

Anil Markandya

USA
World Bank and University of Bath
USA

Poverty Alleviation and the Road to Sustainability in Economies in Transition¹

1. Introduction

The Economies in Transition constitute a group of countries in Eastern Europe and Central Asia that moved in the early 1990s from a centrally planned economic system to a market based one². The process has undoubtedly been painful, with many thousands having died prematurely and many others having faced severe declines in their living standards. The exact magnitude of these losses is still being debated, although no one seriously questions the fact that they were very large. Few now also question the fact that some transition was necessary. The centrally planned system which had operated, with some failures but also with some success in providing for its citizens, was simply unsustainable, given the costs of the Cold War and the presence of a highly competitive and effective capitalist system in the West.

Given that change was inevitable, the problem policy makers have been facing, and still face, is to ensure that the countries in the region move to a sustainable development path. The 'end' or final objective of sustainable development is now well articulated, from its roots in the seminal 1987 publication, *Our Common Future* (World Commissions, 1987). It consists of three 'pillars' – the economic, social and environmental. Development is defined as sustainable if: (a) living standards do not decline over time and economic activity is so organized as not to reduce the effective value of the asset base, which consists of physical, environment and social capital (Pearce, Markandya and Barbier, 1990³; (b) the natural resource base is used with a sensitivity to its limits, transgression of which can result in irreversible losses (Daly, 1989, 1990; Goodland, 1995) and (c) social organization is such that it maintains the trust that individuals need to have in their social institutions and in their relations with each other, critical to which is a belief in the fundamental equity in the distribution of wealth and power in society (Olson, 1982, North, 1990, Putnam, 1993; Dasgupta and Sergeldin, 1999; Schuller, 1999).

The link between these building blocks of sustainable development and the central concern of this paper – poverty alleviation – is still being explored. For a review of the key issues see Markandya, 2002, DFID/EC/UNDP/WB, 2002. In essence these papers show that policies of sustainable development are frequently also policies that alleviate poverty, but there are situations where the goals of raising living standards through growth, or maintaining and preserving the environment, will be in conflict with the goal of poverty alleviation. In such circumstances it will be necessary to undertake complementary measures to ensure that poverty does not increase as a result of the

¹ This paper has been prepared for the conference, "Business Style and Sustainable Development, Kiev, March 2003. I would like to thank my colleagues at the World Bank, Da Zhu, Ellen Hamilton, and Seema Manglee for materials that have been included here. I also thank Alyson Warhurst of Warwick University for the section on corporate social responsibility and Anna Tsetkova of MAMA -88 for data on water services in Ukraine. All errors are of course mine. Moreover this paper has been written in my personal capacity and does not represent the views of the World Bank.

² The 27 countries now making up this group divide into the former Central and Eastern Europe countries and the former parts of the Soviet Union. The first group includes: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Hungary, Macedonia, Poland, Romania, Slovakia, Slovenia and Serbia and Montenegro. The second group is made up of Armenia, Azerbaijan, Belarus, Estonia, Georgia, Kazakhstan, Kyrgyz Republic, Latvia, Lithuania, Moldova, Russian Federation, Tajikistan, Turkmenistan, Ukraine and Uzbekistan.

³ For developing and transition countries this goal is modified to require that living standards **rise over time**, not just be maintained. The reason is simple – current living standards are not considered adequate for many people and a world with such inequities is itself unsustainable.

5th International Conference on Ethics and Environmental Policies
BUSINESS STYLES AND SUSTAINABLE DEVELOPMENT
Kyiv, April 2-6, 2003

'sustainable development' policies undertaken. Examples of synergies and conflicts between these two goals are provided in this paper.

An explicit acknowledgement of poverty reduction as a key component of sustainable development is provided in a number recent declarations at the Johannesburg at the World Summit on Sustainable Development, and the work undertaken prior to that conference. Perhaps the best concrete guidance on what is required to achieve sustainable development is provided by the *Millennium Development Goals* (MDGs), which were agreed on in Johannesburg by the international community as the guiding principles for such development. The MDGs lay down 8 specific goals, each with a number targets and indicators that countries should meet along the road to sustainable development. These are summarized in Tables 1 and 2 below. Table 2, which deals with MDG 8 is still in the stage of discussion and data related to it are being collected and will not be discussed in this paper. We should also note that, whereas the goals themselves have been endorsed by the international community through the United Nations General Assembly, the targets and indicators are subject to change, in the light of the experience gathered in monitoring progress toward the goals. Indeed in this paper we will argue that, as far as the transition countries are concerned, change in some of the indicators is necessary.

This paper will look at the progress the transition countries have made since 1990 in the areas defined by the MDGs, but especially with respect to the environmental goal. This will be followed by a review of the prospects for the future, and whether or not these goals can be met in the region. The forward looking discussion will also spell out in more detail the policy reforms and investments needed in the region if this road map for sustainability is to be pursued effectively. Section 2 looks at the experience of the last decade or so in the region, Section 3 explores the challenges for the next 12-13 years, to 2015, which is the date for most of the MDGs. Section 4 provides some conclusions.

2. Progress toward sustainability since 1990

2.1 The "Good News"

In the early years of the transition all countries in the region faced declines in living standards, some that were quite substantial. Inevitably this meant that the most vulnerable suffered most, and the consequence was a large increase in poverty and deprivation. The good news, however, is that the declines in average living standards have now been mostly reversed in Eastern European countries, and, taking the decade 1990-2000, real per capita GDP measured in purchasing power parity terms, is higher than it was at the start of the transition for all of them except Bulgaria, where it is only slightly negative. For the former Soviet Union States (The "NIS"), the picture is not so good. All those for which 1990 data are available had lower per capita GDP in 2000 than in 1990, with the exception of Belarus and Estonia. But even in the other NIS countries there is good news in that growth is returning, and taking the last three years for which we have data (1997-2000), all NIS countries have significant positive growth, with the exception of Moldova. The projections are that the transition phase, when living standards declined in comparison with the centrally planned period, will be reversed in the next decade or so. Table 3 summarizes the data.

The good news is also to be found in the official data relating to primary education, child mortality, gender equality, maternal health and the environment. Official data collected by the Bank shows that, over the last decade:

- a. Relative to their level of real per capita income the countries in the region already achieve high levels of primary education (although data are missing for a number of countries, namely Armenia, Azerbaijan, Bosnia and Herzegovina, Kazakhstan, Lithuania, Moldova, Slovak Republic, Turkmenistan, Ukraine and Uzbekistan). Moreover literacy rates are close to 100 percent in all the 18 countries that report data.
- b. Gender equality as measured by the ratio of boys to girls in primary education, the ratio of literate females to males in the 15-24 age group, and the ratio of women to men in wage employment in the non-agricultural sector is relatively high and has not notably declined in any country in the 1990s. There has also been an increase in the proportion of seats in parliament held by women in most countries over this period.
- c. The Under Five mortality rate has **fallen in every country** in the region and is well below the average for low and middle income countries. The infant mortality

5th International Conference on Ethics and Environmental Policies
BUSINESS STYLES AND SUSTAINABLE DEVELOPMENT
Kyiv, April 2-6, 2003

- rate has fallen in all countries bar Latvia and Ukraine, but even there it is well below the average for the low and middle income countries (low and middle income countries have an average of around 22 deaths per 1000 live births, in 1999 the Latvia and Ukraine figure was 14). Health expenditures per capita have increased in all countries, with the exception of Macedonia, Georgia and the Kyrgyz Republic.
- d. GDP per unit of energy has been increasing everywhere except in Croatia, Georgia, Russia, Turkmenistan, Ukraine and Uzbekistan. In spite of the falls, however, energy efficiency in the region remains very low, compared with countries in similar income groups. Similar trends are found for per capita carbon dioxide emissions, generated by greenhouse gases, which have declined for all countries in the region except Hungary, and Serbia and Montenegro. These observations indicate that there are a number of opportunities for increasing efficiency that can be designed in such a way as to promote sustainable development and reduce poverty (see Section 3).
- e. On the environment side, four indicators reported are reported: proportion of land covered by forest, proportion of land that is declared as conservation land, proportion of people with access to an improved water supply source and proportion of people with access to improved sanitation. Land area under forest has increased in all countries except Albania. Official data on land area under conservation are insufficient to tell whether there has been an increase or not, but national studies indicate that in many countries in the region, this indicator has also improved, partly as a result of marginal agricultural land being taken out of use. The water supply and sanitation indicators also suffer from the same problem in not having enough observations to be able to tell whether or not there has been an improvement. It should be noted, however, that in the few cases where there are more than 2 observations, there is no deterioration. In general both indicators show high levels of achievement. Water supply access is above the figure for low and middle income countries with the exception of Georgia, Kyrgyz Republic, Romania and Turkmenistan. Sanitation access is above the income level in all countries that report data (12 out of 27).

