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ECONOM... TRANS...ON IN CENTRAL AND EASTERN E...PE A... THE ENVIRONMENTAL DI...SION

DR... REPORT

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I. INTRODUCTION

1. There is little question that the international community has entered an era in which borders, in the broadest sense, are far more porous than even twenty years ago. The intricate web of global interdependencies has never been woven as tightly. Environmental challenges perfectly illustrate this phenomena simply because pollution and its ill effects cannot be contained by human constructs like borders, even though there is still evidence that some countries engage in trans-border environmental dumping. National governments alone are in no position to manage these problems; environmental defence has become an issue in which international co-operation is now essential for environmental as well as for security reasons. Yet, while the chain of policy co-operation must transcend borders, it also must extend downwards to regional and municipal levels and indeed even to the individual.

2. In this respect, environmental defence has emerged as a core issue of transition in Central and Eastern Europe. Environmental defence concerns the most fundamental structures, procedures and cultural precepts shaping democratic political life: an active and constructive policy dialogue among state, civil society, industry, the scientific community and the citizen; relations between the central state and the regions; the critical capacity of the state to ensure that "externalities" - the hidden costs of public goods like defence or a clean environment - are factored into real prices faced by consumers; the need to construct transparent public fiscal strategies to achieve these ends; and relations with other countries.

3. Introducing new concepts into rapidly evolving societies like the notion that polluters pay the cost of the damage they inflict, as well as the general need for openness and transparency represent radical propositions in societies where responsibility for environmental damage was long systematically evaded. But it is nonetheless essential that such concepts be introduced.

4. It is hardly surprising that embracing Western environmental standards has necessitated not only administrative and legal transformation in Central and Eastern Europe, but also fundamental cultural change. Indeed, creating top to bottom systems for environmental defence is an ongoing process rather than an end in itself. It is interesting, for example, that environmental policy experts view environmental education as a fundamental pillar of the transition process. Cultural change is impossible to enact overnight and precisely for this reason, addressing environmental challenges demands both short and long-term strategies. Moreover, as technology evolves, new threats to the environment as well as new clean-up solutions will invariably emerge. Yet, teaching citizens how to be environmentally vigilant will remain integral to any long-term strategy to defend the environment, particularly for countries lacking a strong legacy of environmental stewardship. At the same time, democratic governments must be in a position to take on board their citizens' concerns about the environment and, in effect, learn from them.

5. Environmental matters also have an important and often under-appreciated security component. The location of dams, nuclear power sites and hazardous waste dumps can quickly become the source of trans-border tensions. Moreover, military conflict invariably has a devastating environmental impact that can take years and even decades to clean up. This set of problems has been particularly evident in the Balkans where war aggravated the region's already grave environmental degradation. On the other hand, because of shared trans-border stakes in environmental clean up, it can also provide the foundation to restore dialogue and co-operation. This has been the case, for example, in the Sava River Basin initiative in which several countries - Slovenia, Croatia, Serbia and Montenegro and Bosnia and Herzegovina - signed a framework agreement to begin to co-operate on river water management, flood control and navigation issues. [NATO PA Secretariat Report, Visit to Hungary, September 2004]

6. Environmental cleanup has thus posed one of the most complex and difficult challenges to those advancing Europe's post-Cold War reintegration. The state of the environment throughout

much of Central and Eastern Europe was dire after years of utter neglect at the hands of Communist government rule and Soviet domination. Creating a culture of environmental responsibility where before none had existed has tested not only public policy-makers but also renascent civil societies.

II. THE COMMUNIST LEGACY

7. It hardly needs to be repeated that the economies of COMECON (Council for Mutual Economic Assistance) countries were heavily biased toward the production of steel, cement, chemical and petrochemicals. The Eastern Block accorded a high priority to defence industries, and these industries were highly polluting. Firm managers ran plants to achieve state output targets, not to generate profits - an industrial orientation that places a premium on efficiency and productivity. Production quotas thus lay at the very core of managers' behaviour, and these were to be achieved without any rational assessment of input prices, consideration of alternative manufacturing costs, care for the quality of end products, and the collateral damage inflicted upon the environment in the production process. At best, central plans only paid lip service to environmental targets. The consequences were environmentally as well as economically tragic.

8. State-set energy and resource prices were totally divorced from consideration of the relative scarcities of these commodities, and this, in turn, invariably resulted in highly inefficient consumption patterns. Nature and the environment were simply clumped together with other resources and essentially considered limitless. Clean air, pure water and a pristine environment were viewed as free goods without any real value. (Mnatsakanian) The indiscriminate use of highly polluting energy resources, such as brown coal, which fuelled a broad range of power stations, and widespread use of hazardous materials like asbestos caused considerable environmental damage the costs of which were, at least, officially, ignored, although a high toll was nonetheless exacted from society.

9. In economies structured on such lines, authorities invested very little in environmental knowledge and failed to generate newer and cleaner industrial technology. There were simply no incentives to do so. Pollution fees and regulatory-standards were minimal and only weakly enforced, while civil society was highly restricted and effectively prohibited from demanding environmental transparency and accountability. To make such demands was considered anti-Marxist and even regarded as treasonous. So even then, a link was apparent between the democratic impulse and environmentalism.

10. In most of Central and Eastern Europe as well as in the Soviet Union, large-scale collective farming dominated agriculture. Many European territories of the former Soviet system had been major food exporters prior to Soviet rule, but the lack of market price systems, irrational planning and the absence of real incentives to increase productivity sparked dramatic production falls, that for example, triggered mass starvation in the Ukraine in the 1930s. Attempts to extend the area under cultivation to marginal farmland had disastrous environmental effects as well. The Kazakh grassland was ploughed under and subsequently suffered from enormous erosion while the construction of an irrigation network around the Aral Sea precipitated its depletion. The introduction of heavy machinery and chemical fertilizers in Central Europe engendered soil degradation, erosion and acidification. Large-scale irrigation projects in Eastern Europe resulted in excessive fertilizer and pesticide use and salinization in some instances. Air quality near major industrial regions was a terrible problem and the health effects in cities like Krakow were devastating.

11. For years heavy industry and high emissions of acidifying compounds polluted ground water used in watering crops, and these compounds contaminated food stocks throughout the region. Military bases were a particularly threatening source of contamination as they often are in the

West. The fact that they were abandoned after the Soviet Union's demise hardly stemmed their capacity to sully swathes of the Central and Eastern European countryside with oil products, heavy metals and even carelessly discarded radioactive compounds. Many of these former bases are now dangerous hazardous waste sites and pose a genuine quandary for the region's governments. No comprehensive survey has been done of this problem, but it is clearly quite serious and remains an important fiscal and technical burden on these countries.

