



**Economic and Social  
Council**

Distr.  
GENERAL

ECE/AC.25/2004/4  
19 November 2003

ORIGINAL : ENGLISH

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**ECONOMIC COMMISSION FOR EUROPE**

**Regional Implementation Forum on Sustainable Development**

Geneva, 15 to 16 January 2004

Item 5 of the provisional agenda

***SUSTAINABLE DEVELOPMENT OF HUMAN SETTLEMENTS IN THE UNECE  
REGION: PROGRESS AND CHALLENGES\****

*Report prepared by a consultant and finalized by the UNECE secretariat*

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\* The references mentioned in this document are available in full on the UNECE website at:  
[http://www.unece.org/env/wgso/Sustainable%20Development/sd\\_forum.jan2004.htm](http://www.unece.org/env/wgso/Sustainable%20Development/sd_forum.jan2004.htm)

## EXECUTIVE SUMMARY

### **Sustainable human settlements: a call for action**

1. This report provides an overview of the progress achieved in the sustainable development of human settlements in the region of the United Nations Economic Commission for Europe (UNECE). The overview is guided by the commitments in the Programme for the Further Implementation of Agenda 21 (A/RES/S-19/2) and the Johannesburg Plan of Implementation. Recognizing the critical contribution that cities can make to sustainable development efforts, the focus is on urban sustainability and strategic regional priorities advanced in the *UNECE Strategy for a Sustainable Quality of Life in Human Settlements in the 21<sup>st</sup> Century* (ECE/HBP/120). Given the diversity of responses, the emphasis is on major achievements in addressing the multiple dimensions of sustainability as well as new challenges and opportunities in four thematic areas: (i) urban management and governance; (ii) land-use planning for sustainability; (iii) land administration; and (iv) provision of affordable housing.

### **Trends and implementation challenges for sustainability in human settlements**

2. UNECE countries with traditional market economies have experienced a strong economic growth and major progress in their structural reform agenda in the past decade. The growth trajectory has been uneven, but it has delivered better living standards in Western Europe and North America. On the environmental side, there has been some progress in decoupling pollution and natural resource use from economic growth. Despite these gains, the reality of over 56 million people in the European Union living at risk of poverty, with one in ten people facing consistent poverty, has become a significant social and political challenge.

3. The countries in transition in the UNECE region have experienced the most dramatic political, economic and social change. In Central and Eastern Europe, most countries have become functioning market economies, have exceeded the level of economic output of the early 1990s, and have moved to decentralized political and administrative power. In the Commonwealth of Independent States (CIS),<sup>1/</sup> progress in structural adjustment and political reforms has been uneven. While at the start of the reform poverty did not exist in the present sense of the concept, today more than 100 million people are classified as poor. The share of people living on less than US\$1 per day is alarmingly high in Tajikistan, Uzbekistan and the Republic of Moldova. The number of refugees has grown rapidly. About 45 million people now live in countries affected by war or civil strife. Almost 400,000 have been killed and some 7 million have become refugees or are internally displaced. The move towards a market economy and democracy has failed to deliver uniform benefits to all countries in transition and/or to all social groups.

4. These developments create the framework for the implementation of policy reforms promoting sustainable human settlements. The UNECE region is overwhelmingly urbanized, with more than 75% of the population concentrated in urban areas and a growing complexity of urban challenges. Urban issues are critical for sustainability, particularly given the rise in urban poverty and environmental deprivation. In countries in transition, the extensive privatization of housing to sitting tenants has caused problems of ensuring proper maintenance and low-income groups

have little chance of being allocated a social dwelling from the currently small social housing stock. The sustainable provision of essential infrastructure services continues to be a challenge with critical implications for the environment. Cities face technical and fiscal constraints in the provision of adequate water and sanitation, solid-waste management and public transport. Municipalities have become crisis managers with many responsibilities but limited fiscal powers. These unfunded mandates have led to strategic disinvestment and continued to erode the quality of basic services.

5. The countries in the UNECE region have, to different degrees, addressed sustainability goals in human settlements through national sustainable development strategies. This has created a supportive framework for local action and a number of local authorities have managed to create coalitions and partnerships to achieve economically productive, socially inclusive and environmentally sound cities. Urban management as a decision-making process fosters programmes and services that effectively support the multiple dimensions of sustainability in a collaborative manner. Some 6,400 municipalities have Local Agenda 21 initiatives, advancing a culture of good practice and excellence.

6. Sustainable land-use planning plays a major role in policy integration and generates important synergies that define incremental progress towards sustainability. Recent experience has shown that a number of cities have chosen to undertake strategic planning processes, guided by sustainable development principles and frameworks. Across the UNECE region, urban regeneration has become much more prominent. The search for effective strategies for urban regeneration to create employment opportunities, recycle brownfield sites and improve the existing infrastructure has promoted new planning models and instruments dealing simultaneously with physical deprivation, social exclusion and environmental degradation in local communities.

7. In countries in transition, economic and social changes have triggered turbulence and controversy in the planning process. While some capitals have a new generation of master plans that promote sustainable land-use planning, other communities gave planning reforms lower priority and instead considered poverty and macroeconomic stability. There is a general mistrust in the ability of land-use planning to guide development. Ineffective, bureaucratic planning procedures and the lack of adequate institutional capacity have often led to ad hoc changes to older plans in response to development pressure.

8. Across the UNECE region, governments have promoted good land administration in terms of creating spatially integrated, efficient markets for housing, land, real estate and public transport. In most countries in transition governments have carried out massive land privatization with various degrees of success. The scale of land tenure transformation has been very dramatic. For example, in the Russian Federation over 50 million people and legal entities have acquired private ownership of land and 129 million hectares of land, comparable to the area of Western Europe, has become privately owned. Together with legal and institutional developments related to land cadastre and valuation, privatization has facilitated the establishment of a modern land administration system. Implementation, however, is constrained by a multitude of problems: (i) incomprehensive land policy; (ii) ineffective control due to inadequate institutional capacities; and (iii) lack of transparency in land restitution and privatization.

These developments are accompanied by the occupation of agricultural land in the urban periphery and the growth of illegal settlements (e.g. in Tirana, Tbilisi and Erevan) where the combination of inefficient administrative systems and urban poverty creates a cycle of economic and social deprivation.

9. Housing reforms in the UNECE region in the past decade have promoted policies to reassert market forces and reduce State intervention. Homeownership has increased to 90% in some countries in transition due to the mass privatization of public housing, and new construction has reached historically low levels. The gap between income and entry costs has continued to increase, particularly in high-growth urban areas, making housing less affordable. Homelessness is an ongoing challenge - about 6 million people in the European Union and the United States were homeless and another 23 million were inadequately housed in 2002.