To summarize, the official data show a region that is making the transition successfully, with living standards exceeding those of the pre-transition phase in Eastern European countries and with growth in the NIS countries that promises to achieve this goal in the present decade. At the same time, education, gender equality, child mortality, energy efficiency and the environment all show either high levels of current achievement or improvements from the position in 1990. This would suggest that the region is doing well and should achieve the target improvements without too much difficulty. Indeed one might argue that there are other regions of the world where the situation is much worse and more development resources should be allocated to them. This would, however, be an incorrect conclusion, for reasons that are given below.

2.2 The “Not So Good News”

Unfortunately the picture in the region is not as rosy as the above data would suggest. Partly there is a problem of data; many of the countries have not reported the numbers and others have provided data that do not tell the full story, or misrepresent the underlying situation.

Poverty: Let us start by looking at the actual data on poverty. This is presented in Table 4, which reports the percentage of the population that is below the national poverty level (NPL) and the population that is below the region's extreme poverty level of \$2.15 in PPP⁴. The most important observations are the following:

⁴ The MDG goal is to eradicate **extreme poverty**. This is defined globally as less than \$1 of income a day, measured in local purchasing power parity (PPP) terms. In almost all cases the national poverty line is above that in the transition countries and a Bank study took an extreme poverty line for the region as \$2.15 in 1996 PPP. One rationale that is given is the high cost of heating and clothing in Eastern Europe and Central Asia (see World Bank, 2000a for a discussion of this). The national poverty lines are based on costs of a minimum consumption bundle, with an adult calorie intake of around 2,100 calories and minimum costs of other items of consumption. While this may not define extreme poverty we would argue that it is a more sensible objective for the region.

5th International Conference on Ethics and Environmental Policies
BUSINESS STYLES AND SUSTAINABLE DEVELOPMENT
Kyiv, April 2-6, 2003

- In no case is there a baseline figure for 1990, which is the base year in the MDG goal (Table 1). Hence a different baseline will be needed.
- For 9 of the 26 countries there are **no official NPL estimates** of poverty **for any year** in the 1990s. These are: Bosnia and Herzegovina, Bulgaria, Croatia, Latvia, Lithuania, Macedonia, Slovakia, Tajik Republic and Uzbekistan.
- More than one NPL observation is provided for Georgia, Kyrgyz Republic, Moldova, and Albania. Of these only Albania has shown a decline in rural poverty between 1994 and 1998 (although urban poverty there has increased). Other countries show an increase in poverty (Kyrgyz Republic, Moldova) or very little change (Georgia).
- Extreme poverty is relatively low in Eastern Europe but is very high in some NIS countries. The four highest levels are in Tajik Republic (68.3 percent), Moldova (55.4 percent), Kyrgyz Republic (49.1 percent) and Armenia (43.5 percent). In the Baltic states, Ukraine and Belarus it is as low as in Eastern Europe but in the Caucasus and Russia it ranges from 19 to 23 percent.
- What little data there is indicates that poverty in terms of NPL remains a persistent and serious problem in all the NIS and the Balkans and in some of Eastern Europe, particularly Romania. In the NIS rates of between 30 and 50 percent are observed. Independent surveys by the Bank show that poverty rates in some Central Asian countries are even higher – around 50-70 percent, although there are problems of comparability with earlier surveys.

Health Data: Official data and survey data are not always in agreement here. For example, the official data on the under 5 mortality rate was 34:1000 in 1999 for Tajikistan and 42:1000 in 1997 for the Kyrgyz Republic. World Bank supported survey data, however, give 120 for Tajikistan and 76 for Kyrgyz, which casts doubt on the official data and the story which it supports.

Water Supply and Sanitation: There are areas where the official MDG indicators do not pick up the key issues in the transition countries. For example, with water supply the official definition of adequate supply is in terms of sources (piped water or water from a well that is less than 20 meters from the dwelling). In the transition countries these are not the critical issues, but rather the **quality** of the water and the regularity of supply. As Table 5 shows water samples taken in the NIS frequently do not meet chemical and microbiological standards, and frequency of supply is poor. In some cases the proportion of such samples is more than half! These factors are critical in the region, yet they are not picked up in the selected indicators. The impact of poor quality is particularly serious for the poor, who are least able to take avertive action by buying mineral water or ensuring that the water is suitably disinfected.

Forestry: Another indicator that does not pick up sustainability changes in the natural resource base is the area of land under forest cover. The region has an increase in forest cover, but this does not do justice to the decline in the quality of the forest, which has been declining in a number of countries in the region (Albania, Ukraine, Serbia) over the 1990s. In addition, illegal logging has been increasing in several countries, itself a manifestation of the depth of rural poverty. (UNECE/EC, 2002).

A breakdown in the supply of energy, particularly electricity, gas and district heating is also a phenomenon that is a matter of concern in a number of countries. As infrastructure deteriorates, and as resources for its maintenance are not available, the supply of electricity and gas has become more irregular and, in some cases, supplies have been cut off altogether (especially of gas and district heating). This has resulted in households reverting to non-commercial fuels, principally fuel wood, which is environmentally damaging as well as injurious to the health of the households, who suffer elevated levels of indoor air pollution. Cases of this kind are documented for Azerbaijan (despite its abundant oil and gas resources), Armenia, Kyrgyz Republic, Moldova and Tajikistan. A recent Bank study has also shown that in such cases, it is the poor who are most affected. (Lampietti et al, 2002)

The lack of electricity is important in any poverty alleviation program and has strong links to the MDGs discussed earlier. A major World Bank study (Wang, 2001) looked at demographic and health data from over 60 low-income countries and investigated the determinants of health outcomes using cross-country data between 1985 and 1999. It found that in urban areas linking households to electricity is the **only key factor** reducing both infant mortality rate (IMR) and under five mortality rate (U5MR), and that this effect is large, significant and independent of

incomes. In rural areas improving female secondary education is crucial for reducing IMR, while expanding vaccination coverage reduces U5MR.

Slums: A key indicator for MDGs is the number of people living in 'slums', which have traditionally been defined as dwellings with insecurity of tenure. Since data on this indicator as originally defined (i.e., people who could be evicted without recourse to the legal system) could not be collected, tenure security has more recently been measured by an index developed by UN HABITAT and consisting of:

- %Households with access to water
- % Permanent structures in the housing stock
- % Housing in compliance with local regulations
- % Households with access to sewerage
- % HHs w. access to electricity

For the transition countries tenure security is of little relevance since virtually no one can be evicted for any reason. Even the HABITAT interpretation is not so relevant as most urban dwellings would comply with the list. The lack of satisfaction with this definition has resulted in other criteria being used (e.g. in India, USA), which define slums as places that are: a) under provided with services; and b) with certain social and economic characteristics (i.e., places with concentration of the poor).