12. Fifty years of communist rule also bequeathed a legacy of public apathy that has hindered society's efforts to nourish a culture of vigilant environmental stewardship and accountability. The habit of waiting for government to solve problems sometimes seems deeply rooted in these societies. The public's reluctance to engage government directly in Central and Eastern Europe is sometimes striking to Western environmental experts, some of whom feel that even the region's NGOs suffer from the illusion that government should be both their primary client as well as principal patron. Only gradually are these attitudes beginning to change, and the transformation of these perspectives is probably the cornerstone of environmental protection. (Jehlicka, Kosztolanyi, Wojnarowski and Jefferies) Yet as in Western Europe and North America, there are still powerful vested interests resisting environmentally sound policies and there is also still a proclivity to defer to these interests.

13. Part of the problem is that there is also a genuine lack of public awareness of the seriousness of the environmental challenge in the region. This is not surprising given both the history of neglect and the fact that most people in the region feel that they confront greater challenges than a poor environment. High unemployment, waning social benefits and job insecurity constitute greater daily concerns. Some would even argue that environmentalism is itself a privilege of richer Western societies. This might explain why Green parties are not as strong in political terms in this region as they are in post-industrial, post-modern Western Europe. Green party candidates, for example, won only one seat in recent EU Parliamentary elections. It is not surprising that the German Green MEP, Daniel Cohn-Bendit, characterized the Green movement as the first victim of enlargement. *(Kempf and Cohn-Bendit, Rivais, Jehlicka)* It is important to point out, however, that other parties in the region have nonetheless embraced environmentalism and so the relative weakness of the Green Party movement cannot be interpreted simply as an expression of weak environmentalism in the political cultures of the region.

14. Another problem that the region's governments have been compelled to address involves the lack of coordination between the national government and local actors, whose involvement is necessary to make environmental policies work. Agreeing rules at the national level matters little if regional and local authorities are not apprised of the purpose of these rules, fail to comprehend their own obligations, are not trained to fulfil them and lack the necessary resources to do so. Fostering improvements in centre-regional relations involves far more than the environment; indeed, this is a core policy objective of the democraticisation process in general. In this way, instilling a culture of environmental stewardship is tightly bound to the construction of democratic societies and should be part of the move toward any decentralization of policy-making and implementation.

15. Yet the process is not without certain paradoxes, particularly as much of the pressure for environmental clean up is generated from Brussels. After decades of communist dictatorships and Soviet rule, Central and Eastern European countries harbour a degree of suspicion towards international authority of any kind even when this involves voluntarily pooled sovereignty as it does within the EU. Some had feared that this disposition would complicate environmental transition. But given how far these countries have come in the last decade, and their dedication to European membership, it is clear that the urge to join Europe far exceeds any residual concerns about supranational authority. (Beckmann, Ackerman)

III. THE TRANSITION

16. In fact, all the new members have embraced EU concepts of proper environmental policy and the people of Central and Eastern Europe have collectively made great strides in ameliorating environmental conditions in their countries. The simple introduction of rational pricing structures into formerly Communist states has resulted in a windfall of energy savings and thus injected a certain automaticity into environmentally sound decision-making. Consumers respond much more quickly to price changes, market-, fee- or tax- induced, than they do to public exhortations to conserve energy. In the Communist system, to take one example, it was routine to open windows rather than lower thermostats when flat temperatures became uncomfortably warm. Indeed, most apartments under the old system lacked thermostats, and residents had little choice but to engage in practices which were both uneconomical and environmentally unfriendly. As more and more consumers face individual energy billing, this highly wasteful practice is itself going out the window rather than precious heat.

17. Production methods were also not subject to the fundamental laws of supply and demand, and this often lay behind environmentally debilitating and energy-wasting production techniques. With few environmental regulations and virtually no enforcement, waste was often simply dumped with little controls. And parts of the countryside were littered with toxic chemicals as a result.

18. All of this is changing. Ever more stringent environmental regulations, improving implementation capacity at national and local levels, accurate price signals and especially the closing of the most inefficient industrial goliaths have dramatically reduced emissions including acidifying compounds by 39%, slashed the discharge of organic matter and phosphorous and led to much improved wastewater treatment. (Janiak)

19. Among these developments, the closing of highly inefficient and polluting plants that occurred during the early years of the transition proved particularly important. This was also a period when the first legal, regulatory and administrative environmental frameworks were being laid out. Those frameworks were ultimately modelled on the European Union's *Acquis communautaire*. This body of law and regulation served not only to focus the effort to improve the region's degraded environment but also to lay a foundation for ultimately acceding to the Union. The effort, moreover, was not carried out in isolation; international donors and lenders actively helped the region's governments to construct the kind of environmental infrastructure that had not existed under Communist rule. All of this helped ensure that once growth resumed, which it has throughout the region, it would not be as pollution intensive as before. (Janiak)

20. The Regional Environmental Center for Central and Eastern Europe (REC) in Szentendre, Hungary has played a particularly notable role in this regard, acting as an environmental information clearing house dedicated to instilling the region with greater sensitivity to environmental protection. It has helped local and regional authorities develop capacities to deal with environmental challenges and has worked closely with legislators to develop appropriate legislation consistent with the EU *Acquis*. The REC also played a key role in promoting the Aarhus convention, which ensures access to information, public participation and justice in environmental policy-making. The REC has provided vital support to EU new member states confronting the Union's highly complex environmental regulations and it has fostered reconciliation efforts in the Sava and Tisza river basins where environmental issues have become inextricably linked to national rivalries. Its staff worked with Slovakian officials to develop a national strategy for sustainable development, and has supported post-war clean up efforts in the former Yugoslavia. It has also lent support for efforts to build capacities that allow officials to systematically survey the health effects of environmental conditions in the region and advised on establishing priority investment programs. The REC approaches environmental challenges in a scientific and politically neutral manner and engages not only national governments but also regional and municipal authorities as well as business and civil society groups. [NATO PA Secretariat Report,

Visit to Hungary, September 2004] Its singular success has made it a model for other regional environmental organisations.

21. Measuring the effects of pollution on human health is a very difficult and complex undertaking. It is impossible to say with certainty what the long-term impact of the heavy pollution in some parts of Central and Eastern Europe will be. Figures show, for instance, that there is currently a clear life expectancy gap between Western, Central and Eastern Europe. According to one study, in the late 1980s life expectancy in the region was already 4 to 6 years lower than it was in Western Europe. The gap had widened by the early 1990s. By the end of that decade, male life expectancy in Western Europe was 73 or 74 years, while in Central and Eastern Europe it was usually in the mid to upper 60s. (Hertzman) Of course, one can attribute these gaps to many factors including economic and lifestyle disparities, different healthcare regimes and a range of other factors linked to a highly stressful economic, social and political transition. But a poor environment is certainly part of the picture. Studies in the Czech Republic, for example, have linked heavy pollution to relatively high rates of cancer, low fertility levels, malformed foetuses and serious respiratory infections. (Jønsrund)

