. This is partly due to rent control, which is still applied in many countries, or to loan systems where the burden of capital costs is very high during the first years. Both these factors can lead to a situation where housing costs in a newly rented or newly purchased dwelling are essentially higher than in a dwelling occupied by the same household for a long time.

The elderly, for their part, often live in dwellings which are technically inadequate although they especially need the comfort provided by a well-equipped dwelling. The rapid increase in the "senior citizen" bracket makes this problem especially critical.

There are also many special groups (such as the disabled) who are in a disadvantaged position in the housing market. Ensuring their access to adequate housing would require special action. Neither has it been possible to eliminate the problem of homelessness even in the most developed ECE countries. The United Nations International Year of

Shelter for the Homeless 1987 brought the problem to the fore in political discussions. Later, bodies such as the Council of Europe have worked resolutely to chart this problem.⁶ One of their fundamental conclusions is that the homeless are not a homogeneous group and that the elimination of the problem thus requires a wide variety of measures.

Recently, the income gap between rich and poor has increased and has become a matter of particular concern. This is in part due to the continuing high unemployment. It is clear that where income differences have increased, urban internal safety is threatened.

More recently, the strong rise in unemployment has brought about an increase in the number of homeless people in many ECE countries. In several countries of the region another reason for this alarming trend is the rapid increase in the inflow of immigrants. Also, the shut-down of many psychiatric hospitals has added to the problem because the patients who are released often cannot cope in the general housing market. Experience has clearly shown that homelessness cannot usually be eradicated merely by the direct provision of housing; support services are also required.

Taking into account these problems, the discussion continues about whether housing should be generally subsidized so that the economic situation of the family has no bearing on the size of the subsidy, or whether the amount of support provided should depend on the income of the household, the number of household members, housing expenditure and other such factors. Generally, the trend has been towards reducing untargeted subsidies and increasing need-related subsidies. For instance, eligibility for tax deductions for interest payments on housing loans, which was a common form of general subsidy in western countries, has been limited in many ECE countries. At the same time targeted subsidies such as housing allowances for individual households have increased. Moreover, there has been an attempt to direct housing policy so that the support provided benefits especially those population groups with the greatest need (see also ECE/HBP/84).

There is a widespread shortage of affordable housing, a problem which is aggravated as the number of people living below the poverty line grows. In several countries Governments have started to scrutinize their policies in this respect.

Efforts to counteract increasing demolition combine with an increasing interest in preserving the cultural heritage inherent in old buildings for future generations. This refers not only to buildings as such but also to social structures and ways of life in old communities.

Other problems are caused by the deterioration of the relatively new housing stock. As mentioned earlier, in terms of quantity housing production in many ECE countries rose to an extremely high level in the late 1960s and early 1970s. Much of this production concentrated on new housing estates consisting of very monotonous multi-storey buildings. In addition to problems related to quality, they often presented social problems because of their homogeneous population structure. In some cases it was decided to demolish these buildings because of the imbalance in their social fabric and the neglect of maintenance.

At least two lessons can be drawn from this. First, continued neglect of maintenance combined with a homogeneous social structure may result in a vicious circle which is hard to break. Second, the problem will only worsen if the building tradition and way of life in the country or region concerned are ignored in construction. However, this works both ways: a type of neighbourhood that is not appreciated in one country may be more to the liking of the residents in another country. Moreover, the experiences of the ECE region show that "demolition and new-built areas as a housing renewal strategy is very expensive and difficult to organize, and implies heavy social and cultural costs"

⁶ See for instance *Homelessness*, Report prepared by the Study Group on Homelessness, Steering Committee on Social Policy (CDPS) (Council of Europe Press, 1993).

(HBP/SEM.51/2, para. 17). Therefore, demolition should be undertaken only as a last resort and maintenance and renovation encouraged.