What do slums look like in ECA cities and how many are there? Although we cannot answer the question quantitatively, we have some evidence that the problem is a growing one. Initially, however, we need to have some understanding of what the situation was with housing in the late 1980s, just before the break up of the Soviet Union and the collapse of state socialism across the region. Under state socialism, housing units were built by the state according to state standards, were allocated without regard to ability to pay, and tenants were charged low standardized rents. Furthermore, services (utilities, healthcare, education) were provided at little or no cost based on a system of normatives. Finally, society was relatively equal meaning that there were few rich people and poor people. As a result, at the beginning of transition, in most countries one found a relatively even mix of different social and economic groups within the buildings and across the city (i.e., no rich and poor neighborhoods) and a relatively even availability of services (utilities, health and education) in neighborhoods and across the city

In the early 1990s, transition meant three aspects changed fundamentally. The populations became much less equal with extremes of wealth and poverty. Housing markets replaced state construction and allocation. On the one hand this meant people could, for the first time, freely choose where they wanted to live, while on the other it meant people were no longer guaranteed a unit of a certain quality. Provision of many services became problematic and availability to the population much less uniform as tariffs increased and service quality deteriorated. Now, some twelve years after transition began, there is evidence that cities are becoming more spatially differentiated into rich and poor areas. There are two major patterns of concentrated poverty (or areas that one would characterize as slums):

- "Vertical slums." Within the existing housing stock, those people who had the resources have moved out of less desirable areas and likely been replaced by people of fewer means. After a number of years, one can see the wealthy areas, but I suspect they are complimented by poor areas, where ever higher concentrations of the poor live in close proximity to one another in high-rise apartment buildings located far from jobs and businesses, that are crumbling due to lack of reinvestment. Examples of vertical slums are to be found in Dushanbe in Tajikistan and Tomsk, Russia.
- "Peri-urban (or traditional) slums." In some countries there have been large movements of people looking for work to the major cities, where they have settled in peri-urban areas. This is the typical pattern in most of the developing world. In some cases these migrants have been given unserviced land to build on. In other cases, this is not so. In any event, these areas are generally:
 - Home to populations that are much poorer than the city as a whole
 - Poorly housed in buildings that are not structurally sound.
 - Poorly provided with basic utilities.
 - Poorly provided with health and educational facilities.

- Not accessible.
- Often environmentally problematic.

Examples of such slums in the region are to be found in Tirana, Albania and Bishkek, Kyrgyz, in both of which the World Bank has programs for peri-urban rehabilitation.

Poverty and Degradation of Irrigation in the Aral Sea Basin: In the Central Asian republics in the Aral Sea Basin—Southern Kazakhstan, Uzbekistan, Turkmenistan, the Kyrgyz Republic, and Tajikistan—some 28 million people depend on irrigation for their livelihoods. These are being seriously affected by the collapse of irrigation systems, which are crucial for the agriculture in the region. This is hurting a population that is overwhelmingly poor and all the signs are that any growth in the economies in general is not trickling down to this group. Over time one would expect people to move out of an activity that is not sustainable, economically or ecologically, but in the meantime something has to be done to address the growing problems of poverty and social collapse. (Bucknall et al, 2002). The problems of the Aral Sea basin are symptomatic of a wider regional issue that links agriculture to poverty, and that is the decline of the sector, due to deteriorating infrastructure, declining yields and the pressure of international competition for agricultural products. These communities face the problem common to all sectors that are in economic decline, something that is not special to transition countries. The additional difficulty in the region is the lack of resources to help the affected areas, and the difficulty in absorbing those who want to migrate into the urban economy.

Other Regional Environmental Problems: Other environmental problems in the region that have potential implications for poor and vulnerable people include:

- Pollution and collapse of fisheries in the Caspian Sea, which affect communities dependent on that resource
- Damages to fishery and tourism in the Black, Baltic and Mediterranean Seas from point and non-point pollution and from unplanned coastal zone development.

These problems are being addressed through regionally coordinated programs of action, the primary focus of which has been the protection of the environment. Increasingly, however, it is recognized that any action will only be successful if it ensures sustainable livelihoods for the affected communities, and this in turn requires attention to be paid to the impacts that protection measures themselves can have on the poor.

Conclusions on the transition record to date: On the picture of what has happened in the transition countries in the 1990s we can conclude that, although there have been some major successes, in terms of reforms and economic growth, for example, there are also a lot of areas where the region is still a long way from a level of development with which it can be satisfied and which puts it on a sustainable path. This paper has shown that areas where there serious problems remain include: poverty levels, some health indicators (where data are conflicting), water supply and sanitation, energy infrastructure, creation of new slums, poverty in rural areas dependent on declining agriculture, and the regional seas where environmental damages are threatening local communities dependent on the natural resource base.

3. Prospects for the future and possible actions to promote pro-poor sustainable development

In this section we explore the prospects for meeting the MDGs, where these goals have been modified to take account of the region's special environmental and social problems. The policies or actions are divided into the following categories:

- a. Sustainable growth and poverty reduction.
- b. Investment in water supply and sanitation and in energy infrastructure
- c. Programs for natural resource management.

3.1 Sustainable growth and poverty reduction

The relation between growth and its link to poverty has been studied in some depth for a cross section of countries by the World Bank and reported in its 2000 World Development report. In this it has concluded:

5th International Conference on Ethics and Environmental Policies
BUSINESS STYLES AND SUSTAINABLE DEVELOPMENT
Kyiv, April 2-6, 2003

- (a) If a society as a whole is getting worse off, the poor will hardly ever better their position; being at the bottom of the pile their lot will almost certainly decline and
- (b) While not all groups will have improved their welfare in the 83 countries that have had positive economic growth in the last 33 years, most have, especially if the rate of growth has been high enough.

The World Development Report for 2000 thus shows convincingly that several aggregate indicators of poverty decline as economic growth increases. The closer the growth rate is to zero, the more likely is it that poverty will not decline for all groups in society. **Hence we can conclude that a major factor in reducing poverty in the transition country is achieving growth.**

However it is not the only factor and it certainly does not guarantee that all poor groups benefit from the growth. The links between growth, economic policies and the environment are important for poverty reduction in two inter-related ways (DFID/EC/UNDP/WB, 2002):

- There is no simple trade-off between growth and the environment – countries with similar levels of income and growth can have quite different levels of environmental performance;
- **IGNORING THE ENVIRONMENTAL SOUNDNESS OF GROWTH – EVEN IF THIS LEADS TO SHORT-RUN ECONOMIC GAINS – CAN UNDERMINE LONG-RUN GROWTH AND ITS EFFECTIVENESS IN REDUCING POVERTY.**

Critical to discussing economic growth as it relates to environmental impact and poverty is the consideration of the *quality* of growth. The same rate of growth in the economy can be associated with widely different environmental impacts.

Factors that need to accompany the growth strategy (and some of which will actually enhance the growth) are the following:

- Scrutiny of public expenditures with respect to its social and environmental impacts.
- Careful evaluation of macroeconomic policies for their environmental and social impacts
- Promote measures that reduce the environmental vulnerability of the poor.
- Promoting corporate social responsibility in the region

Scrutiny of public expenditures with respect to their social and environmental impacts. Supporting the development program one needs an effective environmental management system and a social assessment system. This is to ensure due diligence with regard to these factors, a key part of which consists of extensive public consultation on important investment programs. Government and private expenditure programs at the national and local level need to be scrutinized with care. Many important decisions in the region regarding economic development are taken without paying enough attention to their implications for indicators of poverty or the state of the natural environment. Although this is changing, the capacity of developing countries to undertake such assessment is limited. Furthermore, integrated systems of assessment that look at **both** environment and poverty issues are very rare. It is true that development agencies have devoted considerable resources to ensuring major environmentally sensitive investment programs are scrutinized over their environmental impacts and (increasingly) their social impacts but this does not happen to all investments.

At the same time, as far as the environment is concerned, there is need to have a strong environmental regulatory framework in place and a government body that can implement that framework. This is necessary to ensure that excessive damage is not done to the environment and to protect the natural resources for future generations. As the DFID study referred to above shows, ignoring the environment can undermine long-term growth. Examples in the region of policies that have been pursued in the 1990s and that could have long term implications for growth include:

- Collapse of fisheries and irreversible damage to stocks of sturgeon in the Caspian.
- Salinization of land in Central Asia from unsustainable agricultural practices
- Contamination of land from industrial pollution that makes it unusable (many countries).

Many of these things started before transition but the process was not stopped during transition and now it may be too late (e.g. it is too late to save the Aral Sea). What we want to ensure that this does not happen in the future and that the quality of growth is addressed.

Careful evaluation of macroeconomic policies for their environmental and social impacts. In addition to policies and programs at the micro level, we also need to look at macroeconomic policies from the same perspective -- policies in the areas of trade liberalization, structural adjustment and privatization. To do this we need to develop tools of analysis that are simple and robust and that track such policies in terms of their impacts on indicators of sustainability and poverty. Furthermore such analysis should feedback into the design of the policies. We are a long way from achieving these goals in the transition countries.