22. There have been a number of initiatives to deal with environmental justice issues and these have been linked to broader efforts to reinforce democratic institutions. The governments of Central and Eastern Europe as well as the European Union member governments have all signed the UN Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters. This was adopted on 25 June 1998 in the Danish city of Aarhus at the Fourth Ministerial Conference on the 'Environment for Europe'. The negotiation process itself was highly unique as it engaged civil society groups as well as governments. The Convention came into force in October 2001. Virtually every European government has signed the agreement and at this writing 30 countries have ratified it. Russia has not signed Aarhus and some are concerned that this will deny its citizens access to crucial information about the state of the environment and the impact of certain environmental projects. (Environmental Management in Russia: Status Directions and Policy, World Bank, July 2004, www.worldbank.org.ru)

23. The Aarhus Convention, as it is commonly known, represents an altogether new kind of environmental agreement, linking environmental rights to human rights. It acknowledges, as a starting point, that the present generation owes an obligation to future generations. It establishes that sustainable development can be achieved only through the involvement of all stakeholders. It links government accountability to environmental protection and delineates the obligations of public officials to their publics in environmental matters. It thus focuses on the democratic interaction between the general public and government authorities and it has established a new precedent for public participation in the negotiation and implementation of international agreements. The convention is thus providing a harmonised framework for democratic participation in environmental decision-making, an approach that is broadly facilitating European convergence in environmental matters. (http://www.unece.org/env/pp/) Governments and civil societies now have a powerful tool to advance environmentalism in new and creative ways. Yet Aarhus only establishes minimum standards and does not prevent signatories from creating even more ambitious, open and participatory structures to undergird environmental policy-making. As a result of the convention the EU has drafted new directives governing public access to environmental legislation although how to frame a European approach to access to justice is still a subject of tough debate in EU circles.

24. The Aarhus convention sets up a time frame for information sharing and requires governments to respond to information requests from NGOs, the media and the public within one month of receiving the request. If the government decides to deny the public information request it is obliged to state this in writing along with the reasons why. Public authorities can only refuse to share information if it is determined that to do so would have an adverse effect on the public interest. It also calls for strict pollution inventories, although a number of governments allow

companies to conduct these inventories. But governments, in turn, will need to closely audit these reports.

25. The convention's justice provisions thus extend to citizens the right to challenge government decisions on environmental effects if their own rights to environmental protection are infringed. The convention requires that citizens have access to an appeal system through which transparent, timely, equitable, inexpensive, adequate and effective remedies are available. One of the bottlenecks to implementation of these obligations is the lack of properly trained legal experts. Efforts are now under way to inculcate lawyers and judges in the finer points of the Aarhus convention and the precise implications for domestic law.

26. The ratification of the convention has only been a first step; governments are now obliged to establish procedures and legislation to make the system work along the lines agreed at Aarhus. This has not been easy and has required a degree of capacity-building, public and administrative education and no small degree of trial and error. Doubtless, the standard of transparency laid down in Aarhus will invariably conflict with the natural proclivities of certain ministries, and there have already been incidents in which Environment Ministries have been pitted against other government agencies in struggles over whether certain information should be made public. This has been the case, for example, in Hungary, where a bureaucratic battle has unfolded over the construction of a NATO radar on an environmentally sensitive mountaintop, which environmentalists believe should remain pristine.

IV. EU ENLARGEMENT

27. The prospect of EU membership, however, has proven the most significant external catalyst for upgrading environmental conditions in Central and Eastern Europe, and it is certainly one of the principal reasons why the new member states have moved so much more quickly than Ukraine, Russia, Belarus and the Caucasus, which are not considered prospective candidates at this juncture. Formal negotiations on the Environment Chapter (Chapter 22) between EU member governments and the first applicant countries began at the end of 2000. Negotiations with Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovenia, and Slovakia were closed in December 2002. Members concluded environmental negotiations with Bulgaria in June 2003 and talks are ongoing with Romania. (European Commission, 06/2003, Christiansen and Tangen)

28. The new member countries had to surmount several core challenges in order to qualify for membership. On the legislative front, governments and parliaments had to adopt some three hundred acts related to environmental issues. [Communication from the Commission (97) 2000] These include roughly 70 EU directives with which candidates needed to be fully aligned by the date of accession. These covered products (quality of fuel oil, control of noise from construction equipment), production processes and waste disposal, environmental quality protection (control of dangerous substances), procedures and rights (environmental impact assessment, access to information). (EBRD)

29. The new member countries also had to strengthen administrative structures to enforce this new body of law and regulation. Many regulatory areas, which in EU member states fall under the purview of environmental ministries, were in fact under the control of various other ministries in Central and Eastern Europe. Demanding an unparalleled degree of inter-ministerial co-ordination has, at times, strained the limits of new member states' administrative capacities. Not surprisingly, ministerial understaffing has constituted a serious bottleneck. As late as 2002, the Polish Ministry of Environment had only 300 staff members, very few of whom were intimately familiar with the EU *Acquis*. As late as 1997, Czech authorities had tasked only one civil servant at the Ministry of Environment to work on EU integration and language was initially a genuine barrier to full

co-operation. Of course, the situation has changed dramatically in the intervening period, and more and more environmental experts with critical technical, legal and organisational skills are now involved in the policy-making process both in and out of government. That said, environmental training still needs to be stepped up so that there are sufficient personnel to ensure that high environmental standards are achieved. The development of local environmental administrations, however, is still in its initial stage and clearly needs to be accelerated. The administrative capacity of implementing agencies and local administrations is thus an area where central government and international support will be crucial for years to come.

30. Budgetary constraints have been another serious concern. Fully implementing the environmental *Acquis* will be extraordinarily expensive given the current lack of environmental infrastructure throughout the region. Even defence ministries need to set aside more resources for environmental clean up and protection. Yet, national budgets are tight and will remain so given the acceding countries' obligations to pursue disciplined macro-economic policies. Finding the resources to pay for cleaner environments demands financial imagination as well as fiscal discipline and willpower, particularly in the face of potentially sceptical publics who may want scarce public resources set aside for non-environmental public goods like healthcare or government jobs. Entirely new markets need to be developed to help finance clean-up and prevention as well as to spread risk.

31. Another persistent problem has been the dearth of regional co-operation among the new member states themselves despite their shared goal of EU membership and a cleaner environment. (Jehlicka and Tickle)

32. Finally, as suggested above, the core challenge lies embedded in the very fabric of the region's societies. Communist governments never bothered to cultivate an environmental consciousness in their societies partly because production targets were the end of all economic life. Those societies are now understandably suspicious of any appeals to collective obligations after decades of criminal abuse of such appeals. In a trying period of transition, in which economic survival is for many a daily challenge, it is not surprising that environmental considerations do not rank among the public's highest order of priorities.