10. In countries in transition the public stock of *social housing* has shrunk as a result of massive privatization. Local authorities are left with the worst housing which is in a poor state of repair. Most countries have discontinued the provision of new social housing. Experience during the past decade indicates that governments have failed to integrate social housing reforms into the wider process of welfare restructuring. There is an urgent need for government involvement to encourage investment in the rehabilitation of the existing stock, and to assist marginalized groups in gaining access to social housing.

11. In this context, high-rise rehabilitation is potentially one of the largest problems facing municipalities in countries in transition, since failure to carry out repairs will result in massive structural problems in more than 40% of the urban housing stock. The shortage of housing finance and the lack of adequate legal arrangements for upgrading common facilities/structures in apartment buildings are major barriers. Recently, most countries have introduced laws to regulate the operation of homeowners' associations. The legislation has provided the framework for the organization of owners, the decision-making mechanisms, as well as the enforcement of rules and obligations. The crucial question is the implementation of association agreements.

### **Way forward**

12. At its 64<sup>th</sup> session, the UNECE Committee on Human Settlements reaffirmed its commitment to sustainable development and acknowledged that policy reforms to promote social stability and social equity needed to become a critical element of local and national strategies for sustainable human settlements. At the local level, three important priorities were emphasized: (i) fostering a sustainable quality of life in human settlements through holistic strategic planning; (ii) emphasizing sustainable housing reforms and social equity, particularly through the regeneration of deprived communities; (iii) promoting good land administration for social equity by emphasizing transparency and efficiency to ensure fair competition and security of tenure.

13. At the national and international level, a more supportive and enabling policy framework is needed that acknowledges the importance of urban issues. This strategic focus in countries in transition will allow policy intervention to respond to pressing urban problems with a high impact on national poverty reduction, equitable growth and environmental improvement. International organizations, including bilateral and multilateral agencies, associations of local

governments and international support networks have a critical role in that respect. Financial support and technical assistance can enhance the transfer of good practices in the region and assist capacity-building.

## **I. SUSTAINABLE HUMAN SETTLEMENTS: A GLOBAL CALL FOR ACTION**

### **Introduction**

14. The purpose of this report is to assist UNECE countries to review progress in the implementation of commitments, goals and targets agreed upon in Agenda 21, the Programme for the Further Implementation of Local Agenda 21 and the Johannesburg Plan of Implementation for the thematic area of human settlements.

15. It has three specific objectives. Firstly, it explores major regional trends and policy responses pertinent to sustainable human settlements. Particular emphasis is given to the urban dimension of sustainable development in the context of economic, social and environmental change. Secondly, the report aims at providing an overview of major local, national and international policy initiatives that contribute to sustainable development of human settlements in the region. Thirdly, given the diversity of experiences in the 55 countries of the UNECE region, the report explores challenges and opportunities, as well as progress since the Rio Summit, with a special emphasis on countries in transition. Given the lack of readily available data on some of these issues at the regional and/or urban level, the emphasis is on good practices and policy innovation, rather than systematic comparisons.

16. The assessment is based on existing information from government reports, such as the national assessment reports prepared for the World Summit on Sustainable Development, comparative evaluations on the topic carried out by major international organizations and research institutes, and international databases and statistics from officially published sources of information. The research integrates input from the in-depth discussion of the UNECE Human Settlements Committee on policy reforms for sustainable development at its 64<sup>th</sup> session.

17. Efforts have been made to reflect the enormous heterogeneity in the UNECE region which has political, economic, social and environmental dimensions. UNECE member countries include some of the richest economies in the world and some of the poorest nations; those with long and strong democratic traditions and others with newly emerging democratic regimes, those with environments almost completely altered by humans and those with large territories under natural and semi-natural conditions. These immense differences, coupled with the most dramatic political and economic changes in countries in transition, have a profound effect on the sustainable development of human settlements. Where possible, progress is reviewed on a regional and subregional basis. For this report four subregions have been distinguished: North America, Western Europe, Central and Eastern Europe and the Commonwealth of Independent States (CIS).

18. The document's structure corresponds to the major clusters selected for reporting in the thematic area of human settlements, issues identified in the Division for Sustainable Development's scoping paper and the priorities of the UNECE Committee on Human Settlement. Chapter I

provides an overview of global commitments to the sustainable development of human settlements and their relationship to the policy agenda in UNECE countries. The second chapter highlights major economic, social and environmental trends in the region as well as driving forces for change. The emphasis is on differences and similarities in these processes and on the important challenges for the implementation of sustainable initiatives, particularly in urban areas. The next chapter systematically reviews opportunities and challenges in: (i) urban management and governance; (ii) land-use planning for sustainability; (iii) land administration; and (iv) provision of affordable housing. The analysis highlights major achievements in addressing the multiple dimensions of sustainability. Finally, the conclusions revisit some of the major themes and draw attention to alternatives for local, national and global action.

#### **A. Commitments to sustainable human settlements in the UNECE region**

19. The sustainable development of human settlements is a multidimensional process. Agenda 21, in chapters 7, 10, 21 and 28, focuses on sustainable human settlements, integrated land management, waste and sanitation, and empowerment of local authorities. The Programme for the Further Implementation of Agenda 21 explicitly refers to the importance of human settlements in achieving sustainable development goals locally and globally. It also called for intensified international cooperation on poverty eradication. In that respect, the implementation of pro-poor land-use planning and service management policies in rural and urban communities needs to address the multiple dimensions of poverty.

##### **Box 1: Sustainable human settlements**

The need to intensify efforts and cooperation to improve living conditions in the cities, towns, villages and rural areas throughout the world is recognized. Urbanization creates both challenges and opportunities. Global urbanization is a cross-sectoral phenomenon that has an impact on all aspects of sustainable development. Urgent action is needed to implement fully the commitments made at the United Nations Conference on Human Settlements (Habitat II) consistent with its report, and in Agenda 21. New and additional financial resources from various sources are necessary to achieve the goals of adequate shelter for all and sustainable human settlements development in an urbanizing world. Transfer of expertise and technology, capacity-building, decentralization of authority through, inter alia, strengthening of local capacity and private-public partnerships to improve the provision and environmentally sound management of infrastructure and social services should be accelerated to achieve more sustainable human settlements development. Local Agenda 21 programmes should also be actively encouraged. Global targets could be established by the Commission on Sustainable Development to promote Local Agenda 21 campaigns and to deal with obstacles to Local Agenda 21 initiatives.