The housing questions mentioned above are part of a conglomeration of problems with which many human settlements, especially the larger ones, are confronted. They have to cope with a deteriorating infrastructure, diminishing public services, large-scale unemployment, crime, drug abuse, racial and ethnic discrimination and polarization. Outbreaks of violence are no longer an exception. In order to combat these evils cities have to be enabled to carry out a comprehensive strategy of educational, health, housing and employment measures.

D. The role of the public and private sectors and the so-called third sector

The review is primarily based on the western European and North American tradition. The former socialist countries of central and eastern Europe are rapidly changing their administrative systems in the direction of the institutional arrangements prevalent in market economies.

The actors in the human settlements sector can be roughly classified as follows:

- (a) *Public authorities*: central, regional and local authorities and the institutions that they administer. Hereinafter the term "State" will be used to refer to both the central and regional level;
- (b) *Private enterprises*: developers, contractors, commercial banks, landlords, real estate agents; servicing companies and various consultants;
- (c) *The "third sector"*: various self-help groups and non-profit developers and builders, housing cooperatives and condominiums and tenant organizations. Trade unions and consumer cooperatives also operate in the human settlements sector, at least as lobbying groups. This "third sector" differs from commercially-based enterprises in that they do business or represent their members in accordance with their special goals, i.e. working for the benefit of their members/owners on a non-profit basis.

1. The tasks of the State

The primary task of the State in a market economy is to create a regulatory framework in all the relevant areas, such as land policy, physical planning and building standards. Another major task of the State is to create a legal framework for contractual relationships between the various parties, e.g. between landlord and tenant. Some legislation also aims at safeguarding effective competition between enterprises.

The responsibility of the State also includes keeping records of land ownership and land transactions, even when the registers are kept at the local level.

The State is also in charge of drawing up building norms. More recently, the character of these norms and regulations has changed so that prescriptive provisions are often replaced by performance or user requirements. Such regulations and standards have also tended to become increasingly international. In western Europe great efforts are being made to harmonize such norms, in particular in order to remove trade barriers between countries.

Furthermore, the State controls the instruments of economic and fiscal policy, including taxation. The State may also facilitate access to housing finance either through direct loans, interest subsidies or in the form of State guarantees. It may lower housing costs through various instruments, such as need-related housing allowances. Tax relief is a common form of public support; a lump-sum subsidy for savings is another.

The support and promotion of research and the dissemination of information are also important public tasks. Finally, promoting education and training in the wide variety of skills and professions required in human settlements development is mostly the responsibility of the State.

States taking part in intergovernmental cooperation may harmonize policies for human settlements with those for the protection of the environment and human health, in particular in relation to obligations entered into under international legally binding conventions and protocols. The relevant provisions of the United Nations Framework Convention on Climate Change and the United Nations Economic Commission for Europe Convention on Long-range Transboundary Air Pollution and its related protocols on the reduction of sulphur emissions and on the control of emissions of nitrogen oxides are a case in point.

2. The role of local authorities

There are two main kinds of local authorities: local government and municipalities. Local governments are either an extension of central State power, or, as municipalities, derive their power and legitimacy from the local electorate. In some countries municipalities have a minor role, whereas in others they play a major part in political life and have their own sources of revenue, including the power to tax their inhabitants. Although there are differences in historical tradition, the general trend is clearly towards decentralization and delegation of power to the local level.

In most ECE countries local authorities have a crucial role in human settlements development because of their responsibility for physical planning and infrastructure investments. However, the responsibility for the provision of infrastructure usually means only that the authorities see to it that the required infrastructure (roads, streets, water-supply, sewerage systems, electricity, etc.) is created. For the actual building work most countries rely on the private sector, which competes for contracts by bids or tender. Although in many countries the local authorities are generally responsible for infrastructure costs, these tend to be so high as to require central government subsidies as well. The central Government also plays a role in physical planning, mainly relating to the planning of the trunk road network and to matters of national interest.

Local authorities can also be sizeable landowners. This gives them a powerful instrument for an active land policy through which they can effectively guide the development of settlements, given their role in physical planning and infrastructure building.