33. For all of these reasons, the EU environmental *Acquis* will invariably prove to be among the most technically, financially and politically difficult aspects of European law to implement. Consequently, member governments agreed to transitional periods that will provide time for the new members to achieve full compliance after accession. (European Commission, June 2003, Sciberras) Transitional periods are in place for meeting current EU standards in urban wastewater treatment and safeguards at large combustion plants. Governments were also given extra time to meet waste packaging, industrial pollution prevention and control requirements. The Union, however, refused to lengthen transition periods for transportation standards (as opposed to implementation); all framework directives (e.g., air quality, waste and hazardous waste framework, radiation protection, access to information, environmental impact assessment); nature protection (habitat, birds); the internal market (all product-related legislation); and any new installations, which had to meet all EU compliance standards upon accession. (Danish Environmental Protection Agency)

34. There are residual concerns that as these countries are now full member states, they will slow down their efforts to meet these deadlines. The EU, however, has a palette of options to monitor implementation in new member states. This past May, the EU screened legislative acts in all acceding countries to verify their alignment with the EU directives. In cases of non-compliance, the Commission can undertake infringement procedures, and the cases will then be heard in the European Court of Justice. Reports suggested that all essential legislation had been transposed at the time of accession.

35. Environmental information is a particularly high priority for the Commission. The EU environmental *Acquis* requires members to provide full access to environmental information in order to insure both transparency and an intense and informed public dialogue on environmental matters. Environmental impact assessments of construction projects as well as strategic environmental assessment of plans and programmes are also seen as critical. Consistently undertaking such rigorous studies and putting their results to appropriate uses, however, require significant capacity-building. Skilled assessors are needed throughout the region as well as appropriate equipment, technology and administrative capacities. All of this takes far longer to build up than simply drawing up and passing implementing legislation, which in itself, has been no easy task. So, in many areas, tough and expensive challenges lie ahead.

V. COMMON AGRICULTURE POLICY — THE ENVIRONMENTAL DIMENSION

36. New members are acceding to the European Union at a time when the Union is re-orientating the Common Agricultural Policy (CAP) to make land and environment stewardship one of its core policy objectives. As early as 1992 the CAP incorporated incentives to encourage less intensive farming methods including the conversion of arable land to meadow and pasture, preserving habitat, afforestation and the promotion of organic agriculture. Production subsidies are increasingly being replaced with direct payments, and reforms announced in 2003 have further advanced the environmental dimension of the programme. That said, European farming generally remains highly intensive and relies heavily on monocultures, chemical use and heavy machinery, all of which can exact an environmental toll on the land.

37. Upon accession, the new members will only receive 25% of the agricultural support received by current members from the Union's coffers. Union support will gradually increase and achieve equivalence only in 2013 when, it is presumed, the CAP will have been sufficiently reformed to shoulder the burden of including new members fully in its funding programmes. It will also have to be made more environmentally sustainable. National funding from the new member states can be used in the interregnum to top up Union support, but the budgetary leeway of these countries is obviously limited.

38. European Union environmental regulations are already changing on Central and Eastern European farming. In several important respects, many of the techniques used in the region are less environmentally imposing than those used in intensively farmed Western Europe. Nitrate pollution, for example, is far less of a problem in the rural lands of new members States than in intensively farmed West European farms. That said, significant investment is still needed to bring the new member's farms into compliance with rural environmental standards. Simply bringing manure storage to Union standards will cost an estimated €4 billion.

39. Some environmental groups are concerned that the West European agricultural model will essentially be imported wholesale into the East. Indeed most pre-accession funding has been targeted on modernising agriculture and food-processing rather than on rural environmental protection. Yet, the World Wide Fund for Nature maintains that accession could ultimately help the new members adopt an approach more focused on rural development than on simple production output. Support for rural development strategies, including agro-environmental measures, has already increased significantly throughout the region. The hope is that if the CAP does indeed move in this direction, new members will not need to adopt the production at all costs orientation which has wrought both environmental and economic distortions. (Beckmann) But given the politics of CAP reform and the inbuilt resistance to change, expectations are somewhat less than optimistic.

40. One potential advantage of Central and Eastern Europe may be its endowment of relatively pristine farmland that could be dedicated to organic farming. Hungary's vast Puszta plain, for

example, is equal in size to the Netherlands, and livestock throughout that region feeds off naturally occurring grasslands. This is one region where organic farming techniques should prove a genuine boost to the region's prosperity. (Csagoly) The Puszta may well have a comparative advantage in this ever more important niche market that can potentially bring high returns to farmers. This certainly seems like a more promising and environmentally friendly alternative than, for example, introducing farming techniques based on genetically-altered crops and other more environmentally uncertain methods.

VI. OTHER KEY CHALLENGES

A. FORESTRY

41. Forestry practice in the Baltic States and many sections of Central and Eastern Europe and Central Asia has never been conducted on a mass industrial scale, and this has helped preserve several old growth forests in the region. Preserving the forest is critical because there are very few remaining old growth forests on the continent, and they play a key role in safeguarding bio-diversity, something that reforested land cannot do. Mounting budgetary pressures on governments to privatise pristine forestland might make it more difficult to impose strong land management practices. This is a particular concern in Russia where old growth forests are still relatively abundant.

42. Air pollution, acidification, pest outbreaks, drought and fire are tied to the forestry issue. Air pollution in Central Europe, for example, has resulted in serious defoliation in certain regions of the continent. (UNEP Global Environment Outlook)

B. KYOTO AND CLIMATE CHANGING EMISSIONS STANDARDS

43. Seven of the Central and Eastern European countries that have just joined the European Union have made great progress in achieving their targets for reducing greenhouse gas emissions laid out in the Kyoto Climate Change Protocol. Slovenia is the only one of the acceding countries in Central and Eastern Europe that expects to miss the target, according to the European Environmental Agency. The aim is to bring emissions levels roughly to 8% below base year levels. Base years are generally 1989 or 1990, although several new member states use earlier dates. (European Environmental Agency Press Release, December 2, 2003)

44. Greenhouse gas emissions in these countries dropped substantially after 1990 because of the closure of plants, economic recession and the adoption of increasingly stringent environmental standards, particularly those for automobiles. This decline has been so dramatic that most new member states will have little problem in meeting their target levels. Latvia and Estonia expect the largest emissions reductions of 58.2% and 56.6% from their base years while Hungary will be only 6% below its target level.

45. The positive trend, however, has begun to reverse itself particularly because of the growing automobile and truck traffic throughout Central and Eastern Europe. In the Baltic States, for example, car ownership rose from 118 cars per 1000 people to 150 cars per 1000 people between 1989 and 1993. (UNEP Global Environment Outlook, 2000) The figures today are significantly higher and roughly similar growth patterns are apparent throughout the region. London's successful inner city congestion charge could be a model for transition countries struggling with the sudden rise of urban traffic.