Source: Programme for the Further Implementation of Agenda 21, A/RES/S-19-2, paragraph 32.

20. In the evaluation of progress towards sustainability, the Rio+10 preparatory process underlined five important issues. Firstly, the international community should concentrate on expeditious implementation of Agenda 21. Secondly, the three pillars of sustainable development need to become more explicitly integrated into policy reforms. Thirdly, there are new realities such as globalization that should be addressed to promote equity and inclusion. Fourthly, a focus on certain key areas is needed and on deliverables that can accelerate progress towards the realization of the goals of sustainable development, particularly in relation to the Millennium Development Goals.<sup>2/</sup> Finally, strengthening institutional arrangements for sustainable development is a key to implementation.

21. The World Summit on Sustainable Development in Johannesburg, South Africa, refocused attention on achieving development 'which will last' and on ensuring that future generations have the potential to enjoy at least the present-day level of welfare. It recognized the importance of urbanization issues such as adequate shelter, water and sanitation for the achievement of sustainable development (UNDESA 2002). The Johannesburg Plan of Implementation reaffirms the Rio principles and contains important references to sustainable human settlements in the sections on poverty eradication, changing unsustainable patterns of consumption and production, protecting and managing the natural resource base of economic and social development, and institutional framework for sustainable development. The following commitments are of special relevance to human settlements:

(a) Making globalization work for sustainable development: (i) integrate the poorest developing countries into the global economy through supportive trade and investment policies; (ii) contribute towards the elimination of poverty; and (iii) promote a better understanding of the linkages among environment, poverty, trade and human security;

(b) Sustainable consumption and production: (i) adopt measures to encourage a shift towards more sustainable production and consumption; (ii) focus on energy efficiency and the decoupling of economic growth from pressures on the environment or natural resource base;

(c) Sustainable human settlements: (i) implement effective urban planning and management, (ii) implement the Habitat Agenda with references to sustainable urbanization, adequate shelter and basic services; (iii) improve the lives of 100 million slum dwellers by 2020 through more effective land management and adequate shelter provision; (iv) improve the provision of environmental infrastructure, including transport; waste management; water resource management; and disaster management;

(d) Improving governance and democratic processes: (i) strengthen the role of local authorities and develop partnerships for sustainable development; (ii) improve governance systems in cities and other human settlements, and national / local institutional capacities; (iii) focus on capacity-building in geographic information systems (GIS), planning and management methodologies and improvement of broad-based decision-making;

(e) Implementing sustainable development by: (i) mobilizing all sources of finance; (ii) transferring technology and capacity-building; (iii) developing efficient institutional structures; and (iv) ensuring more effective participation and developing measures for monitoring progress towards sustainable development.

22. In the UNECE region different countries, driven by national priorities, politics and historic circumstances, assign different priorities to sustainable development in human settlements. Despite this diversity, policies for the practical implementation of global commitments emphasize the interrelationship of economic, social and environmental components (EC 1998; PCSD 1996). Success, although often measured in physical and economic terms, is increasingly associated with good governance, social equity and citizen participation<sup>3/</sup>. While there is no universal blueprint for sustainability in human settlements, a series of important policy documents endorsed by the UNECE Committee on Human Settlements map out a trajectory for strategic policy intervention.

**Box 2: UNECE Strategy for a Sustainable Quality of Life**

The document articulates the strategic vision and priorities in response to major regional challenges for sustainable development. Five objectives provide strategic directions for change and action:

- Promoting a system of democratic governance that responds to the needs of local communities;
- Improving urban environmental performance;
- Facilitating social cohesion and security;
- Promoting market reform in the housing and urban sector; and
- Improving land and real estate markets and securing land tenure.

*Source:* UNECE Strategy for a Sustainable Quality of Life in Human Settlements in the 21st Century, 2000.

23. The UNECE Strategy for a Sustainable Quality of Life endorsed at a Ministerial Conference in 2000 is an important milestone in defining regional priorities. It supports the main principles of Agenda 21 and reaffirms the commitments in the Programme for the Further Implementation of Agenda 21 in the area of human settlements. As such, it has provided the overall framework for reforms to facilitate incremental progress towards sustainability in the specific context of the UNECE region.

24. The goal of the UNECE Committee on Human Settlements is to promote sustainable development in the region while fostering economic and social prosperity and supporting democratic governance. In the context of a sustained policy dialogue with national governments, the Committee's work has focused more explicitly on the transfer of experience and knowledge and the improvement of legal, institutional and management frameworks in countries in transition. Pursuing the practical implementation of the Strategy implies a renewed emphasis on sustainable cities that are economically vibrant, socially inclusive and environmentally responsible; cities that are liveable and promote social equity while contributing to the progress of the country as a whole (UNECE 2003g;e). Policy documents adopted since the World Summit on Sustainable Development have restated the commitment to change and action for urban sustainability through policy reforms in spatial planning, urban regeneration, housing management and land administration.

25. The major areas of the Committee's work – urban planning, housing and land administration – have provided a broad menu of thematic options for different national, regional and international activities, knowledge transfer and policy development. The overriding objective is to strategically invest in the three priority areas to make a stronger contribution to developing policy guidelines and recommendations and to accelerate progress towards sustainability through socially equitable policies. The critical importance of integrating countries in transition into the European and global economies has gained further prominence on the Committee's agenda and will remain a priority (Schmögnerová 2003).



## II. TRENDS AND IMPLEMENTATION CHALLENGES FOR SUSTAINABILITY IN HUMAN SETTLEMENTS

26. UNECE countries have experienced strong economic growth and major progress in advancing their structural reform agenda in the past decade. Driven by technological progress and globalization, most have expanded their service-based economies (UNECE 2003h). The growth trajectory has been uneven, but it has delivered better living standards and gains in education and health care in Western Europe and North America. There has been some progress in decoupling pollution and natural resource use from economic growth. Emissions and concentrations of some of the most damaging air pollutants have been reduced, per-capita consumption of freshwater has fallen and the coverage of forest areas has increased (UNECE 2002d). Despite these gains, poverty, unemployment and social exclusion remain a serious concern.

27. By contrast, the countries in transition have experienced the most dramatic political, economic and social change. In Central and Eastern Europe, most countries have become functioning market economies, have exceeded the level of economic output of the 1990s, and have moved to decentralized political and administrative power. In CIS, progress in structural adjustment and political reforms has been uneven. Across the countries in transition, inequality and poverty have increased and fiscal constraints have eroded basic social and infrastructure services.