In the design of policy the tendency has been to look for 'win-win' solutions. This is natural – policy makers want to please all parties and avoid having to make hard choices. But we cannot hope to cover all relevant options in this way. There are simply too many situations where there are trade-offs. For example a conservation program may improve the stock of environmental capital but at a cost in terms of increased hardship to some; or a trade liberalization or privatization measure may promote economic growth but at a cost in terms of some environmental damage and/or increased unemployment. The traditional methods of analysis of such trade-offs have been social benefit-cost and multi-criteria analysis. They should continue to be used but they need to be strengthened, especially in the way that poverty and natural resource impacts are assessed, both in terms of changes in their present and future levels. As this work evolves, we should get some broad guidance of how environmental policies can be made 'pro-poor', what poverty reduction strategies can be made 'pro-environment' and how macroeconomic policies can be made more sensitive to both sets of concerns.

Finally there is the issue of monitoring. It is imperative for policy makers to know how consistent their actions are with the goals of sustainable development. This can only be achieved by having indicators that are regularly reported and widely disseminated. As far as natural capital is concerned, some wealth measures that include physical capital as well as natural and human capital are useful and should be constructed, using consistent methods of valuing all assets including natural resource stock changes. Work is still in progress on this and more effort is needed if we are to have measures that can be used with the same level of confidence as, say, GDP. But a real wealth measure is not enough. Tracking sustainable development needs physical measures for ecosystem health and warning indicators when that health is under threat. Much work has been done on such pressure indicators (Adrinasee, 1993, Markandya and Dale, 2001) and we have a good idea of what information countries need. But what has not yet been done is to develop those indicators that both track the state of ecosystems and at the same time take account of the impacts of these changes on vulnerable individuals and communities. Some changes to the state of natural capital are more threatening in this respect than others. It would be useful to have an indication of the extent to which this is so.

Promote measures that reduce the environmental vulnerability of the poor. The poor face many environmental risks, which they manage as best they can. At the same time, the state can and should pay a role. While natural hazards in general cannot be prevented, their impacts, and sometimes their magnitude, can be managed. There are four main approaches (ICRC, 2001):

- Reduce the causes of environmental vulnerability through measures such as land and water management in upper catchments of watersheds. Good land-use planning and zoning can prevent a natural cycle of water flows from becoming a catastrophe. Fire breaks and early response can to some extent prevent wildfires to spread.
- Focus more on participatory risk reduction and mitigation. Early warning systems that effectively provide local people with adequate information to minimize impacts can be very effective. Building codes for houses and other infrastructure can ensure that they are equipped to withstand natural hazards to a reasonable degree. In many environmental disasters, the majority of fatalities occur in the first 24 hours – long before national and international agencies arrive on the scene. So engaging local residents in disaster preparedness, mitigation and coping strategies is the only practical solution.

5th International Conference on Ethics and Environmental Policies
BUSINESS STYLES AND SUSTAINABLE DEVELOPMENT
Kyiv, April 2-6, 2003

- After disasters have happened, improve relief coordination and place a greater focus on building up resilient sustainable livelihoods with a focus on disaster preparedness. Evidence shows that economic vulnerability is more of a constraint than environmental vulnerability – so there must be focus on long-term improvements through, for example, the introduction of more income-earning opportunities. This is constrained by both government and development agencies who still tend to separate disaster relief from long term development – so that relief is not sufficiently development orientated and development does not fully incorporate disaster mitigation.

Ensure that funds are available for dealing with disasters. While the international community may provide some funds, countries may find it more predictable to set up their own contingency reserves.

*Promoting corporate social responsibility in the region*⁵.

Converging trends over the last decade have shaped a very different business environment for the coming decade. This has implications for where and how business invests, what defines shareholder value and what constitutes risk. As foreign direct investment has grown - more than ten-fold in the developing world since 1990 - and the sourcing of products and services has spread globally, there are also calls for business to play a pro-active role in the reduction of poverty. History demonstrates that poor people, especially indigenous communities in remote regions, have been among the last to benefit. With no faith in the distribution powers of the governments that hosted these investments, communities frequently resort to negotiating directly with business to secure immediate benefits in education, housing and health – basic development rights, in return for 'granting' a 'social license to operate'. This is understandable. Most companies respond rationally by seeking dialogue not conflict. A growing number of countries require prior consultation with indigenous communities based on ILO Convention (1969).

The international community is reinforcing this role of corporate responsibility through development of codes of conduct to guide business as global corporate citizens. We therefore see emerging: first, at the level of Corporate Governance, the UN Global Compact (2000) initiative with its call for action by business to promote human rights, the avoidance of complicity, labour rights; and environmental protection. Secondly, at the executive level, there recently emerged the UN's draft on Principles and Responsibilities for Multinational Enterprises (MNEs) (2002), which build on the OECD Guidelines for MNEs (2000) and the EU resolution on human rights practice of European MNEs overseas (1999). Thirdly, at the operational level, there are various interpretations of human rights law in the form of voluntary initiatives and accreditation schemes, such as the Ethical Trading Initiative, GRI, AA1000, SA 8000 and sectoral and company codes.

Business is recognizing that it has responsibility for its wider impacts beyond the work-force and the perimeter fence. With the recent liberalization of investment regimes worldwide, downward adjustments in social welfare spending, to accommodate tax breaks to attract foreign investment, are widespread. In response, we see NGOs requiring business to be transparent about taxes and royalties, although the pressure so far has not been as great in the transition countries as it has in the developed countries and some of the developing countries and . Key challenges ahead for business in this region, which should be promoted both by government and the NGO community thus include:

- ❑ Bring corporate governance into the realm of corporate citizenship, and address the key elements of social justice in respect of employees' rights, pensions, shares and the role and structure of the Board. Corporate Citizenship needs to be a proven company culture.
- ❑ Broaden risk and impact assessment to include 'intangibles' and long term, considerations, across the environment, economic and social dimensions, building on human rights inventory approaches.
- ❑ Align community investment programs through a Corporate Social Responsibility (CSR) strategy, as an extension of core business practice, focused on contributing to sustainable development goals and the promotion of human rights, not fostering dependency.

⁵ This section draws heavily on Warhurst (2002).

- ❑ Develop management systems and tools which focus on capacity to manage rather than to audit and eliminate problems, without considering possible development impacts. Without the fulfillment of basic rights, poverty is perpetuated. The need to earn income at any cost, leads to the violation of core labor standards.
- ❑ Finally, review what is emerging in terms of principles, codes of conduct and guidelines within the organizing structure of the international human rights framework, and 'fast track' global corporate citizenship from that base.

Implications for poverty reduction of this growth strategy. If all these measures are followed what can we say about the poverty goal in the MDGs? As we noted in the previous section, the appropriate poverty target for this region may not be extreme poverty but poverty as defined in terms of minimum consumption bundles (see Table 4). It is difficult to say if this measure can be halved by 2015, for the simple reason that we do not have baseline data for 1990 in most cases! An alternative base year might be a 'floating' one of 1993-1996, in which case it is an open question as to whether this figure can be halved by 2015. More usefully, we can say that if the medium term growth estimates is realized, and if the national policies can respect the guidelines presented in this section, the best that can be done will be done. On the contrary, if the growth policies are less sensitive to these recommendations, the impacts on poverty will be much less.

3.2 Investment in water supply and sanitation and in energy infrastructure

If the official MDGs on water supply and sanitation are to be met, a considerable amount will have to be spent on improving services in these areas. The World Bank has recently estimated the investment costs of meeting these goals in the "East Europe and Central Asia (ECA) Region" as around \$600 million a year from now to 2015. This includes Turkey, which we would not consider a transition country and the indications are that for that country alone the costs could be as much as \$300 million. This leaves a rather low amount for the rest of ECA, and is undoubtedly influenced by the fact that official supply data in these countries are quite high. To put it in perspective the Bank's estimate of the investment costs for the water supply and sanitation goals for the whole world are around \$30 billion annually, making ECA a mere two percent of that figure.