In several ECE countries, they are significant owners of rental housing. This is most noticeable in the former socialist countries, where much of the State's huge stock of rental dwellings is being transferred to the local authorities. In many countries, however, it has been considered more appropriate to hand over the management of rental dwellings owned by local authorities to specialized private or non-profit corporations. Whatever the model, competent management has proved to be of crucial importance.

Furthermore, education, environmental protection, health care, and social welfare are often part of the mandate of local authorities. Through these tasks they can greatly influence the lives of their residents. Social welfare also implies that local authorities are striving to solve the housing problems of the homeless and other weak groups in the housing market.

The experience of many ECE countries also indicates that the local authorities can play a major role in the implementation of housing and urban renewal schemes.

Finally, local authorities provide administrative services relevant to human settlements development. For instance, they usually grant building permits and administer various forms of support regardless of whether the funds actually come from the local authority

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or the State. The goal is that citizens should be able to deal with all administrative matters within their own municipality.

A number of ECE countries have attached particular importance to Local Agenda 21. Since the aims of sustainable development cannot be attained merely through the efforts of central administration, a strong commitment at the local level is necessary.

Since the tasks of local authorities are so wide-ranging and require so much expertise, emphasis is being laid on continuing training of both local civil servants and elected members of municipal bodies.

In order to cope with their extensive tasks, local authorities also require a sound financial base. The following sources of local revenue are common in ECE countries:

- Local property tax based mainly on the value of the property;
- Service charges used to recover the investment and maintenance costs. Nowadays the emission charges/fines and the water charges collected often also cover the costs of anti-pollution equipment, the purification of drinking-water and treatment of sewage. Charges and metering for energy use are gradually being introduced in countries in transition. This will enable authorities to adopt and implement modernization schemes for energy systems, in order to make them more efficient;
- Profit made through economic operations such as land transactions. Such transactions may also be motivated by goals other than profit when, for example, a municipality buys undeveloped land in order to strengthen its land-use management and then sells or leases serviced plots at prices clearly higher than the original purchase price plus development costs;
- In some countries they receive an important part of their income in the form of local income tax on private citizens or enterprises.

While independence in the revenue base is of absolute importance for the real self-management of municipalities, it is at the same time considered necessary in many ECE countries to level off the differences in the resource base of poor and rich municipalities by, for instance, allowing the central Government to redistribute some of the revenue. Otherwise, the quality of education and health care, for example, is very dependent on the income level of the inhabitants, undermining the goal of ensuring equal rights for all citizens.

3. The private sector and the “third sector”

In the ECE region the private sector and the so-called third sector play an important role in human settlements development. They both create a considerable number of jobs. The following aspects seem to be essential for the efficiency of these sectors:

- The roles of the developer and contractor are kept separate. It is the task of the developer to plan the project and to ensure the crucial inputs (land, finance) as well as to manage its implementation by inviting tenders from contractors. Finally, the developer sells the built space or hands it over to those from whom he has received the commission;
- There is strong competition between suppliers in the building materials industry;
- The small-scale building materials industry has access to a distribution network through which the products can reach all types of clients;
- There is continuous development of and research on products needed in the sector. This research and development can also be supported by the Government;

—Basic and advanced training is kept at a high level in order to ensure that skilled, motivated personnel is available.

Today the construction sector is facing new challenges. The overall trend shows an increase in repair and maintenance as opposed to new development. Meanwhile, development projects are smaller than before, as the building of housing estates decreases and densification of old areas becomes more common. This means that building enterprises should be able to provide even more flexible customer-oriented services than before.

In addition to the efficient construction companies and an efficient building materials industry, a diversified network of specialized enterprises is needed to support them, such as service companies specialized in accounting and auditing for better financial as well as environmental management.

Finally, mortgage loans and other credit systems have proved to be of vital importance for the human settlements sector. From the point of view of a well-functioning finance system, it is important that there is a variety of financing institutions, such as mortgage banks, specialized housing finance institutions, and commercial banks which compete with each other.