28. These developments create the framework for the implementation of policy reforms promoting sustainable human settlements in the UNECE region. This multi dimensional process is driven by a series of interrelated processes of change: economic, demographic, social and environmental. Their sequence and rhythm reshape existing systems of human settlements, transform their social and demographic composition and lead to changes in governance. The following sections will focus on some of the major trends across the region and the way they determine the agenda for policy reforms.

### A. Economic and Social Change

29. National economies across the UNECE region have become increasingly integrated within the global system of production, distribution and trade. The liberalization of trade, international capital flows and structural adjustment policies are well known developments which have led to fundamental economic restructuring. This economic transformation has been accompanied by restructuring of the welfare state and a transition to a 'semi-public paradigm' in politics. The role of the State and public-sector institutions has been redefined with an emphasis on pluralism, deregulation, privatization and competition in the delivery of urban services (OECD 2001d; UNECE 2003h; WB 2002).

30. Within the framework of economic restructuring and global integration, differences in economic wealth have increased, deepening inequalities among countries, regions and local communities.<sup>4/</sup>

## 1. Economic trends

31. Recent data indicate that average income per capita, measured in purchasing power parity, in Western Europe is US\$ 25,000, while in CIS it tends to be as low as US\$#2,500 (WB 2003b). Rates of gross domestic product (GDP) growth in 2002 across Western Europe are in the range of 1%, with a high economic performance in Greece and Ireland (3.3%). The fastest growing economies are Turkmenistan (15%), Azerbaijan (8%) and Kazakhstan (7%).

32. Some of the fastest growing economies today have, in fact, had the worst overall performance in the past decade. After years of economic recession, most Central and East European countries have exceeded their pre-reform GDP, while in CIS the average GDP has remained at 68% of its 1990 level. Foreign direct investment (FDI) has provided a major impetus for growth and adjustment. It has increased with the stabilization of the economic and political environment and is an important driver for sustainable development. FDI has led to the transfer of better technology and management practices, and has stimulated additional domestic investment. Hungary, Estonia and the Czech Republic clearly came out as the winners in the regional competition for foreign capital.

33. Structural adjustment policies and economic restructuring have created significant challenges for particular groups such as the long-term unemployed, low-skilled workers and young people with limited work experience. The benefits of growth have not been shared widely across the UNECE region (WB 2000b, c). Income polarization has increased, perhaps more dramatically in countries in transition, and unemployment has remained considerably high. In Spain, Greece and Estonia, the income of the top quintile is 6 times higher than the income of the bottom quintile. By contrast, in Slovenia, Sweden and Denmark this ratio is 1 to 3. This is a major source of social inequality, which paralleled with unemployment creates major challenges for social sustainability. The average level of unemployment has remained high in Central and Eastern Europe (26.7%) and in Western Europe (7.6%). Greece, Spain and Turkey have levels of unemployment in the range of 10-11%. North America has experienced years of jobless recovery, while unemployment in the CIS has remained as low as 2.5% (UNECE 2003g). These countries have sheltered their economies from the external shocks, but have also experienced deep recessions.

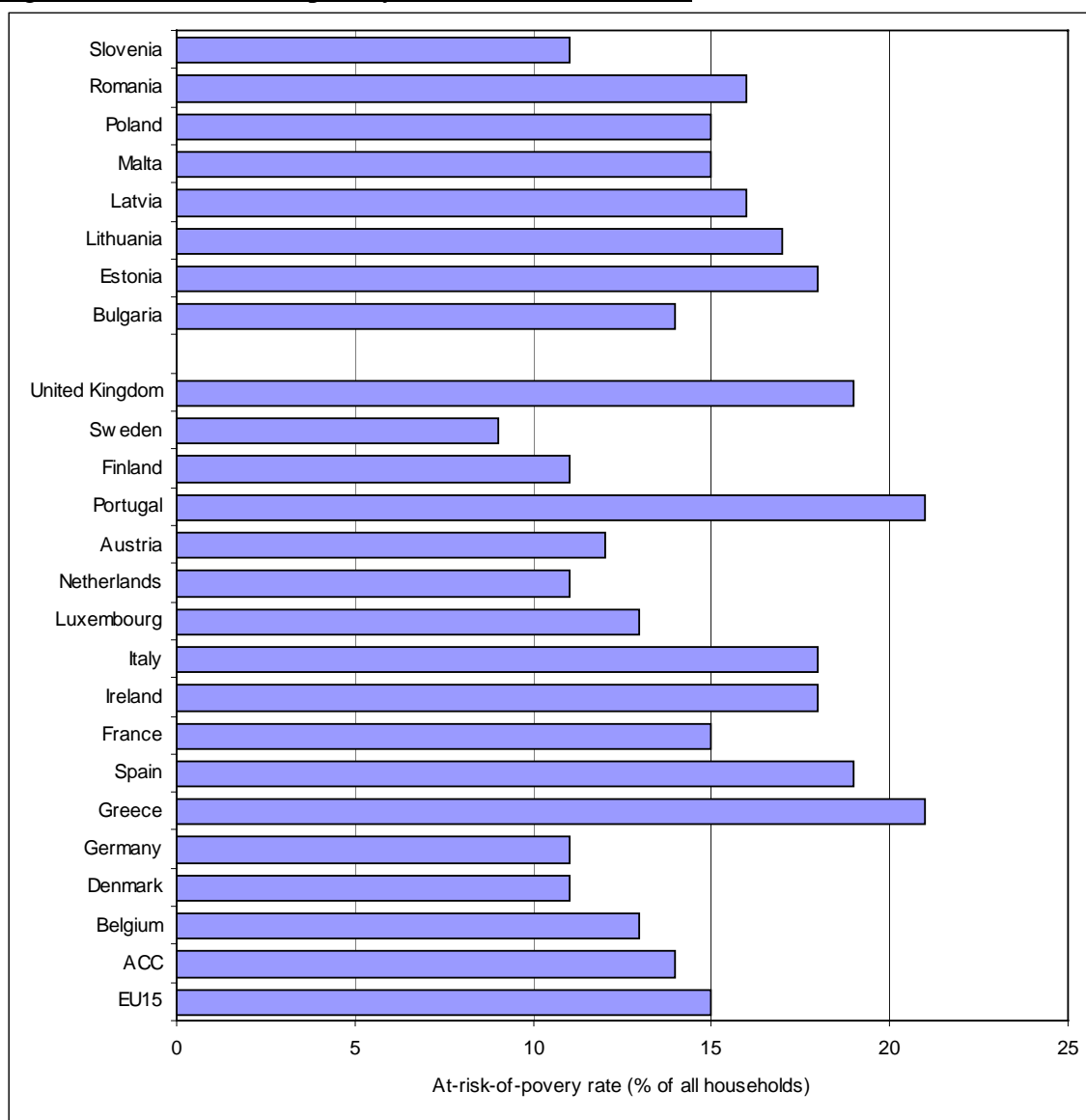
## 2. Social Trends

34. Population growth in the region has remained modest – 1% in Western Europe and 3% in North America, mostly attributed to immigration. The countries in transition have experienced years of negative population growth, a result of emigration, lower reproduction rates and responses to economic hardship. While demographic developments are relatively stable across UNECE, poverty has increased. The reality of over 56 million people in the European Union (EU) living at risk of poverty, with one in ten people experiencing consistent poverty, has become a significant social and political challenge (Fahey, Nolan & Whelan 2003).