While the amount estimated for the region may be low, it may also be sufficient if the 'right' investments are made. By right we means investment that focus on rehabilitation and provision of services that are affordable by the people. It is pointless to provide a delivery system that requires operation and maintenance costs that cannot be met through the institutional framework in place. **The focus should be on provision of regular water supply and effective sanitation, which does not necessarily require piped delivery systems or centralized sewerage systems.**

This is particularly important for rural areas where the costs of such systems per household served can be very high. To give an example, consider data for Ukraine. The cost of supply of centralized water supply and sewerage to rural residents has been estimated at around \$340/person for rehabilitation of existing systems and \$1296/person for provision of new systems⁶. This implies a cost to the budget of around \$253 million over ten years, or \$25 million a year. Although this may not seem a lot, it has to be put in context. Total environment related expenditure from the budget in 2000 was around \$35 million. So the rural water supply program would take up a large part of this, leaving little else for urban water supply and other environmental expenditures (currently around 40 percent of public expenditure is for water). Furthermore such centralized schemes will entail operating costs that rural communities will be unwilling to bear. In that case the investment will be unsustainable and systems will not be operated. Low cost options that exist include decentralized services, such as⁷

- Rehabilitation of wells by providing regular (annual) well washing; raising people awareness about wells maintenance and protection them from pollutions. The cost of proper washing is about 200 hrivnas (\$38) and the capital cost is that of a pump, which costs \$200.

⁶ Estimates are based on data from Ministry of Water, assuming 560 persons on average per settlement and 5.3 Hrivnas to the dollar.

⁷ Data in this section has been provided by Anna Tsvetkovic of NGO, "MAMMA -88"

5th International Conference on Ethics and Environmental Policies
BUSINESS STYLES AND SUSTAINABLE DEVELOPMENT
Kyiv, April 2-6, 2003

- Drilling new deeper wells (up to 30 m depth or more depending on the local hydro-geological conditions) in the nitrate contaminated areas. Usually the depth of the traditional shaft wells 1 -10 m. The cost is around 1000 hrivnas (\$188)
- Building new shafts for the wells (for the 10 m deep wells cost is around 1000 hrivnas (\$188))
- Rainwater harvesting. Costs are not given but known to be very low.

It is difficult to obtain a detailed cost comparison of such options with the proposed centralized supply program, but it is clear that we are talking about much lower figures. As a rough guide, if each well serves only 3-4 people, the capital cost of such solutions is around \$54/capita, compared to the \$340-1200 for the proposed scheme for centralized supply.

Similarly for sanitation, options include pit latrines with a cost of around \$25/capita, household flush toilets without central sewerage (\$150/capita) and full sewerage connections with a cost of \$300/capita. All would meet the MDG requirement but the choice has to be based on what is affordable and financially sustainable. There is also the trade off between providing a effective, low cost service now, and providing nothing for several years, when a higher quality service can be provided. From a poverty alleviation viewpoint the former will generally be the preferred option.

In the case of energy infrastructure the priority in a poverty alleviation context surely has to be the delivery of regular supply to households that lack it. The very wealthy can supplement irregular supply with diesel generators, but the poor cannot. And not to have any electricity or gas, or to have it at an unaffordable cost, will result in a burden to the poor in terms of health and other disadvantages (lack of facilities for homework for children etc.). This has strong implications in terms of affordability, which is discussed below.

In the case of energy an important development that can promote less use of fossil fuels, or increase afforestation and at the same time reduce poverty is the Clean Development Mechanism (CDM) under the Kyoto Protocol. This allows developing countries to 'sell' reductions in greenhouse gases, including reductions through carbon sequestration, to countries that have commitments to reduce emissions (mainly the developed countries). Properly designed, such transactions can benefit local communities, as well. For further discussion of this see Markandya and Halsnaes, 2002.

Privatization and Affordability: Two related issues have to be addressed in the provision of such infrastructure: the role of the private sector and the affordability of the service. As far as the first is concerned, the experience of the last decade has shown that there is a role for the private sector, but it is not as wide as some people thought (especially in the early years of transition) and there have been some failures (as well as successes). Where, of course, the private sector can provide the service, it has the advantage of being relatively efficient (and thus keeping costs down) and of relieving the public budget, which is extremely tight in all transition countries. A World Bank study of 60 privatized companies quoted in Panayotou (1998) found privatization had resulted in an improvement of 11% in efficiency, 44% in investment and 45% in profitability.

While this may be too enthusiastic a picture (similar performance gains are certainly not universal in transition economies, see for example, Auty (2000)), improved economic performance is generally expected from privatization. The concerns are more on the environmental and social side. The environmental fears are clearly stated by French (1998). She states, "When it is done wrong, privatization leaves environmental degradation and social disruption in its wake". (page 32). The incentives for a less than acceptable environmental performance are clear. Governments are keen to attract private capital, which tends to demand higher rates of return on its investment than the public sector. This raises the price of the services (although some of the return comes from an improvement in efficiency as well). In the face of such pressures, and given limited environmental management capacity in the government anyway, the authorities may be willing to overlook environmental norms and social objectives, as these will further raise the costs of provision of the services, or make the projects unacceptable to the private sector.

Examples of private sector projects with potential serious environmental consequences cited by French include: power stations with high pollution levels, water supply projects that pay little attention to conservation, hydro projects with large displacement of populations, and gas and mineral development projects that cause environmental damages which would be unacceptable in

5th International Conference on Ethics and Environmental Policies
BUSINESS STYLES AND SUSTAINABLE DEVELOPMENT
Kyiv, April 2-6, 2003

the high income countries. The World Bank and other multilateral institutions point out that projects financed with their involvement have to meet strict environmental standards, and that such impacts are not possible. In this they are correct, although some private sector projects, especially in the transport and water sectors have been subject to criticism. What they cannot do, however, is to influence all privatization-related activities and, since funds are fungible, countries may go to the multilateral institutions for the 'cleaner' projects and to other private sector sources for the less 'clean' ones. There is no study that has investigated whether this is true or to what extent it is true.

On the social side, the concerns about privatization are that it will result in higher charges and a lack of social provision of the service to poor and vulnerable groups. The fact that private sector enterprises require higher returns is partly due to the higher perceived risk of such investments. Haarmeyer and Mody (1998) note that the equity return on a sample of private power projects is 18-25% and for a sample of private road projects it is 15-30%. These are considerably higher than the returns for public investments, which tend to be around the 10-12% mark. How much of the returns are generated by increased efficiency and how much by higher prices is not answered in the literature but some increase in prices is often expected (although there have been several privatizations where prices have fallen)⁸.

Affordability: The way to protect the low-income groups and others who would lose out in the face of such changes is through the regulatory framework and much has been written about how this should be structured (See, for example, Brook-Cowen, 1997). We should note that this is not only a 'privatization' issue: social protection will also be needed when the supplier is a local or central government entity operating on a commercial basis. The issue is to ensure that social objectives of access to a desired level of supply is maintained when the service is provided without direct budgetary financial support (or strictly limited support) to the service provider.

Tariff determination, including possible cross-subsidization of rates for low level/low-income users has successfully been achieved in a number of cases of privatization as well as state provision of basic services. For a review of alternative methods of ensuring affordability see Markandya and Streimikiene (2003).

A number of cases of how social factors have been dealt with in practice when suppliers are from the private sector are described in Gentry and Fernandez, 1998; French, 1998; Johnstone et al., 1999. These suggest that projects have had some success in meeting all three criteria of sustainability and indeed the social dimension has been given considerable thought in the design of the privatization. This does not mean, however, that **all** privatizations have had the same success in social terms -- again there is a tendency to pick out the 'good cases'. Furthermore, there have been some problems, as we note below.

- (a) Trade-offs between lower average tariffs for the poor who are provided the service and expansion of the service to more poor households;
- (b) Lack of clarity in the agreement about how increased costs of unforeseen environmental regulations will be passed on;
- (c) Difficulties in applying metered tariffs;
- (d) Difficulty in getting political agreement on large-scale concessions for privatization of public services. Transparency in the arrangements for such contracts and ensuring competitive bidding is essential for the long-term success of the project (Gentry and Fernandez, 1998).
- (e) Given the long term nature of the agreement, it is more effective when the contracts are based on performance indicators rather than process indicators (specifying how standards are met) (Gentry and Fernandez, 1998).
- (f) The terms of private sector provision of water and sanitation often ignore the impacts on those outside the scheme -- other users of ground and surface water which is drawn for the project or those receiving untreated waste water resulting from the project. (Johnstone et al, 1999)

⁸ The higher rate of return may be justified when the alternative is public sector funds. The literature on the marginal cost of public funds (Ballard et al, 1985) notes that a dollar of public investment costs society more than one dollar because of the distortions it creates in the process of collecting the revenue. Hence if the private sector demands a rate of return of X% on its investment, the social cost of provision may be lower than with a public sector that asks for a lower rate, but that imposes a welfare cost on society in raising the revenue.