46. There are a number of obligations associated with Kyoto that will be difficult for the countries of Central and Eastern Europe to manage. Capacity-building is still needed in areas like data

collection, the adoption of renewable energy sources, and to support efforts to systematically lower plant emissions as the region's economies begin to take off in order to make that growth more environmentally sustainable. Central and Eastern European countries are still very inefficient energy users and need vast improvements in this area. The fact that most of the region's countries are operating well below the Kyoto emissions requirements, moreover, could reduce the incentives to attack this problem aggressively. Of course, the adoption and implementation of the EU's environmental *Acquis* will help greatly on this front. New member states must also develop capacities in order to participate in European emissions trading structures.

47. It should also be noted that most EU states will miss their Kyoto emission reduction targets by a large margin. Only two countries, Sweden and the UK, are on track to meet the EU's goal of reducing 1990 greenhouse emissions by 8% before 2010, and as a whole the EU is now likely to achieve only a 5% reduction in those levels. According to a recent Commission report, Denmark, Spain, Ireland, Austria and Belgium are the worst offenders with Spain likely to undershoot the target by 33%. (Osborn) Most specialists attribute the problem to dramatically rising road traffic throughout the Union, a trend, which as suggested above, is also evident in Central and Eastern Europe.

48. While the EU has undertaken to meet the Kyoto Protocol greenhouse gas emission standards, the accord is not yet legally binding because several important producers of greenhouse gas, namely the United States and until recently Russia refused to sign up to it. Developing countries like India and China face no immediate obligations to meet the terms of the protocol. Russia itself had argued that the arrangement was potentially too costly, and their refusal to sign has meant that the agreement has not yet been made legally binding on signatories. But very recently the Kremlin indicated that Russia should sign the agreement and if, as expected, the Parliament agrees, than the agreement will go into force. Russian parliamentarians should be encouraged to give their approval to this very important agreement. While the United States would indeed find it very difficult to achieve the Kyoto targets, particularly given the current administration's animus toward environmental regulation, Russia will have little problem in meeting its targets given the decline of its large industrial sector.

C. BIODIVERSITY

49. Over the past century, the pressure on natural ecosystems stemming from rapid population growth, land use changes, pollution, modern agricultural techniques and tourism have had an adverse impact on biodiversity. Climate change threatens even more devastating effects. In many European countries, half of the known vertebrate species are threatened, and migratory birds have lost many of their natural habitats. The problem has been particularly serious in densely populated Western Europe, while in Central and Eastern Europe, many indigenous habitats have survived largely because of lower population densities, reduced levels of industrialisation, and the fact that the region's industries are far more concentrated. Central and Eastern Europe's poor transport infrastructure and lack of economic dynamism during the Cold War limited phenomena like suburbanisation. This effectively left some rural land untouched by developers. Yet the region should not be seen simply as a haven for rare fauna and flora. Far from it. Mega projects like mass water drainage projects destroyed thousands of acres of natural wetlands with adverse effects on habitat. Perhaps the direst example of this in the Eastern bloc as a whole was in the Soviet Union where, for example, the draining of the Aral Sea destroyed unique delta forests and led to a dramatic diminution of species diversity, while sparking a water and surface toxicity crisis that continues to this day. (UNEP Global Environment Outlook 2000)

50. The discussion about biodiversity has shifted in recent years from species and plant protection to habitat stewardship, which, most experts agree is the key to preserving genetic diversity in flora and fauna. This constitutes a serious pan-European challenge, and there is currently a concerted effort to link various protected areas into wildlife "bio-corridors". This involves

numerous initiatives, some as simple as preserving hedges around agricultural fields to create sanctuaries for birds and small mammals. The Ramsar Convention has helped support the preservation of some 300 wetland sites throughout Europe, but wetland loss has continued apace both along the Mediterranean littoral as well as in North Western and Central Europe. The great challenge in preserving biodiversity, as in other environmental fields, is that far too often, short-term economic interests trump the efforts to defend these eco-systems from further attrition.

51. The EU's *Acquis* includes a range of measures designed to preserve biodiversity. Complying with the Birds Directive and the Habitats Directive places new and immediate administrative and financial burdens on authorities from new member states. The new member states will not be extended any transition time in this area and have had to accelerate efforts in nature conservation as a result.

D. WATER QUALITY AND WATER POLLUTION CONTROL

52. EU water legislation covers a wide range of policies and is expected to be among the most difficult and expensive of the EU requirements to implement. Most acceding countries have asked for transitional periods in this area. Hungary, Poland, and Slovenia, for example, have until 2015 to comply fully with the Urban Waste Water Treatment Directive, ten years later than the final compliance date for member states laid down in the Directive. Other demanding water-related acts are the Drinking Water Directive, the Bathing Water Directive, the Nitrate Directive, and a number of rules that address the discharges of dangerous substances. The newly adopted Water Framework Directive requires new members to achieve "good ecological status" and "good chemical status" for all surface and ground water by 2010—a daunting objective that will be difficult to achieve across the region.

53. To take one example, 40% of the wastewater flowing into the Danube from Budapest is untreated. The state is currently building a huge water treatment facility that will address the problem, but the cost is high and the outlays are occurring at a time of serious budgetary tensions in that country. Hungary's Environment Minister told members of this committee that water treatment and improving water quality have been particularly difficult challenges for the state and Hungarian society and that a number of water treatment facilities will have to be built at great cost. (NATO PA Secretariat Report, Visit to Hungary, September 2004) Because the sources of water pollution were often now defunct state-owned firms, the clean-up cost is likely to fall on public authorities. EU drinking water standards may require the governments to move quickly on some of these sites because they are contaminating vital water tables. This problem is hardly restricted to Hungary and is evident throughout Central and Eastern Europe.

54. With a total implementation cost estimated at €15 to €25 billion, the Urban Waste Water Directive is expected to rank among the most expensive. The Drinking Water Directive, in turn, will cost €10 billion. Investment estimates for the remainder of EU water legislation cost significantly less. (Danish Environmental Protection Agency, DG Environment, *Handbook of Implementation*)

E. AIR QUALITY

55. Over the past decade, air pollution policy objectives in the acceding states have shifted from reducing emissions at large industrial installations and coal-burning combustion plants to more complicated scenarios involving increased motor vehicle traffic and other less apparent but nonetheless important sources. Although industrial and energy restructuring associated with the general transition has improved air quality, energy consumption per GDP unit is still roughly five times as high in the acceding countries as in member states. Solid fuels like coal and wood are still widely used, and this helps drive air pollution to unacceptable levels despite the relatively lower level of industrial activity in the region. Waste is often eliminated through unregulated incineration,

which creates serious air quality problems. Thus there remains a great deal of room for slashing emissions further.

56. EU member governments recently adopted a stringent air quality framework directive, and new members in most cases will have the same amount of time to comply as members states. New member states were expected to meet internal market measures (car emissions, fuel quality) immediately upon accession. In some respects Central and Eastern Europe have one advantage in the sense that there is relatively high public transportation usage throughout the region, although car sales are rising. The challenge to these societies will be to preserve and indeed expand these public transport networks to provide viable alternatives to highly polluting automobile transport. Investment totalling an estimated €10 billion is needed to implement the Large Combustion Plant Directive.