35. Groups at risk are the long-term unemployed, large or one-parent families, people with a low level of education, also increasingly ethnic minorities, with particularly deep pockets of poverty among Roma communities. Some of the common drivers are unemployment or jobless

growth, but also regional inequalities and inadequacy of the social protection systems (EC 2003). Figure I presents the share of households at risk of being poor in different countries after the social transfers have been taken into account. Central and East European countries for which data are available have at-risk-of-poverty rates close to the EU average. The strong welfare states – Sweden, Denmark, Germany and the Netherlands – have rates that are half those of the United Kingdom and Greece.

Figure I. At-risk-of-poverty rates after social transfers



Source: Eurostat Yearbook 2002.

Note: The share of persons with an equalized disposable income below the risk-of-poverty threshold, which is set at 60% of the national median equalized disposable income. 'Equalized' means that the measurement takes account of differences in household size and composition. ACC refers to EU accession countries.

36. The dimensions of poverty in CIS are quite different. The subregion accounts for the largest share of people living in absolute poverty. *While at the start of the reform poverty in countries in transition did not exist in the present sense of the concept, today more than 100*

million people are classified as poor (WB 2003b). The share of people living on less than US\$#1 per day is alarmingly high in Armenia (12%), Tajikistan (12%), Uzbekistan (19%) and the Republic of Moldova (22%). The move towards a market economy and democracy has failed to deliver uniform benefits to all countries in transition and/or to all social groups. It is widely acknowledged that the second generation of policy reforms is driven by a more sober reflection that market failures need to be addressed more efficiently and that the social protection of vulnerable groups is perhaps the most important aspect of public policy intervention (UNECE 2003h; WB 2002).

37. The number of refugees has grown rapidly in the past decade creating significant social challenges. The break-up of two former federations, the Soviet Union and Yugoslavia, was accompanied by military conflict and violence in the Balkans and Northern Caucasus. As a result, about 45 million people (excluding the Russian Federation) now live in countries affected by war or civil strife. Almost 400,000 have been killed and some 5.5 million have become refugees or are internally displaced. War-affected countries have suffered major economic and social shocks with long-term divisions in society, often along ethnic lines (UNECE 2002d; UNDP 2003). Displaced people as a result of conflicts in Bosnia and Herzegovina are estimated to be 2.5 million and in Kosovo (Serbia and Montenegro) alone over 1 million.<sup>5/</sup>

## **B. Environmental and urban change**

### **1. Environmental trends**

38. The UNECE region continues to face significant local, transboundary and international environmental problems. These include emissions of greenhouse gases, air and water pollution, biodiversity loss, waste generation, technological hazards and risks to human health caused by harmful chemicals. Despite progress in some of these areas, such as the reduction in emissions of some air pollutants or improved energy efficiency, more effective measures are needed to protect the environment and human health.<sup>6/</sup> On the positive side, new legally binding regional and subregional environmental conventions that enhance sustainable development have entered into force. Most countries have developed national sustainable development strategies with key environmental indicators to monitor progress. The “Environment for Europe” process has opened up new opportunities for collaboration in the UNECE region to ensure that development is sustainable (UNECE 2002d). Environmental protection and sustainable development feature prominently on the EU agenda. Furthermore, accession countries have made major efforts to adopt the EU body of law and to harmonize their environmental management systems.

39. Across the UNECE region greater focus has been placed on global environmental problems, such as the depletion of the ozone layer and global warming by greenhouse gases, largely because of the global conventions and their proactive financing mechanisms. The Kyoto Protocol has become an important step in global efforts to respond to climate change, but so far most of the countries in Western Europe and North America have failed to meet the emission targets. By contrast, most countries in transition are well below the required level, which creates opportunities for a more effective use of the flexibility mechanisms envisaged under the Protocol to limit mitigation costs (UNECE 2003f). As far as the energy intensity of different economies is concerned, the outcomes are quite different. Despite a 35% increase in energy efficiency since

1992, the countries in transition consume 5 to 6 times more energy per unit of GDP than their West European counterparts.<sup>74</sup>

40. These developments in environmental policies affect human settlements. *Human settlements continue to use natural resources* (energy, water, air, land) which are then consumed, processed and transported, increasing the ecological footprint well beyond their boundaries. *The environmental conditions within human settlements have become a central concern*, particularly due to the strong links between economic growth, poverty and the environment (HABITAT 2002; 2003). Within the context of sustainable development, differences between problem-oriented and comprehensive environmental policies have become more pronounced. In Western Europe, many of the pollution-related problems have been resolved, while environmental problems resulting from consumption have increased. Countries in transition, however, face the legacy of source-related problems such as air, soil and water pollution due to outdated industrial technologies and a lack of environmentally consistent policies. In CIS, contaminated sites continue to be a threat to the environment. These sites include: (i) industrial properties polluted by chemicals from stockpiles of hazardous waste; (ii) areas surrounding metallurgical plants contaminated with heavy metals; (iii) Soviet military bases polluted with leaked fuel and unexploded ordnance; and (iv) areas contaminated with radioactive fallout -- Chernobyl in Ukraine, Semipalatinsk in Kazakhstan and closed nuclear cities in the Russian Federation (UNECE 2003g).<sup>84</sup>

## 2. Trends in the provision of environmental infrastructure

41. While industrial pollution often needs to be addressed through national policies and intervention, *the critical links to the sustainable development of human settlements at the local level are related to the triple challenge of: (i) providing adequate water and sanitation; (ii) managing solid waste; and (iii) managing transport* (UNECE 1997; Wakely & You 2001). The sustainable provision of these essential services is an enormous task for municipalities with critical implications for the environment. It has become even more important at the local level due to the recent decentralization and devolution in governance across the UNECE region. Municipalities have become 'agents of change' responsible for the planning and delivery of environmental infrastructure and social services. This devolution of responsibilities, particularly in the countries of transition happened just as national governments began to reduce public spending and to rely increasingly on market forces for economic growth. Tax systems and subsidy programmes have come under close scrutiny; social budgets have been reduced and investment delayed, thus leaving many 'unfunded mandates' (WB 2000). Municipalities have responded to the funding squeeze by cutting back on investment first, then on maintenance and repairs, and finally on services. The adjustment processes and the outcomes in the past decade have been different between countries, cities and utility types, depending on the initial conditions and the depth of the crisis.