In the "third sector", various non-profit organizations are common in many ECE countries. Their roots are to be found in the cooperative movement established in England in the 1830s, from where it rapidly spread to continental Europe. In many countries non-profit enterprises have a significant role as owners and managers of rental housing, for example. Non-profit enterprises also act successfully as developers, contractors, and financiers.

The role of residents is also increasingly emphasized. The management of buildings and housing was seen earlier as a narrow technical, economic activity, consisting of tasks such as maintenance, planning and organization of renovations, collecting of rents, repayment of loans and bookkeeping. Lately more attention has been paid to the psychological and social aspects, especially in the management of so-called problem neighbourhoods.

Different condominium and cooperative housing solutions are already founded on the principle of resident self-management. But in rental housing the concept of tenant participation has also become common in many countries. The experiences have been encouraging; in addition to the tenants being more satisfied, there has been a reduction in repair and administrative costs. The involvement of tenants in renovation projects has also been emphasized in many ECE countries.

Finally, various non-governmental organizations (NGOs) operating in the human settlements sector are also significant in ECE countries. Because they are very active and often critical of the activities of public authorities, they in turn are sometimes viewed rather critically by the authorities. Yet they play a very useful role as a channel for voicing citizens' opinions. In view of the significant work of the NGOs, the Governments of many countries provide financial support to these organizations.

To sum up the message of this chapter, striking a balance between high efficiency and social justice has been fundamental to the tradition in the ECE region. As regards the goal of high efficiency, experience shows that market mechanisms and open competition have enabled the building industry to maintain high productivity. "Social justice" has been understood to mean the need to protect the most disadvantaged and generally guarantee that the social goals of, for instance, housing policy are reached. In their efforts to attain this goal, Governments have paid growing attention to creating a strong administration at both central and local levels and ensuring good cooperation with the non-governmental sector, including the private sector, enterprises in the "third sector", and NGOs (see ECE/HBP/84).

E. Human settlements information systems

The information systems used in the human settlements sector can be divided into two main categories according to their goals:

- (a) Administrative information systems—usually various types of registers—where the data entered into the system establish legal rights or relationships for private or legal persons. The most important are, without doubt, land registers;
- (b) Statistical information systems, the purpose of which is to produce information about the development of society. Irrespective of their form, these information systems differ from administrative information systems in that they provide information not on individuals but on groups.

1. Land and real property registration

Land is literally the foundation of all economies. Land plays a key role in the creation of wealth. Employment, too, is created by all the activities—buying, selling, leasing and mortgaging—related to land transactions. For an enterprise, land constitutes one of the major assets of its business. It enables enterprises to raise funds using the land they own as security for their debts. Land is also one of the best forms of collateral for banks to secure loans. Governments can obtain revenue from the taxation of income from private land ownership. Finally, for individual households, the enjoyment of land ownership, including the right to bequeath land to heirs, is a fundamental right which encourages enterprise amongst the population.

Land and property registers generally include at least the following components:

- Type of tenure: leasehold or freehold with their many variations;
- Subdivision of land;
- Ownership;
- Possible encumbrances on the land. These encumbrances can be, for example, the right of the neighbour to build a road through the property or financial burdens, e.g. mortgages;
- Information on rights to build on the land. Although registers concerning the physical planning situation and the zoning and other regulations related to each piece of land are often kept technically and administratively separate from land registers, they can be seen as part of the land and real estate registration system. More recently, there have been attempts in many countries to integrate the two through computerized information systems.

In many countries registration systems have been developed over a long period of time and by different professional groups. Not only does the legal and administrative framework to which they have been adjusted vary from country to country, but there may also be variations within countries. Recently, in many ECE countries special attention has been paid to analysing the cost-efficiency of the systems from the point of view of both users and society as a whole. Also, efforts are being made to fully utilize the potential of modern integrated information systems.