As noted earlier, there are several levels and forms of 'privatization'. Brook-Cowen describes them as follows (in increasing order of private sector responsibility): service contract, management contract, lease, build-operate transfer, concession and divestiture. Apart from divestiture, most involve some form of public-private partnership. Although there are many papers describing the merits and de-merits of each, a detailed evaluation of the relative performance of different forms is lacking. The consensus view appears to be that where there are substantial social objectives, broad public-private partnerships are a better vehicle than pure private sector operations, such as exclusive build-operate-transfer, concession and divestiture. Hart (1998) notes that such schemes can also be the appropriate vehicle when:

- (a) The state needs to share in the rents that cannot be collected through taxation;
- (b) It is a step to full privatisation, which may need some monitoring of private sector performance and when the full value of the privatised entity is hard to determine (in which case there is danger that state assets will be undersold); and
- (c) The projects are too risky for the private sector to take on alone.

Successful public-private partnerships require mutually agreed objectives and targets, clearly defined roles and responsibilities, 'Dominant Partner Management' (one of the two parties retains exclusive operational control) and a sharing of asset ownership so that both parties seek to gain appreciation of their assets and protect them from downside risk.

To sum up, privatization is an important potential source of finance for sustainable development, although it is by no means the main source of provision of key infrastructure services and indeed the share of state activity has not fallen in many countries. The experience with private provision of what was previously a public sector activity has generally been good with respect to the economic dimension of sustainability. On the environmental and social dimensions the evidence is less clear but the few examples we have point to some progress on both these fronts, with strong public private partnerships being singled out for special commendation. We need more systematic evidence, however, and there is a concern that what is documented is the 'good side', often because it relates to the activities of the multilateral institutions, which are under more careful scrutiny than other private sector initiatives.

As with the poverty MDG, one can ask whether the goal for water supply and sanitation can be met. The World Bank has made an assessment based on official data, and average costs that are needed to meet the supply targets. On this basis, the judgment is that, among countries for which there are data, only Romania is unlikely to meet the goal. Other countries are either likely to meet or have a reasonable chance of meeting it. There is, however, a lack of data for 7 countries (Armenia, Azerbaijan, Bosnia and Herzegovina, Georgia, Kosovo, Macedonia, and Serbia and Montenegro). We would conclude that, if the focus is on low cost options and on ensuring adequate quality, the chances for all countries of meeting the goal are increased substantially.

3.3 Management of Natural Resources

The key issues on management of natural resources as far as this paper is concerned are:

- (a) Protecting resources that are under threat as a result of the quest for growth
- (b) Protecting vulnerable communities when seeking to protect biodiversity and conserve land.
- (c) Promoting the sustainable use of those resources that can deliver incomes to local communities thus making them viable.

The first needs an environmental regulatory authority that ensures due diligence in environmental matters when investments are being undertaken, be they in the private or public sector. Similarly one needs a strong social authority, which vets projects and programs that aim to conserve biodiversity through limiting the use of land and water resources by local communities. This is justified not only on grounds of poverty alleviation but because it makes good conservation sense: any program that does not address the impacts of conservation on communities that have been using the resource will not succeed because there will be non compliance and incursion by those who have been affected.

Natural and cultural resources also have a role to play in promoting sustainable development, particularly through tourism, both national and international. Almost every country in the region

has some valuable resources of this kind although it is sadly been the experience that each one has unrealistic expectations of what can be achieved through the development of tourism. Not only is there is need for significant investment in infrastructure (which really only the private sector can provide), there is also a need to ensure safety and to offer a package of tourism services if one is to attract a large number of visitors (cultural, nature based, beach, mountains etc.). The major conflicts that have arisen in this area are (a) when private capital is brought in, much of the 'rent' from the tourism goes to the owners of that capital and little remains for the local communities, (b) tourists damage the ecology, create pollution for which they do not pay and create an unsustainable environment which in the end will self destruct. Both these can be avoided but it needs care and sensitivity in the way the development is carried out, and it certainly needs a strong authority that can ensure compliance with land use regulations. In the transition countries we have seen some alarming losses of tourism (e.g. in Georgia where it has all but collapsed from a previously vibrant level), and in others we are seeing the resurgence of pre-transition centers (e.g. in Croatia and Bulgaria). The future is promising but this is not an area with easy pickings for anyone.

4. Conclusions

In the early stages of transition, the primary objective was market reform, followed by economic growth. Poverty and sustainability concerns were not given much importance. As a consequence, significant reforms were made in the 1990s and growth was been achieved, albeit with different rates in the different countries. At the same time, poverty was not really tackled, although some indicators, such as education and infant and child mortality rates did not suffer as much as would be expected. The road to sustainability has been mapped out by the UN in terms of MDGs, which apply to all countries. As far as the transition group is concerned there are a lot of goals where the region is still a long way from a level of development with which it can be satisfied and which puts it on a sustainable path. Apart from the level of poverty, these include some health indicators (where data are conflicting), water supply and sanitation, energy infrastructure, creation of new slums, poverty in rural areas dependent on declining agriculture, and the regional seas where environmental damages are threatening local communities dependent on the natural resource base.

For the future, the question of whether the target reductions in the MDG indicators can be achieved is not, in our view the critical one. Rather we focus on what can be done to promote high quality growth, i.e. growth that respects the environment and pays attention to the social objectives. Key policies that have been identified in this regard include

Under Sustainable Growth and Poverty Reduction

- Scrutiny of public expenditures with respect to its social and environmental impacts.
- Careful evaluation of macroeconomic policies for their environmental and social impacts
- Promote measures that reduce the environmental vulnerability of the poor.
- Promoting corporate social responsibility in the region

Under Investment in Water Supply and Sanitation and Energy Infrastructure

- Focus on provision of regular water supply and effective sanitation, which is affordable by the recipients and which does not necessarily require piped delivery systems or centralized sewerage systems
- In the case of energy, ensure regular supply of electricity and, where appropriate, gas or district heating, to all households.
- Take advantage of the CDM to develop programs that reduce green house gases that also benefit local communities.
- Encourage the use of the private sector, particularly in a public private partnership, taking account of environmental and social objectives, the latter including providing social protection in the face of increases in the cost of services
- Protect natural resources that are under threat as a result of the quest for growth
- Protect the interests of vulnerable communities when seeking to protect biodiversity and conserve land.

5th International Conference on Ethics and Environmental Policies
BUSINESS STYLES AND SUSTAINABLE DEVELOPMENT
Kyiv, April 2-6, 2003

- Promote the sustainable use of those resources that can deliver incomes to local communities thus making them viable.

If these policies are followed the prospects of achieving sustainable development in the region will be greatly enhanced.

5th International Conference on Ethics and Environmental Policies
BUSINESS STYLES AND SUSTAINABLE DEVELOPMENT
Kyiv, April 2-6, 2003

Table 1: Millennium Development Goals 1-7

Goal	Targets	Indicators
Eradicate extreme poverty and hunger	Halve between 1990 and 2015 proportion whose income is less than \$1/day	Proportion of population below \$1 per day Poverty gap ratio (incidence x depth of poverty) Share of poorest quintile in national consumption
	Halve between 1990 and 2015 proportion of people who suffer from hunger	Prevalence of underweight children (under five years of age) Proportion of population below minimum level of dietary energy consumption
Universal Primary Education	Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling.	Net enrolment ratio in primary education Proportion of pupils starting grade 1 who reach grade 5 Illiteracy rate of 15-24-year-olds
Gender Equality and Empower Women	Eliminate gender disparity in primary and secondary education, preferably by 2005, and to all levels of education no later than 2015	Ratio of girls to boys in primary, secondary and tertiary education Ratio of literate females to males of 15-to-24-year-olds Ratio of women to men in wage employment in the non-agricultural sector Proportion of seats held by women in national parliament
Reduce Child Mortality	Reduce by two thirds, between 1990 and 2015, the under 5 child mortality rate	Under-five mortality rate Infant mortality rate Proportion of 1-year-old children immunized against measles
Improve Maternal Health	Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio.	Maternal mortality ratio Proportion of births attended by skilled health personnel
Combat HIV/AIDS, malaria and other diseases	Have halted by 2015 and begun to reverse the spread of HIV/AIDS	HIV prevalence among 15-to-24-year-old pregnant women Contraceptive prevalence rate Number of children orphaned by HIV/AIDS
	Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases.	Prevalence and death rates associated with malaria Proportion of population in malaria risk areas using effective malaria prevention and treatment measures. Incidence of tuberculosis (per 100,000 people) Proportion of tuberculosis cases detected and cured under directly observed treatment short course
Environmental Sustainability	Integrate the principles of sustainable development into country policies and programs and reverse losses of environmental resources.	Proportion of land area covered by forest Land area protected to maintain biological diversity GDP per unit of energy use (as proxy for energy efficiency) Carbon dioxide emissions (per capita)
	Halve by 2015 the proportion of people without sustainable access to safe drinking water	Proportion of population with sustainable access to an improved water source
	By 2020 to have achieved a significant improvement in the lives of at least 100 million slum dwellers	Proportion of people with access to improved sanitation Proportion of people with access to secure tenure (urban/rural)