### **Access to water and sanitation: focus on quality**

42. Access to water and adequate sanitation in the UNECE region is one of the highest in the world. Available data indicate progress; however, the situation is particularly problematic in Azerbaijan, Kyrgyzstan, Romania, Tajikistan and Turkmenistan.<sup>94</sup> The present level of access to

water is 94%. Although urban areas reportedly have higher levels of service, close to 3 million people in European cities lack access to water and 8 million to sewers (UN-HABITAT 2003a). In countries in transition, drinking water frequently fails to meet basic biological and chemical standards. High connection rates do not necessarily mean good quality of piped water.<sup>10/</sup> Access to basic sanitation is ensured for 93% of the people in the UNECE region. As in the case of water supply, services are most problematic in Albania, Romania and CIS. Urban-rural inequalities in sanitation are much more pronounced, particularly in Ukraine and Romania. Although connection to public sewers is quite high in urban areas, the system is frequently in a poor state of repair with leaks and threats of water pollution.

43. *Supplying safe drinking water and adequate sanitation is therefore an important issue in many countries and requires explicit emphasis on quality.* The problems are complicated by the inability of national governments, municipalities and municipal companies to ensure maintenance and investment in the systems. Losses from the pipelines range between 30 and 80%, metering is rare and the water-treatment facilities are often inadequate. Drinking water increasingly fails to meet standards due to pollution, poor operation of treatment facilities, lack of disinfection and the poor condition of supply systems and sewerage systems.<sup>11/</sup> In rural areas, water is pumped from wells that are often chemically and biologically contaminated. On the demand side, contracting incomes and growing poverty have prevented price adjustments to achieve cost recovery and provide much-needed revenue (UNECE 2003g). While this situation is clearly unsustainable, it has resulted in disinvestment and massive deterioration in the quality of basic services (box 3).

### **Box 3: Strategic disinvestment in public utilities**

Water supply is a monopoly in urban areas, so customers have few options. In Odessa, Ukraine, the water company achieved a 40% cost recovery in 1996, and other utilities were in a similar situation. The total funding gap for all municipal services in Ukraine was estimated at about 50%. The residential water bills in Odessa would have to increase three to tenfold to fully cover the costs of provision, but this is out of the question. Pensions (relevant to 45% of the population of Odessa) are set at the poverty level, and government employees are often paid very late. The system has deteriorated through 'strategic disinvestment' to a point where water has become unsafe, is available for roughly one third to one half of the day, and pressure is variable depending on location within the city or on storey. Well-to-do households buy bottled water but most households store piped water and treat it themselves.

Source: Mitric, S. (1999).

### **Solid waste management**

44. Across the UNECE region most countries have made a commitment to establishing efficient and cost-effective solid waste management facilities. Particularly in Western Europe and North America, priority is placed on waste prevention and minimization, reuse and recycling.<sup>12/</sup> Generation of waste is a major problem in most human settlements since landfill sites continue to consume a disproportionate share of land, and waste management facilities for incineration and waste-water treatment require major investments. Recent policy efforts have focused on strategies to reduce the amount of biodegradable municipal waste sent to landfill. Countries with high rates of diversion of such waste from landfill employ a combination of separate collection, thermal treatment (mainly of incineration with energy recovery), centralized

composting (garden and food waste) and recycling (paper and cardboard). The key to achieving both high diversion from landfill and high reuse, recycling and composting appears to be the provision of widespread separate collection facilities, together with the availability of adequate markets for the materials collected (Crowe et al 2002).

45. Recent data indicate that rates of municipal waste per person per year in countries in transition are lower but comparable to those in Western Europe. While the annual amount has declined in the past few years, rates vary across the region, with the United States and Iceland taking the lead with over 700 kg per person.

46. *Solid waste management in countries in transition continues to be problematic.* The waste is taken to municipal landfills that are usually operated by the waste-collection companies more or less free of charge. Most municipal waste-collection systems are subsidized, and landfill investment and maintenance costs are covered by municipal budgets or municipal environmental funds. The consequence of this is, on the one hand, poor management of municipal landfills and, on the other, a lack of incentives for waste minimization, recycling or some more demanding forms of treatment (UNECE 2003g). Furthermore, there is no safe infrastructure for hazardous waste disposal.<sup>13/</sup> Recycling practices are in their rudimentary stage. Experimentation is limited (e.g. Cracow, Budapest, Riga) as far as the collection of paper, scrap metal, electric and electronic waste, biodegradable and hazardous components of solid municipal waste is concerned.

47. Although most countries in the first wave of EU accession have waste management strategies, implementation plans and feasibility studies are non-existent. Generally, countries use command-and-control instruments. One of the levies generally imposed is the municipal waste charge, usually set as a volume charge, but in some cases as an average payment per household (e.g. in Hungary or Lithuania). An interesting option was adopted in Bulgaria, where households pay a municipal waste tax based on the value of the property. Some countries apply non-compliance penalties or fees (e.g. Estonia or Hungary) or higher rates on hazardous or toxic waste (e.g. in Latvia) (DHVCR 2001).

## **Transport**

48. Air pollution from transport, especially sulphur dioxide, nitrogen dioxide, particulates and hydrocarbons, have been reduced in Western Europe and North America, mainly as a result of vehicle technology improvements. While air quality in towns and cities has improved considerably in the past decade, it is still a serious problem. The technological improvements have been outweighed by the growth in traffic and average vehicle weight (UNECE 2003f). Congestion has increased, particularly in large urban areas, leading to more air pollution during peak hours.<sup>14/</sup> In countries in transition, the pollution from mobile sources has increased disproportionately. This is a result not only of the rapid increase in the vehicle fleet but also of the age and condition of the fleet, an inadequate tax structure, poor inspection requirements and the continuing use of leaded fuel.