These modern comprehensive information systems have evolved over the years from simpler registers. The experience gained in ECE countries confirms that the first priority is to ensure the reliability, viability and general usefulness of the register and only then gradually to enhance the system so that it becomes an all-embracing register. However, this ultimate goal should already be taken into account when various sector-specific registers are being planned.

Land registers serve many purposes which are vital for individuals and society at large. For an individual home-buyer it is essential to know that the seller really owns the property in question. Likewise, for a smooth housing finance system the availability of completely reliable information on issues such as tenure and ownership is an absolute necessity. Finally, much of the local revenue is collected through property taxes or property-related levies, which require reliable and continuously updated registers.

For countries in transition, real property rights, their registration and related cadastral systems are essential basic elements on which the real property market and the whole transition process should be built. Land reform can have many objectives: social justice, economic efficiency, collection of State revenue through taxation of land and real property, and the effective operation of land markets to provide mobility of ownership and efficient land use. Since some of these objectives may be incompatible, policy decisions have to be made to balance the priorities.

Secure land ownership not only encourages investment and production in land, but also improves our environment. Information concerning real property is decisive for the optimal use of society's resources. The registers containing this information are of the utmost importance for the sustainable development and the orderly progress of a society based on a market economy. This implies that the registers must be open to the public, thereby improving the implementation of planning decisions and preventing the emergence of informal property markets.

2. Statistical information systems

The purpose of statistical information systems is to provide information on the current status and trends in various sectors of society. A typical example is the population and housing census carried out at 5- or 10-year intervals. However, a few ECE countries have replaced such comprehensive censuses by computer registers because censuses are very expensive and because these countries can obtain the same information from reliable and continuously updated population and housing registers. In addition to its cost-effectiveness, another advantage of this system is that it can provide annual, point-by-point information, e.g. on housing stock and living conditions, much faster than the normal censuses. In a few cases the two approaches can also be combined so that statistical data obtained through censuses are updated with the data obtained through registers.

In countries with a variety of up-to-date registers the register-based systems have also become a preferred alternative, because modern computerized registers form a good basis for sample studies. Consumer surveys are a traditional example of such studies. Being very economical, this methodology has lately been used increasingly to obtain statistical information in many other fields as well. For example, compiling statistical information on the trends in housing expenditure is, in practice, possible only through sample surveys.

Lately, geographical information systems have been developed in many ECE countries, combining various registers with other information, such as environmental indicators.

The information included in statistics and the indicators for which it is used can have quite an impact on how it is processed. Indeed, seemingly neutral statistical indicators can greatly influence our thinking and direct our attention to certain matters. A classic example is the national accounting system and gross national product (GNP) as its central indicator for development. The changes in GNP are closely monitored and various efforts are made to influence the figure. However, this indicator does not, as such, illustrate quality of life. Nor does it, for example, take environmental pollution into account. In fact, the very opposite may be true because an increase in polluting production also raises GNP. Owing to these problems work is now under way in many ECE countries to develop a "green GNP".

OECD and the United Nations carried out much work in the 1970s to develop so-called social indicators. Many ECE countries are currently making an effort to increase knowledge of the environmental and ecological aspects of human settlements.

The ECE Committee on Human Settlements, together with the Conference of European Statisticians, develops and improves international statistics in the field of human settlement. Ad hoc meetings and informal consultations are organized to define concepts and definitions, to reach agreement on tabulations for the presentation of current statistics on human settlements and to improve and develop the *Annual Bulletin of Housing and Building Statistics for Europe*. The Programme for Current Housing and Building Statistics for countries in the ECE region is a set of statistical standards drawn up in the early 1990s by the Committee on Human Settlements and the Conference of European Statisticians. The Programme relates in the first place to statistical series which are of particular international interest and which are or may be published in the statistical publications of ECE, but it is wider in coverage in that it constitutes a framework for the development of national statistics in general, including statistics which are of national rather than international interest. The Programme therefore has a dual purpose: to assist countries in developing their national statistics on housing and building and to foster international comparability in this field. The Programme should be regarded as a set of long-term objectives to be implemented in stages in accordance with countries' national possibilities, requirements and resources.