F. WASTE MANAGEMENT

57. Acceding members have a great deal more work in the field of waste management to comply with EU standards. Most of the region lacks the facilities to treat and dispose of existing waste streams. Several countries lack proper collection systems, illegal dumping is widespread and generates income for criminal groups, and clearly more systematic recycling programmes are needed. Efforts are also needed to work with manufacturers to reduce packaging waste, which poses one of the great headaches for municipal authorities responsible for dealing with discarded plastics etc. Another option is to find new uses for industrial waste; for example, using slag in cement products. The total cost for acceding state compliance with the Waste Management Directive is estimated to be €13 billion. The Rotterdam and Stockholm conventions both outline guidelines for dealing with persistent pollutants. A key challenge here involves translating international decisions to local policy choices while ensuring that local concerns are understood at the national level. In other words, top down and bottom up approaches are needed. For example, Hungary has closed one third of the 1300 municipal dumpsites in the country. The goal, however, is to keep only 42 open and this suggests that Hungary still has a great deal of work to do on this front. Similar problems are evident throughout the region. (NATO PA Secretariat Report, Visit to Hungary, September 2004.)

G. INDUSTRIAL POLLUTION

58. Although the closure of many heavily polluting industrial plants has delivered a much-needed reduction in industrial pollution, many surviving plants are still polluting well above acceptable levels. The Integrated Pollution Prevention and Control Directive (IPPC) governs industrial pollution controls within the European Union. Meeting the requirements of the IPPC Directive by the 2007 deadline for existing plants represents one of the more daunting aspects of EU environmental legislation. Compliance will likely require investments totalling an estimated €20 billion.

59. The EU framework law on classification, labelling and packaging of dangerous substances seeks to harmonise national laws controlling an estimated 100,000 chemicals. There are also several international environmental conventions concerning chemical controls. The new member states have had to adapt and implement a very daunting array of new regulations in this area, employ skilled professionals and develop tools to enforce these rules including a far greater capacity to test chemicals.

H. NUCLEAR SAFETY

60. In its Agenda 2000 report, the European Commission expressed serious concerns about nuclear safety in Central and Eastern Europe. The existence of several Soviet-era plants built to

the same low safety standards as Chernobyl raises a particularly compelling set of concerns. The 1999 Cologne and Helsinki European Councils stressed the importance of setting very high standards for nuclear safety in the enlargement process. Nuclear plants in new member countries, which cannot meet the EU standards will have to be closed down (Ignalina in Lithuania, Bohunice in Slovakia, and Kozloduy in Bulgaria). The decommissioning of these plants is enormously costly, not only for all the obvious technical reasons, but also because alternative power sources have to be found and developed. Upgrading radioactive waste management and decommissioning retired reactors like the massive Ignalina facility will cost at least €1 billion. Upgrading reactors to make them compliant with European standards will carry a price tag of roughly €2 billion. (Axelrod) There are also security concerns given the apparent market for nuclear materials among terrorist groups; users must therefore ensure strict monitoring controls over nuclear waste materials and waste sites not only for environmental reasons but also for security purposes.

Country	Plant name	Reactor type	Expected closure date
Lithuania	Ignalina 1	RBMK 1500	by 2005
Lithuania	Ignalina 2	RBMK 1500	before 2009
Slovakia	Bohunice A1	HWGCR	Shut down in May 1979
Slovakia	Bohunice unit 1	VVER 440/230	2006
Slovakia	Bohunice unit 2	VVER 440/230	2008
Bulgaria	Kozloduy unit 1	VVER 440/230	before 2003*
Bulgaria	Kozloduy unit 2	VVER 440/230	before 2003*
Bulgaria	Kozloduy unit 3	VVER 440/230	2006
Bulgaria	Kozloduy unit 4	VVER 440/230	2006

* reactor was shut down on 31/12/02
(http://europa.eu.int/comm/energy/nuclear/decommissioning/candidate_en.htm)

61. In August 2000, the Lithuanian government approved a National Energy Strategy, which incorporated a decision to shut down one of the Soviet reactors before 2005 and to announce at the latest by 2004 when the second reactor will close. The EU expects the last unit will be closed by 2009. An estimated €250 million will be needed to decommission these facilities. As Ignalina currently provides 70% of the country's power, the greatest challenge lies in finding alternative and cost-effective energy sources. Some EU member governments worry that now that the new members are in the club, they might be inclined to delay the scheduled closings to which they have agreed.

VII. FINANCING AN EXPENSIVE ENVIRONMENTAL TRANSITION

62. The EU has been providing all manner of environmental assistance to Central and Eastern Europe since 1989. It initially offered funding through the Phare programme. Since 2000, the accession process itself has driven the EU's efforts in assisting the new member states on the environmental front. The goal has thus not only been to help the countries to deal with their environmental problems, but to narrow as rapidly as possible the gap between candidates and members. These funds have been channelled through the Instrument for Structural Policies for Pre-Accession (ISPA).

63. ISPA has an annual budget of €1,040 million, which is split between major environmental and transport infrastructure projects. It will grant over €500 million per year for environmental investments over the period 2000-2006. Structural assistance for the new member states for 2004-2006 amounts to €22 billion. ISPA resources have been tentatively allocated among the 10 acceding countries employing a formula based on population, per capita GDP, and land surface area.

64. After accession, first round accession countries will also have access to Structural and Cohesion Funds that are used to reduce disparities between wealthier and poorer regions of the EU. Environmental projects will be eligible for funding under this programme and could consume a fair share of the fund budget. Acceding members will not receive the levels of cohesion funds that were made available during the last enlargement. Although Spain and Poland have roughly the same population levels, Poland will receive between €156-€192 per capita a year through the ISPA, while Spain has received between €842-€892 per capita a year in funding. The Structural Funds available to all member states after accession will have a budget of €213 billion for the period of 2000-2006, or roughly €35.5 billion per year. On the face of it, this hardly seems fair and it may not be realistic.

65. Indeed, complying with a litany of rigorous EU environmental standards will be costly for the new members. The EU has said that the new members will have to cover at least 90% of these costs with their own sources. Each of the new member states has accordingly established environmental funds to leverage financing for environmental purposes. Expenditure on environmental protection has increased in the new member states, but according to Commission estimates, it meets only a fraction of their needs. The Commission is convinced that new members will have to spend on average between 2 and 3% of GDP in the coming years to fully implement the *Acquis*. But estimated investment needs differ considerably between countries: from 2% for the Czech Republic to 11% for Bulgaria. Currently, GDP investment expenditure ranges from 0.6% to 3%. Economists argue justifiably that the greatest share of the financing burden properly lies with polluters or owners of polluted lands. Undoubtedly some of this financial burden will fall on regional and municipal governments and will put strains on local financing as well.