49. *In most UNECE countries, car ownership has increased in the past decade, but the pattern of growth in countries in transition has been unprecedented,* in spite of the recession in



many countries. The rates of growth vary between a low of 10-15% in the Czech Republic and the Republic of Moldova to 130% in Romania and 120% in the Russian Federation. Romania has 39 cars per 1,000 population and Slovenia 424, with most countries in the 200-350 range. This growth in motorization reflects a combination of pent up demand, the size of the grey economy and the scale of income inequality in these countries.

50. Data for individual cities are sparse, but confirm the experience that cities drive motorization. In the past decade the increase in car ownership was 106% in Warsaw, 85% in Prague, and much higher in Moscow (196%) and St. Petersburg, Russian Federation (207%). Correspondingly, growth in motorization has resulted in a rise in the number of trips by private car (per person per day) in the range of 10% in Western Europe and 70% in Central and Eastern Europe (ECMT 2002).

51. These rapid changes create significant pressures on the management of the transport infrastructure and municipal services (parking, public transit, etc). *Public transport, particularly in countries in transition, has lost its competitive advantage.* Three issues dominate the urban transport scene. The first is the shortage of funding to sustain good-quality public transport. The capacity of municipalities to raise adequate funds remains problematic, as is the decision-making by different levels of government on fares, discounts, compensation and subsidies. The second issue relates to barriers to reduce the burden of subsidies by gradually moving towards cost recovery for services. On the demand side, poverty and lower wage growth, coupled with increases in the cost of food and essential services, make the adjustment process particularly difficult. Various groups enjoy discount fares, such as pensioners in Sofia and Riga or war veterans in St. Petersburg, and resist losing these privileges. Third, the legacy of the previous system of public transport is an important determinant of the level and quality of services. Publicly-owned and still less-than-efficient monopolies are dominant in the more prosperous Central and East Europe countries, while heterogeneous mixes of public and privately owned operators, the latter with varying degrees of regulation, co-exist in CIS (Lovei et al 2000; Mitric 1999).

### 3. Urban trends

52. Urban change in the UNECE region is a response to economic, social and environmental trends, but the specific ways in which urban settlements develop and grow in different countries is also determined by the legacy of urban policies, planning intervention and culture. Globalization, democratization and competitiveness increasingly define urbanization and alternative pathways to sustainability.<sup>15/</sup> There is a strong link between urbanization and economic and human development – countries with rates of urbanization above 70% have well developed economies and a high human development index (UNDP 2003). The UNECE region is overwhelmingly urbanized, with more than 75% of the population concentrated in urban areas and a growing complexity of urban challenges. The level of urbanization in Western Europe is 80%, with the United Kingdom and the Netherlands reaching 90%. The countries in transition have an average rate of urbanization close to 61%, but considerably higher in the largest countries – the Russian Federation (77.7%), Poland (65.6%), the Czech Republic (74.7%) and Hungary (64%).

53. With the exception of seven megacities -- New York, Los Angeles (United States), Paris,



Istanbul (Turkey), Moscow, London, and Chicago (United States) -- the main cities in the region tend to be under 3 million with medium densities, and stable or low-growth population (growth rates under 1%).<sup>16/</sup> The projected annual urban growth in Albania, Tajikistan and Uzbekistan is in the range of 2% (UN-HABITAT 2002). Close to 45% of the people live in medium-sized cities with a population of 100,000 to 200, 000.<sup>17/</sup>

### **Challenges for economic sustainability and social equity**

54. *With the globalization of the economy and the advancing international division of labour, cities across UNECE have gained importance as networks of economic growth and business development.* New York, Los Angeles, Paris and London are among the top world cities – centres of command-and-control functions in business, finance and global governance. The economic functions of cities have diversified, but the production of goods and services has benefited from economies of scale, access to a pool of qualified human resources and a critical mass of customers. Thus urban areas account for an increasing share of national income (Cavallier 1998; UNECE 1998). This economic growth has provided the basis for better infrastructure, education and social services and income-earning opportunities for the poor. Conversely, in the absence of a healthy urban economy, the provision of essential services defining quality of life could not be sustained.

55. Despite the notable economic success of major urban centres in the UNECE region today, *globalization has exacerbated social polarization and urban poverty.* There is a recognition that the problems associated with environmental degradation and social polarization are concentrated in cities. There is also a growing recognition that sustainable reforms to address these challenges need to focus on the economic, social and environmental issues simultaneously, however with a particular emphasis on policy solutions that are locally appropriate and socially equitable. This implies new models of governance with a decentralization of responsibilities from the State to the local level, democratization of the decision-making process and effective public consultation.

56. In the countries in transition, the reforms from centrally planned to market-based economies have added another layer of complexity to the implementation of sustainable development in cities. The integration of these economies within UNECE markets has offered significant opportunities for increasing the economic prosperity and social well-being of urban residents. Cities of countries in transition have remained the centres of economic growth, technological innovation and cultural diversity. However, in many countries social security has declined considerably and fiscal constraints have eroded the quality of the social infrastructure and social services. These challenges have become particularly significant in large urban centres where the decline in living conditions is accompanied by rapid social polarization, poverty and environmental degradation (Buckley & Mini 2000; Tsenkova 2003b).

57. The rise in urban poverty is one of the most serious concerns in the region. While poverty, social exclusion and inequality are much more pronounced in the countries in transition, they have become an integral part of the social landscape of large metropolitan areas across UNECE. These outcomes jeopardize efforts to achieve prosperity and improve the quality of life in a sustainable manner. The urban poor are especially vulnerable to economic shocks; they lack access to services, safety nets and political representation. Children are especially susceptible to

these risks since women work and adequate child care is often lacking. Cumulative disadvantages, often defined along the lines of gender, age and ethnicity, create widening social differences between social groups, with low-income, single-parent or women-led households worst off.<sup>18/</sup>

58. *In this context, policy reforms to promote social stability and social equity need to become a critical element of national strategies for sustainable human settlement development.*

Recent experience suggests that the best way to respond is through new patterns of democratic governance that are people-centred and socially inclusive (Allen & You 2002). In the urban arena this reorientation implies a new generation of municipal policies – spatial planning, housing, transport and delivery of urban services – that promote social equity and community-based solutions.

### **Challenges for environmental sustainability**

59. The environmental strain resulting from the growing exploitation of natural resources and discharging of waste and emissions in urban areas has been targeted by environmental protection policies. So far progress has been uneven and no significant improvement in the quality of the urban environment (e.g. reduced air pollution, noise, traffic accidents and degradation of green areas) has been reported. The impact of urban development on the larger environment (e.g. conversion of farmland and natural areas as a result of urban expansion, emissions of carbon dioxides and nitrogen oxides resulting from heating and transport) continues to be a threat (UNECE 2002d). Natural resources required for the construction and operation of urban systems (e.g. building materials and fossil fuels) have also expanded the ‘ecological footprints’ of cities, often affecting ecosystems far beyond the city region.