ECE has much to offer in work on human settlements statistics and indicators. It has much experience of statistical cooperation in this field. This experience clearly proves the significance of this work, but also its difficulty. There are special problems in ensuring that what is compared is really comparable, since more often than not the concepts are not defined in the same way in different countries. An example is the definition of a basic concept such as a room, which is still not uniform in the region (is the kitchen counted as a room?), or rent (are heating costs included in the rent?).

II. SUMMARY

The significance of the human settlements sector to the national economy is often underrated. However, the development which took place in the ECE countries after the Second World War is clear evidence of its great importance to the entire national economy. Even today construction still accounts for over half of all investments in many ECE countries. At the same time construction and renovation have a powerful impact on employment because, in addition to providing jobs at building sites, they also create roughly the same number of jobs in the building materials industry and trade and transport. Moreover, renovation has economic significance if energy consumption is cut; this lowers the environmental impact of energy use, as well as heating costs. Regardless of the origin of the energy products used—whether produced locally or imported—there will be financial benefits affecting the balance of payments. Human settlements also represent a substantial proportion of our national wealth, and the ECE experience emphasizes the importance of the continuous maintenance of the building stock and of professional human settlements management.

On the social side, housing is a central issue and experience shows that keeping its quantity and quality at a high level is not enough to solve housing problems. A good average housing standard may hide the fact that there are considerable population segments living in substandard conditions. One example is the number of homeless, which has risen substantially even in some of the most advanced ECE countries. As a result, many ECE countries are focusing today on distributional aspects. A crucial conclusion is that there is a need to diversify housing policy instruments in accordance with the greatly diverse needs of various population groups.

More recently, environmental aspects have grown in importance, partly owing to the emphasis laid on global environmental concerns, but also in an effort to improve citizens' everyday living environment. This is reflected in such trends as the increased attention paid to energy efficiency measures, waste recovery and re-utilization before ultimate disposal, recycling of household wastes, more efficient use of raw materials and the continuous improvement of waste-water treatment and local pollution control. Contamination of groundwater is of special concern in several countries. The environmental problems caused by traffic have also become a critical issue. Efforts have been made to increase the share of more environmentally friendly transport modes, particularly of public transport by improving its quality and attractiveness, and to reduce the environmental impact of traffic by local road-system and parking management, including traffic calming. The ECE experience shows the significance of citizens' behaviour, which can best be influenced through the simultaneous use of information, incentives and disincentives.

The institutional context for human settlements action varies greatly in the ECE countries. In some countries the administrative tradition is based on a strong central Government while in others a highly decentralized system is deep-rooted. However, there seems to be a general trend towards delegating decision-making powers as close as possible to the citizens. This has increased the importance of local authorities as well as the emphasis on various modes of participatory mechanisms (such as tenant participation).

There are a number of general conclusions which can be drawn from the experience of the ECE countries in these institutional issues:

- An efficient construction sector is based on competition between private enterprises;
- In order to create conditions favourable to competition, the role of the developer should usually be kept separate from that of the contractor;

- In some ECE countries, various types of non-profit associations or enterprises play an important role, especially as developers and managers of the housing stock;
- Municipalities have a central task in creating the prerequisites for building, e.g. servicing the land to be developed and securing public participation in the decision-making process concerning urban development;
- Although the trend is towards increased delegation of decision-making to lower levels, the central Government continues to have important “enabling” tasks, such as creating the legislative framework for contractual relationships between the various parties.

Information also contributes to consistent human settlements development. Reliable information on the ownership of and encumbrances on the properties is a *sine qua non*. Therefore, land and real property registration is a key issue. These kinds of registers can be used for various administrative purposes, such as the collection of property taxes and service charges. In many ECE countries, the trend has been towards increasingly comprehensive land registers where geographical information combined with relevant environmental indicators can be integrated into different information systems serving the authorities.