5th International Conference on Ethics and Environmental Policies
BUSINESS STYLES AND SUSTAINABLE DEVELOPMENT
Kyiv, April 2-6, 2003

Table 2: Millennium Development Goal 8

Goal	Targets	Indicators
Develop a Global Partnership for Development	<p>Address the special needs of the least developed countries. Address the special needs of landlocked countries and small island developing States. Develop further an open, rule-based, predictable, non-discriminatory trading and financial system Deal comprehensively with the debt problems of developing countries through national and international measures in order to make debt sustainable in the long term.</p>	<p>Net ODA as percentage of OECD/DAC donors gross national product (targets of 0.7 % in total and 0.15 % for LDCs) Proportion of ODA to basic social services (basic education, primary health care, nutrition, safe water and sanitation) Proportion of ODA that is untied. Proportion of ODA for environment in small island developing states Proportion of ODA for transport sector in landlocked countries. <i>Market access</i> Proportion of exports (by value and excluding arms) admitted free of duties and quotas Average tariffs and quotas on agricultural products and textiles and clothing Domestic and export agricultural subsidies in OECD countries Proportion of ODA provided to help build trade capacity <i>Debt sustainability</i> Proportion of official bilateral HIPC debt cancelled Debt service as a percentage of exports of goods and services Proportion of ODA provided as debt relief Number of countries reaching HIPC decision and completion points</p>
	<p>In cooperation with developing countries, develop and implement strategies for decent and productive work for youth</p>	<p>Unemployment rate of 15 to 24 year olds</p>
	<p>In cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries</p>	<p>Proportion of population with access to affordable essential drugs on a sustainable bases</p>
	<p>In cooperation with the private sector, make available the benefits of new technologies, especially information and communications</p>	<p>Telephone lines per 1,000 people Personal computers per 1,000 people</p>

5th International Conference on Ethics and Environmental Policies
BUSINESS STYLES AND SUSTAINABLE DEVELOPMENT
Kyiv, April 2-6, 2003

Table 3: GDP Per Capita in PPP Terms Among the Transition Countries

Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Growth % p.a.	
Country	GDP PPP Per Capita (Current \$)											Whole prd	1997-2000
Albania	2,843	2,186	2,182	2,354	2,557	2,779	3,028	2,789	2,962	3,239	3,505	2.1%	7.9%
Bosnia and Herzegovina	..	..	..	..	..	..	..	..	..	..	..
Bulgaria	5,797	5,632	5,000	5,061	5,284	5,704	5,244	4,860	4,964	5,198	5,710	-0.2%	5.5%
Croatia	7,133	5,746	5,324	4,956	5,345	6,016	6,606	7,140	7,392	7,646	8,091	1.3%	4.3%
Czech Republic	..	..	10,801	11,023	11,433	12,530	13,364	13,265	13,044	13,258	13,991	3.3%	1.8%
Hungary	9,517	8,579	8,578	8,665	9,124	9,638	9,803	10,221	10,745	11,394	12,279	2.6%	6.3%
Macedonia, FYR	4,610	4,738	4,687	4,356	4,288	4,314	4,384	4,414	4,476	4,766	5,070	1.0%	4.7%
Poland	5,684	5,291	5,512	5,781	6,217	6,824	7,239	7,703	8,001	8,512	9,051	4.8%	5.5%
Romania	6,219	5,577	5,395	5,588	5,913	6,569	6,935	6,512	6,214	6,298	6,540	0.5%	0.1%
Slovak Republic	9,028	7,938	7,644	7,466	7,983	8,703	9,336	9,902	10,225	10,732	11,243	2.2%	4.3%
Slovenia	..	11,345	11,145	11,798	12,312	13,254	13,888	14,586	15,055	16,216	17,333	4.8%	5.9%
Yugoslavia, FR (Serbia/Montenegro)	..	..	..	..	..	..	..	..	..	..	..
Armenia	3,565	3,054	2,160	1,802	1,768	1,947	2,069	2,124	2,229	2,367	2,559	-3.3%	6.4%
Azerbaijan	..	..	..	2,498	2,171	1,965	2,020	2,103	2,244	2,459	2,936	2.3%	11.8%
Belarus	7,031	7,119	6,660	6,245	5,631	5,221	5,432	6,073	6,555	6,945	7,544	0.7%	7.5%
Estonia	7,957	7,529	6,320	5,977	6,062	6,542	6,988	8,087	8,389	8,631	10,066	2.4%	7.6%
Georgia	5,526	4,468	2,574	1,876	1,752	1,873	2,049	2,130	2,181	2,463	2,668	-7.0%	7.8%
Kazakhstan	6,095	5,572	5,615	5,115	4,606	4,427	4,552	4,713	4,663	5,035	5,885	-0.3%	7.7%
Kyrgyz Republic	3,608	3,369	2,978	2,582	2,136	2,075	2,210	2,403	2,405	2,543	2,713	-2.8%	4.1%
Latvia	8,487	7,817	5,335	4,693	4,885	5,057	5,312	5,793	6,023	6,428	7,062	-1.8%	6.8%
Lithuania	8,349	8,060	6,588	5,627	5,209	5,618	6,045	6,570	6,920	6,851	7,278	-1.4%	3.5%
Moldova	5,216	4,494	3,311	3,331	2,358	2,413	2,208	2,261	2,111	2,073	2,114	-8.6%	-2.2%
Russian Federation	10,079	9,797	9,077	8,255	7,286	7,237	7,090	7,184	6,934	7,659	8,406	-1.8%	5.4%
Tajikistan	2,796	2,584	1,866	1,577	1,263	1,161	969	941	960	1,037	1,152	-8.5%	6.9%
Turkmenistan	5,962	5,542	5,154	4,515	3,605	3,408	3,121	2,620	2,756	3,224	3,956	-4.0%	14.7%
Ukraine	6,694	6,287	5,998	5,357	4,149	3,828	3,496	3,408	3,366	3,489	3,818	-5.5%	3.8%
Uzbekistan	..	..	..	2,195	2,077	2,085	2,107	2,127	2,154	2,274	2,405	1.3%	4.2%

Source: World Bank WDI

5th International Conference on Ethics and Environmental Policies
BUSINESS STYLES AND SUSTAINABLE DEVELOPMENT
Kyiv, April 2-6, 2003