60. *Urban development across the region to a high extent continues to be characterized by spatial expansion and extensive growth.* A number of factors including economic and demographic changes, higher purchasing power and increased mobility have facilitated the higher area consumption per capita. Suburbanization has been boosted by consumer preferences for suburban lifestyles. Decentralization trends have become even more pronounced for industrial development. Suburban or ex-urban locations have offered cheaper land, access to major transport networks, availability of parking, and amenities to manufacturing and wholesale businesses. Cities often have become diluted: diffuse conurbations, consisting of low-density zones connected by networks of roads and technical services. Edge cities have become an indivisible part of the metropolitan landscape (UNECE 1998; 1997).

61. To some extent, different patterns of urban development (densification vs. continued spatial expansion) may be attributed to different stages in the urbanization process, reflecting the level of economic and industrial development in the country or subregion. Parallel to the process of spatial expansion or urban sprawl, development pressure on central areas in high-growth cities has continued, their density has risen and the cluster of highly profitable urban functions has expanded, replacing economically less viable activities such as low-income housing (Brebbia *et al* 2002; Katz & Lang 2003).

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<sup>1</sup> Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan Republic, Republic of Moldova, Russian Federation, Tajikistan, Turkmenistan, Ukraine and Uzbekistan.

<sup>2</sup> In September 2000, 147 leaders issued the Millennium Declaration, outlining their collective commitment to sustainable development and poverty reduction. The road map for the implementation of the Declaration prepared by the United Nations Secretary-General is building up a powerful momentum behind these goals and commitment to eradicating extreme poverty and hunger, investing in health and education, promoting gender equality and achieving environmental sustainability.

<sup>3</sup> HABITAT II and a number of UNECE forums have confirmed the need for sustainable civic engagement. The European Charter on sustainable cities describes sustainability as a creative, dynamic and evolving process, aiming for balance that has to permeate all areas of decision-making.

<sup>4</sup> The difference in per capita income between the poorest and the most affluent country in the region is 1 to 45. Per capita incomes in the three wealthiest countries aspiring to European Union membership were still only 68% of the European Union average for Slovenia, 59% for the Czech Republic and 49% for Hungary.

<sup>5</sup> In Serbia and Montenegro and Bosnia and Herzegovina UN-HABITAT has launched a programme to facilitate the settlement and integration of refugees. The programme focuses on the development of sustainable housing solutions in six municipalities as well as assistance to municipal officials to develop capacities to cope with refugee and social housing issues.

<sup>6</sup> The more advanced countries in transition have succeeded in reducing emissions from stationary sources significantly as a result of the introduction of new technologies and products and better management. The situation in CIS is not comparable – the reduction in emissions from stationary sources has resulted primarily from the breakdown of the industrial sector (UNECE 2003g).

<sup>7</sup> The removal of energy subsidies, which still remain high in many countries, would go a long way to increase efficiency. For example, if the Russian Federation were to remove its subsidies, it is estimated that energy efficiency (GDP/energy) would increase by 1.5%, energy consumption would be reduced by 18% and CO<sub>2</sub> emissions would decrease by 17% (WB 2003a).

<sup>8</sup> A particular legacy of contaminated sites was left by the wars in South East Europe: destroyed and burned-down chemical plants and oil refineries, minefields, emergency waste dumps, stockpiles of obsolete pharmaceuticals, spilled PCBs from electrical transformers and military vehicles, and impact sites of depleted uranium shells.

<sup>9</sup> The official data are not consistent with observations on the ground. For example, substantial problems are known to exist in the water supply in Albania, the Republic of Moldova and Ukraine; yet official data report delivery rates of 97%, 92% and 98%, respectively. Likewise for sanitation, figures of 100% for Georgia and Kyrgyzstan are high compared to experience on the ground (WB 2003a).

<sup>10</sup> Examples are Belarus, where data show 96% urban connections but 34% of samples do not meet chemical standards, Georgia (95% connections but 15-16% of samples do not meet standards) and the Russian Federation (98% connections but 22% not meeting chemical standards). Regularity of supply is also an issue in a number of countries -- Armenia, Belarus, Georgia, Republic of Moldova and Ukraine (WB 2003a).

<sup>11</sup> In Kazakhstan, about 33% of the sewage treatment systems do not meet basic maintenance standards. In Ukraine, about 23% of the pipelines need to be repaired and 25% of the sewerage treatment systems need to be rehabilitated (WB 2003a).

<sup>12</sup> A recent EU Landfill Directive requires member States to reduce the quantities of biodegradable municipal waste sent to landfill and sets specific targets. By 2006, the weight of such waste going to landfill must be reduced to 75% of the 1995 level.

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<sup>13/</sup> The uncontrolled and poorly managed dumps pose a particularly severe environmental and health hazard. All kinds of waste, including municipal, industrial and medical waste, are deposited there. Waste is burned in open areas and the smoke containing toxic substances (dioxins, furans) is a source of serious air contamination.

<sup>14/</sup> *European Transport Policy 2010: Time to Decide*, refers to external costs of road traffic congestion alone being 0.5% of GDP in the EU. Furthermore, it states that if the traffic growth is not reversed, CO2 emissions from transport can be expected to increase by around 50% between 1990 and 2010.

<sup>15/</sup> The centrality of urban issues to national and global sustainable development agenda has been acknowledged in the international arena. The Habitat Agenda marked a turning point in promoting socially and environmentally sustainable cities. It also sent an important message that good urban governance is a prerequisite for sustainable development.

<sup>16/</sup> The UNECE region has 100 cities with population of over 1 million (UN-HABITAT 2002).

<sup>17/</sup> Synergy between the rural and urban areas is a particularly important channel for contributing to national development. Urban and rural areas are interdependent markets linked by movements of people, goods, services, information and technology. Many of the concerns of rural development intersect with the urban agenda, including the need to support agriculture with services and markets, and to manage the growth of small towns, which often form part of a wider municipal governance structure covering both rural and urban settlements (WB 2000).

<sup>18/</sup> It is widely acknowledged that in countries in transition women were disproportionately hurt by the deteriorating conditions in the labour market. As a result of macroeconomic austerity women lost previous non-wage benefits and services. The gender wage gap, although narrowing in general, remains in the range of 25-30%. These wage differences combined with the triple burden for women – work, family and care for ageing parents – create multiple disadvantages.