66. According to some observers, new member states have already experienced difficulties in absorbing pre-accession environmental funding which were much smaller than the subsidies they receive as of May 1, 2004 accession. (Janiak) The World Bank had also urged Central and Eastern European governments to shop around for less costly solutions while appealing to the EU to show some flexibility in matters pertaining to whether new members are in a position to meet the full letter of certain directives. But the Union has insisted that differentiation cannot be tolerated, although transition periods have been agreed.

67. Thirteen investment-heavy directives dealing with water supply, wastewater treatment, waste management, and air pollution controls are largely responsible for the daunting price tag of environmental conversion. But there are also striking administrative challenges which have necessitated significant and costly governmental reorganization as well as a broad array of social initiatives in areas like environmental education, training, research and development, planning and the systematic engagement of civil societies in the decision-making process. (McGuinn)

68. Private lending has become an ever more important source of financing for environmental upgrades. Co-financing arrangements pooling public and private funds are playing a growing role in environmental project finance. Given the budgetary pressures under which Central and Eastern European governments are currently labouring, it is very clear that unearthing private funding solutions will be essential to achieving full convergence with the EU's environmental *Acquis*.

69. Among the current members states, Dutch, British, and German assistance programmes have played a particularly prominent role in providing much needed technical assistance to the new member states. The Swedish and Finnish assistance programmes have also provided critical funding for the Baltic States. Non-EU donors such as Norway, the United States, Switzerland, Canada, and Japan continue to support key environmental projects in the region. (European Commission, "The Challenge of Environmental Financing", Lobjakas)

70. The World Bank was a major source of environmental financing in candidate countries. Yet it has begun to shift its financing activities to the less economically developed CIS (Commonwealth of Independent States) and the Balkans. The Bank began underwriting the region's environmental agenda in 1993 through its Environmental Action Program for Central and Eastern Europe (EAP). Over the last five years (1999-2003), the Bank has spent $377 million on rural development and environment in South-Eastern Europe alone. It has also provided non-lending services, including advice to EU-accession countries on cost-effective strategies to comply with EU environmental regulations. (World Bank, *Rural, Environment, June* 2000)

71. The EBRD (European Bank for Reconstruction and Development) has made underwriting solutions to environmental problems a critical priority. By the end of 2000, the Bank had begun to disburse financing for over 660 projects, 262 of which had an environmental component. In 2002 the EBRD provided more than €558 million to underwrite 13 projects designed to improve municipal environmental infrastructure and bolster energy efficiency. In 1998-99, it joined with the EU and other international lending institutions to mobilise €900 million to invest in transport and environment projects. (EBRD, "EBRD's Role in...")

72. One liberal critique of concessionary lending from international sources is that they impede the development of normal capital markets by distorting relative loan prices. Yet, EU enlargement is now compelling firms in new member states to comply with normal competition rules, which generally proscribe financial arrangements that distort international competition. Yet when the environmental advantages are clearly spelled out, it seems reasonable to allow for a degree of concessionary funding.

VIII. COSTS AND BENEFITS

73. A recent study estimated that the annual contribution to the economy of implementing all EU directives relative to the environment will range between €12 to €69 billion or between €80 to €410 per capita. From the moment of accession until 2020, the cumulative benefits will amount to between €134 and €681 billion. Improved air quality accounts for around 55% of the total value of these benefits. EU studies also suggest that while stricter environmental rules might lead to some job losses, other jobs will be created within the sector. One such study estimates that implementation of the *Acquis* will generate 1.8 million jobs across the new member states. (ECOTEL)

74. Central and Eastern Europe are undergoing rapid economic expansion and there are risks that if not properly managed this could generate new environmental challenges. There are some concerns, for example, that public transport may begin to suffer, as the Western automobile-centric transportation model is imported lock, stock and barrel. As suggested above, the emergence of mass consumption societies is already adding new environmental burdens. The

governments of the region need to consider carefully how to manage challenges like the explosion in plastic packaging with all the burdens this poses on waste-management infrastructure. In the same way, accelerating urbanisation will strain water management and garbage disposal infrastructure and the budgets that underwrite them. Environmentalists are also warning about the risks associated with the rise of mass tourism in the region, which could pose new environmental problems in protected areas. Sustainable tourist models are thus needed so that tourist development does not ruin what it seeks to exploit.

75. There is also a danger that the Common Agricultural Policy will artificially stimulate intensified agriculture practices in the new member countries. Much hinges on whether the EU follows up on promises to adopt farming models premised on balanced rural development as opposed to spending programmes that currently encourage highly intensive and environmentally taxing production. Food production must be balanced against other rural functions including tourism, water purity, flood management and overall ecological stability. This vision of the role of the countryside has not exactly captured the public's imagination in acceding states and sometimes seems to be given only lip service in the West. Sustainable agricultural practices based on traditional methods are already present in some parts of Central and Eastern Europe, but the compelling question is whether the positive aspects of these methods can survive the enlargement.

IX. RECOMMENDATIONS

76. Poor environmental conditions often go hand in hand with poverty and conflict. Thus no overall framework for affecting positive environmental change is possible without recognising the need for a multifarious approach involving social, economic, technological, and democratic change. Moreover, security and diplomatic considerations must be factored in as well. The fact that the new members of the EU have been engaged in a genuinely profound transition in all these areas offers the greatest hope for positive environmental change.

77. Perhaps the greatest environment policy challenge in Central and Eastern Europe lies in changing the environmental culture. Defending the environment requires the active engagement of all citizens from the very young to the very old. The educational challenge is daunting. The communist legacy is one of almost total disregard for the environment. This meant that there was virtually no public education regarding collective obligations for proper environmental stewardship. That heritage is onerous; not only because of the shattered environmental landscape that the communist production system bequeathed Central and Eastern Europe, but also because of the mindsets it created. Inculcating the peoples of Central and Eastern Europe in an awareness of their collective and individual obligations to improve the environment and ensure that those improvements are enduring has not been easy. Public education will therefore remain central to the long-run effort to improve the environmental situation in Central and Eastern Europe. Leaders too need to be educated about the environment and their national economic stake in ensuring sustainable development policies. They should see environmental activism as a sign of democratic strength rather than weakness. Of course, this is also true in Western Europe and North America. In any case, there is a great deal of room for trans-border and indeed transatlantic co-operation on these fronts.

78. More work is needed to support environmental education in schools. The Regional Environmental Center in Szentendre, Hungary has done pioneering work on developing environmental curricula for schools systems in Central and Eastern Europe. Poland has adopted much of this programme, as have a number of local and regional school systems. These are models that can be of great use in the West and in the developing world as well, and parliamentarians should consider ways to advance the teaching of environment both locally and globally. The work of the Regional Environmental Center (REC) in nurturing environmental

transition in Central and Eastern Europe has been invaluable, and NATO member governments should continue to support the REC's work. The REC model has been so successful that efforts to recreate it in other regions of the world should also be supported.