Table 4: Poverty Measures in the Transition Countries

Country	1993	1994	1995	1996	1997	1998	1999	2000
Armenia NPL						55.0		
Armenia \$2.15 (96 PPP)							43.5	
Azerbaijan NPL			68.1					
Azerbaijan \$2.15 (96 PPP)							23.5	
Belarus NPL			22.5					41.9
Belarus \$2.15 (96 PPP)							1.0	
Bulgaria \$2.15 (96 PPP)			3.1					
Estonia NPL			8.9					
Estonia \$2.15 (96 PPP)						2.1		
Georgia NPL				52.1	46.2	50.2		51.8
Georgia \$2.15 (96 PPP)							18.9	
Hungary NPL	8.6							
Hungary \$2.15 (96 PPP)					1.3			
Kazakhstan NPL				34.6				
Kazakhstan \$2.15 (96 PPP)				5.7				
Kyrgyzstan NPL	40				51.0			
Kyrgyzstan \$2.15 (96 PPP)						49.1		
Latvia \$2.15 (96 PPP)							6.6	
Lithuania \$2.15 (96 PPP)							3.1	
Poland NPL	23.8							
Poland \$2.15 (96 PPP)						1.2		
Moldova NPL					33.7	43.7	54.5	
Moldova \$2.15 (96 PPP)							55.4	
Romania NPL		21.5						
Romania \$2.15 (96 PPP)						6.8		
Russian Federation NPL		30.9	41.1	43.2		49.1		
Russian Federation \$2.15 (96 PPP)		7.4	11.8	13.3		18.8		
Slovak Republic \$2.15 (96 PPP)					2.6			
Serbia NPL								33.0
Tajik Republic \$2.15 (96 PPP)							68.3	
Ukraine NPL			31.7					
Ukraine \$2.15 (96 PPP)							3.0	
Albania NPL		28.9				17.2		
Estonia NPL			14.7					
Georgia NPL					9.9			
Kazakhstan NPL				39				
Kyrgyzstan NPL	48.1				64.5			
Moldova NPL					26.7			
Romania NPL		27.9						
Albania NPL				15.0		36.8		
Estonia NPL			6.8					
Georgia NPL					12.1			
Kazakhstan NPL				30				
Kyrgyzstan NPL	28.7				28.5			
Romania NPL		20.4						

Source: World Bank WDI and World Bank, 2002a

5th International Conference on Ethics and Environmental Policies
BUSINESS STYLES AND SUSTAINABLE DEVELOPMENT
Kyiv, April 2-6, 2003

	Connection Rate to Piped Water (%)		Water Not Meeting Chemical & Sanitary Quality Standards %			Water Not Meeting Microbiological Quality Standards %			Year	Regularity of Centralized Supply
	Urban	Rural	Urban	Rural Piped	Rural Not Piped	Urban	Rural Piped	Rural Not Piped		
Armenia	87.0	45.0	52			17.0			1998	Supply is only 2-6 hours/day
Azerbaijan		50.0								Supply is unreliable
Belarus	96.0	10.0	33.8	37.8	49.7	7.0	7.4	37.0	1999	Supply is intermittent
Georgia	95	15	16	15	n.a	15.0	10.0	40.0	1999	Supply is 8-10 hours/day in some cities
Kazakhstan	93.0	26.0	10.1	n.a.					2000	
Kyrgyz	75.0	72.0	3.2			11.4				
Moldova	82.0	15.0	56	60	65	12.0	10.0	5.0	2000/01	
Russia	98.0	74.0	22.1		30.5	12.3		28.3		
Tajikistan	82	49	19.1	11.7	51	25.0	35.0	n/a	2000	
Turkmenistan	85.4	42.1	44.8			22.9			1999	Scarcity in Turkmen Aral Sea Zone
Ukraine		25.0	12.2	14.3	25	5.5	7.7	25.0	1999	Supply is often restricted
Uzbekistan										
Turkey	99.5	85.0								

Notes

- Armenia Quality is deteriorating
- Azerbaijan 75% of rural water does not meet stds.
- Belarus
- Georgia
- Kazakhstan
- Kyrgyz Many are provided stand pipes only. Outside Bishkek 70% of system is in disrepair. Funds for disinfection are not available.
- Moldova
- Russia
- Tajikistan Quality is deteriorating
- Turkmenistan
- Ukraine Quality is not improving. Cities like Uzhgorod, Lviv, Mukachevo, Mykolayiv have only 4-6 hours of water services p/day.
- Uzbekistan

Table 5: Water Supply Status in the NIS

Source: Various Bank Studies

References

- Auty, R. (2000) *Environmental Capital, Export and Human Capital Accumulation Problems of Resource Based Growth Models*, (Oxford: Oxford University Press).
- Adriaansee, A. (1993) *Environmental Policy Performance Indicators* (Sdu Uitgeverij) Uoningnegracht, The Hague.
- Ballard, C. J. Shoven and J. Whalley (1985), "General Equilibrium Computations of the Marginal Welfare Costs of Taxes in the United States", *American Economic Review*, 75, 1, 128-138.
- Brook Cowen, P.J. (1997), "The Private Sector in Water and Sanitation -- How to Get Started.", *Private Sector*, The World Bank Note No 126.
- Bucknall, J, et al, (2002), *Irrigation in Central Asia: Where to Rehabilitate and Why*: World Bank, Washington DC.
- Daly, H.E. (1989) "Toward a Measure of Sustainable Social Net National Product" pp 8-9 in Ahmad, Yusuf J., El Serafy, Salah, and Lutz, Ernst (eds.) "Environmental Accounting for Sustainable Development" A World Bank Symposium Paper. Washington, D.C.**
- Daly, H.E. (1990) "Toward some Operational Principles of Sustainable Development" *Ecological Economics* 2 pp 1-6.
- Dasgupta P., Serageldin, I., (1999) "Social Capital: A Multifaceted perspective" The World Bank, Washington DC.
- DFID/EC/UNDP/WB (2002), *Linking Poverty Reduction and Poverty Management: Policy Challenges and Opportunities*, World Bank, Washington.
- French, H.F. (1998), *Investing in the Future: Harnessing Private Capital Flows for Environmentally Sustainable Development*: Washington DC; The Worldwatch Institute.
- Gentry, B and L. Fernandez (1998), "Evolving Public-Private Partnerships: General themes and Examples From the Urban Water Sector", in *Globalisation and the Environment: Perspectives from OECD and Dynamic Non-Member Economies*, OECD, 1998, Paris.
- Goodland, R. (1995) "The Concept of Environmental Sustainability." *Annual Review of Ecological Systematics* 26 pp 1-24.
- Johnstone, N. L. Wood and R. Hearne (1999), "The Regulation of Private Sector Participation in Urban Water Supply and Sanitation: Realising Social and Environmental Objectives in Developing Countries", *Discussion Paper 99-01, IIED, London*
- Haarmeyer, D. and A. Mody (1998), "Financing water and sanitation projects -- the unique risks", *Private Sector*, The World Bank Note No 151.
- ICRC (International Committee of the Red Cross). 1999. *Annual Report*. Geneva.
- Lampietti et al, (2002), *Coping With the Cold: Heating Strategies for ECA's Urban Poor*, World Bank, Washington DC.
- Markandya, A. (2003), "Poverty Alleviation and Sustainable Development: Implications for the Management of Natural Capital" in Marcello Basili, Maurizio Franzini and Alessandro Vercelli (eds.), *Environment, Inequalities and Collective Action*, Routledge.
- Markandya, A. and N. Dale (2001). *Measuring Environmental Degradation: Developing Pressure Indicators for Europe*. Edward Elgar: Cheltenham, UK.

5th International Conference on Ethics and Environmental Policies
BUSINESS STYLES AND SUSTAINABLE DEVELOPMENT
Kyiv, April 2-6, 2003

- Markandya, A. and K. Halsnaes (eds.) (2002) *Climate Change and Sustainable Development*, Earthscan: London (2002).
- Markandya, A. and D. Streimikiene (2003) "Efficiency and Affordability Considerations In The Pricing of Energy For Households", forthcoming, *Economic Journal of Development*.
- North, D. (1990) *Institutions, Institutional change and Economic Performance*, New York, Cambridge University Press.
- Olson, M. (1982) *The Rise and Decline of Nations: Economic Growth, Stagflation and Social Rigidities*: New Haven, Yale University Press.
- Panayotou, T. (1998), *Instruments of Change: Motivating and Financing Sustainable Development*, (London: UNEP/Earthscan).
- Pearce, D. W., Barbier, E.W., & Markandya, A. (1990) *Sustainable Development*: Earthscan, London.
- Putnam, Leonardi and Nanetti (1993): *Making Democracy Work: Civic Traditions in Modern Italy*: Princeton: Princeton University Press
- Schuller T. (1999). "Social capital, human capital and sustainable development" Second OECD Expert Workshop, *Frameworks to Measure Sustainable Development*, 2-3 September, 1999.
- UNECE/EC (2002), *The Condition of Forests in Europe*, UNECE, Geneva.
- World Bank (2000), *World Development Report*, New York: Oxford University Press.
- World Bank (2000a), *Making Transition Work for Everyone: Poverty and Inequality in Europe and Central Asia*: Washington DC: The World Bank.
- World Commission on Environment and Development (1987) *Our Common Future*, Oxford University Press, London