Nevertheless, other sources of information are also required. In ECE countries expensive population censuses are increasingly being supplemented with and even replaced by relevant, constantly updated computerized registers and methods based on sampling. They produce information faster and more frequently. Another advantage is that information can be acquired on a much wider range of issues.

Lastly, it is worth mentioning that many ECE countries are making great efforts to improve the knowledge of the environmental aspects of human settlements.

RECENTLY COMPLETED AND ONGOING ECE PROJECTS RELATED TO THE THEMES OF THE HABITAT II CONFERENCE

At its fifty-fourth session in September 1993, the ECE Committee on Human Settlements decided to make a substantial contribution to the Habitat II Conference based on ongoing and recently completed work: (a) housing policy guidelines; (b) guidelines for sustainable human settlements planning and management; (c) guidelines on land administration; (d) strategies to implement renewal and modernization policies. The above-mentioned projects were carried out within the regular programme of work of the Committee on Human Settlements and serve the needs of its member countries. The ECE Committee on Energy has been adopting and supervising the implementation of externally financed energy efficiency programmes since 1988 through the following projects: (a) Solar applications and energy efficiency in building design and town planning (RER/87/006); (b) Energy Efficiency 2000; (c) Energy efficiency demonstration zones. All projects focus particularly on policy and technical issues of concern to ECE countries in transition from a planned to a market economy and are described below.

A. Housing Policy Guidelines: The experience of ECE with special reference to countries in transition (ECE/HBP/84)

The principal aim of the Housing Policy Guidelines is to provide a basis for the understanding of housing policy issues and to assist in the development and discussion of these issues in the whole ECE region, in particular with a view to meeting the needs of transition countries.

The Guidelines are divided into two main parts. The first deals with the general framework of housing policy, starting with a discussion of the rationale of housing policy. This focuses on the grounds for the pursuance of a housing policy and is followed by a three-stage presentation of housing policy development after the Second World War. Then there is an analysis of the constituent parts of housing policy and a discussion on the preconditions for a functioning housing market and the distribution of responsibilities among different agencies: central administration, local authorities, financial market, building financiers, builders, etc.

The second part of the Guidelines deals with the means of implementing a housing policy. This part starts with matters related to housing production, land development and the financing of housing. It continues with matters related to the housing stock, such as use of dwellings, rent policies, rental housing, housing management and renovation.

B. Guidelines for sustainable human settlements planning and management (ECE/HBP/95)

The Guidelines are primarily aimed at decision makers and policy makers at the national level. They can assist member Governments in reviewing and adapting policies, legislation and national regulations with the aim of achieving a built environment that is conducive to the well-being of the people. They furthermore stress the medium- and long-term goals of sustainable development strategies and point out how they can be integrated into overall human settlements development policies, with a special emphasis on countries in transition.

Due to the topicality of "sustainable development", much work on this subject is currently being carried out by national and local governments, by various international gov-

ernmental and non-governmental organizations and research institutes. In analysing such work, those activities relevant to the Guidelines and the possible links between the different sectorial approaches, such as the economic, social and environmental approaches, are considered. The Guidelines reflect the collective experiences and views of ECE member countries on ways and means of achieving sustainable development in human settlements. Important and relevant issues with a special focus on the countries in transition are identified, also bearing in mind comments made by the Working Party on Sustainable Human Settlements Planning and the Working Party on Housing Development, Modernization and Management.

C. Guidelines on land administration (ECE/HBP/96)

The issue of transferring land and real property to private persons, firms or semi-public institutions is an important part of the transition process of the countries in central and eastern Europe. It is the cornerstone of their nationwide privatization efforts. The structural changes in ownership have a crucial impact on private initiative and on the overall economic and social conditions in the countries concerned. Thus, much attention should be devoted to this process and to the main components of the structural change in the ownership of land and real property.