79. Positive environmental change will therefore not unfold unless societies embrace change. Enduring partnerships must be struck among national, regional and local governments, international lenders and donors, NGOs and other representatives of civil society. It is critical as well that individuals come to feel that they have a role to play. Weaving resilient chains of co-operation among all of these actors is critical to fostering sustainable environmental development. There is an urgent need to inform ordinary citizens that their private choices carry an enormous potential for improving the quality of the environment in their countries or worsening it. The Aarhus Convention provides an innovative international framework for engaging citizens directly in environmental policy-making and stewardship and for ensuring environmental justice. It needs to be fully implemented and enforced. Local officials and citizens must come to a better understanding of the international context of environmental policy just as national statesmen and government officials must be more sensitive to the concerns and problems at local levels of public life.

80. Regional environmental projects that transcend national borders and traditional hostilities can help foster dialogue and instil a habit of trans-border co-operation. But environmental matters are also, at times, the source of international tension. Members of this Committee, for example, learned at the Regional Environmental Center that the arsenic spill in the Tisza River precipitated real tensions between Hungary and Romania. At the same time though, environmental rehabilitation projects can bring together old rivals. This has been the case in the Balkans, where, in the wake of the terrible wars that tore apart that region, the environment represented one policy area on which agreements could be hammered out early on. In this sense, regional environmental initiatives can play a critical role in fostering regional reconciliation. In cases of post-conflict reconstruction, therefore, the international community should recognize this dynamic and include environmental rehabilitation as a core priority area. This is particularly the case when the health of thousands may depend on proper water treatment facilities.

81. Ongoing efforts to improve environmental conditions in Central and Eastern Europe must strive for low-cost solutions where these are possible. Upgrading environmental education is only one of many such methods. The burdens of transition are enormously daunting, and creative efforts are needed to achieve environmental objectives in low-cost ways. Indeed, high technology fixes are not always the most appropriate way to deal with costly environmental challenges in societies that already confront enormous fiscal burdens. Some flexibility in methodology and meeting target dates may therefore prove necessary. Public and private partnerships, co-financing and other innovative financial arrangements must also be further developed to meet the Union's ambitious environmental targets.

82. That said, every effort should be made to ensure that those new members who have agreed to close down nuclear facilities adhere to the originally agreed schedules. Efforts to find alternative sources of energy must be stepped up because Europe cannot live in the shadow of unsafe nuclear plants.

83. Complying with higher environmental standards is not simply a matter of accepting new costs. It also presents new business opportunities in burgeoning new sectors that are hastening technological change. Efforts to conserve energy and raise the proportion of GDP produced relative to energy use can bring enormous economic and balance-of-payments benefits. This is particularly the case if one considers that energy prices may well be undergoing a long term structural rise because of demand and supply trends. The countries of Central and Eastern Europe like those of the rest of the OECD need to embrace opportunities to increase their energy efficiency, not only for the environmental benefits it will yield, but ultimately for the economic ones

as well. It is time for the notion of sustainable development to be taken seriously and put into practice. This must necessarily involve efforts to reduce dependence on petroleum and to seek a greater role for alternative energy sources.

84. Although the West has made important environmental progress in recent decades, its own record is far from perfect. There are, for example, countless examples of EU member government violations of the Union's environmental standards and even defiance in the face of EU warnings. Reports of widespread illegal dumping in southern Italy, the UK's persistent nuclear sludge problem, Belgium's bottom ranking in the United Nation's first World Water Development Report and mass bird hunting throughout Europe are but four of many examples. (Edmondson *et al*; World Water Quality Report) The recent easing of a broad range of environmental controls in the United States and a set of energy, commercial and regulatory policies in that country which can effectively encourage people to commute to work in very large vehicles including Hummers (military transport vehicles now being sold to individuals) - a policy that only increases American dependence on Middle Eastern oil while further boosting air polluting emissions, (Hopkins) - suggest that the problem is not restricted to Europe. The West clearly has ample room for improvement. Along those lines, Western countries will need to work hard to achieve the benchmarks laid out in the Kyoto Protocol to lower air pollution levels. Continued efforts are also needed to encourage the United States government to accept the now overwhelming scientific evidence of climate change, to sign the Kyoto Protocol and to work to encourage the developing world to participate in the effort to achieve lower greenhouse gas emissions.

85. Environmental capacity-building poses a big challenge for the new member states particularly at local levels. This is an area where continued international support can be very useful. Indeed, sharing municipal experiences might be one way to lend support. Developing personnel training and exchange programmes would also be valuable. This would be a particularly helpful focus for city "twinning" programmes that bring municipal authorities from Central and Eastern Europe together with their Western equivalents. Western municipalities have developed a wealth of knowledge about planning partnerships through which building permissions are extended to businesses in exchange for promises that those firms will help improve the local environment. Such quid pro quos are a real building block to environmentally sustainable development.

86. As Turkey moves towards EU accession, it should take on board the environmental lessons learned by the Central European states. The Regional Environmental Center, for example, has launched a major initiative with Turkey to make use of this collective learning experience as it reinforces its institutional capacity and revamps its legislative and regulatory frameworks in the environmental arena. Moving farther afield, there are also many lessons to be learned by countries in Eastern Europe, the Caucasus and Central Asia that while not likely candidates for EU membership, nonetheless need to implement environmentally friendly transition strategies. Special attention needs to be paid to the countries of the former Yugoslavia, which must deal not only with a legacy of environmental and economic mismanagement but also the ill effects of state disintegration, war, persistent regional tensions, and daunting economic problems. All of this has not only made environment a genuine casualty of Balkan tensions but also a building block for reconciliation.

87. Much of Central and Eastern Europe will be experiencing rapid economic growth over the next decade. The region's leaders have one advantage in the environmental field that their Western counterparts may have lacked: they have the benefit of hindsight. They need to learn from the mistakes that all too frequently have been made in the West. To take one example, for years, many Western public transport policies were biased toward the use of the automobile. In some instances, old rail lines were paved over and the environmental costs of car use and road construction were expunged from the prices that consumers confronted. This heavy bias toward the car is no longer tenable in major urban centres. As Central and Eastern Europe embarks upon a period of rapid growth, its leaders should take these lessons on board, and do what they can to

make this growth environmentally as well as economically sustainable. According to an EU-report, the European Investment Bank financed 58 transport projects in Central and Eastern Europe between 1990 and 1999, spending approximately €4.9 billion. Of this amount of money, around 65% went to roads, 27% to railways, 6% to air transport and 2% to ports. Western donors might consider setting funding priorities with a higher degree of environmental sensitivity to encourage the development of environmentally friendly transportation networks and the use of renewable energies like wind and solar power. New members, in turn, should set a goal of leapfrogging their Western partners by ensuring that environment remains a key priority even at this relatively early stage of their economic take-off.

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