The process of structural transformation in countries in transition involves changes in the legal framework and in the organizational set-up of public, semi-public and private institutions concerned with the process of real property determination and ownership. It also requires practical measures and procedures to transfer and subdivide land and real property, as well as to integrate related information within the overall administrative and planning procedures of public authorities at all levels. It is accordingly very important for the successful transition of ownership and titling of land to map out the transformation process carefully.

Based on a review of current administrative and technical problems with land and real property registration in countries in transition, the Guidelines focus on developing strategies for related improvements. The strategies suggest administrative, institutional, technical and managerial measures and instruments for reforming/establishing effective registration and information systems to foster the sustainable development of human settlements and promote the transition to a market economy.

D. Strategies to implement urban renewal and housing modernization policies (ECE/HBP/97)

Today, the issue of renewal of human settlements in the ECE region has taken on new significance. Increased migratory movements, tight economic conditions, socio-demographic developments and the introduction of market conditions in the countries of central and eastern Europe have again put the housing issue high on the agenda. Moreover, a sizeable part of the housing stock, particularly in central and eastern Europe, is in need of modernization and repair. Carrying out these tasks may help to achieve the aims of sustainable development. The aim is to review and adopt integrated renewal and modernization policies and implementation strategies, taking into account economic, social and environmental concerns, and thus guide urban and rural development towards improved efficiency, sustainability and better quality of life.

To outline realistic human settlements renewal and modernization strategies for the future and/or introduce changes in existing policies, it is essential to evaluate past experience—its successes and failures—at national, regional and local levels. The implementation of urban renewal and modernization policies has come up against many practical problems in all ECE countries. This shows the need to change the objectives, approaches, instruments and methods used to implement them by all parties concerned in the process, and at all levels. Most of the problems encountered in the renewal and

modernization operations are primarily due to: (a) the original policy formulation; (b) unforeseen changes in economic, social, technological and demographic trends; and (c) practical difficulties with measures and instruments for policy implementation. The third type of problem seems to be less investigated and is the focus of the Strategies. International comparative work on the subject is of particular interest to countries in transition. It helps to explain which instruments are used in market economy conditions and how they are applied.

E. Solar applications and energy efficiency in building design and town planning

This regional project was financed by the United Nations Development Programme (UNDP) under its regional programme for Europe. The Governments of Albania, Bulgaria, Cyprus, the former Czechoslovakia, Hungary, Malta, Poland, Turkey, and the former Yugoslavia were the beneficiaries. The project has enhanced the professional skills of architects, engineers, and town planners in these countries by improving their skills to design energy-efficient buildings, and to increase the use of passive solar heating and natural cooling techniques.

The five main outputs of the project, which was completed in 1991, are: (a) an international network of institutions for energy-efficient building design; (b) a survey of state-of-the-art energy use in building for all participating countries; (c) a computer programme for energy-efficient building design; (d) a guide to energy efficiency and solar applications in building design with case-studies for all participating countries; and (e) international training modules concerning participating countries.

F. Energy Efficiency 2000

This regional project started in 1991 and is now in its second phase (1994-1997). The main objective is to enhance trade and cooperation in energy-efficient and environmentally sound technologies, management practices and policies between formerly centrally planned economies and market economies.

The achievements to date can be summarized as follows:

- Increased networking and trade among energy engineers and managers, businesses, trade officials, and bankers;
- Listing of energy efficiency specialists in companies, banks, and government;
- Guide and listing of selected technologies, products and services for energy efficiency, environmental pollution abatement and control for countries in transition;
- Selected descriptions of case-studies for energy savings in buildings, industry, agriculture and transport in countries in transition;
- Analysis of key energy-efficient technologies and management practices in order to measure their impact.

G. Energy efficiency demonstration zones

This project has been developed within the framework of Energy Efficiency 2000. The main objective of this large-scale regional project is to promote energy efficiency in demonstration zones within countries in transition. This should enable the competent authorities in these countries to evaluate the results and apply the lessons learned in the demonstration zones also to other areas and regions.

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