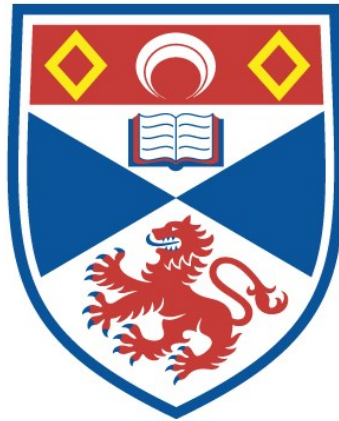


CENTRAL AND EASTERN EUROPE IN TRANSITION:  
PROSPECTS FOR SUSTAINABLE DEVELOPMENT

Patricia A. Buchanan

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at the  
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DEVELOPMENT**

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Degree of M.Phil.  
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30 September 1994**

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### ABSTRACT

This dissertation seeks to describe and analyze the problem of environmental degradation in Central and Eastern Europe (CEE) in the context of international relations theory. Using the concepts of sustainable development and the theory of the commons, this analysis seeks to broaden understanding how the degradation occurred and how further degradation may be avoided in the future. It begins by explaining the global environmental debate, into which the states of CEE have not quite been incorporated. It then explains how, prior to the 1989 political changes in the Soviet bloc, the planned economies of CEE were characterized by an emphasis on heavy industry, high output, and the use of less energy-efficient fuels such as brown coal. The lack of a pricing mechanism to reflect relative scarcity of natural resources, along with the use of outdated industrial technology, both contributed to an overuse of natural resources. The effect on the environment has been significant. A survey of environmental pollution, as well as human health data, which may be relevant, provides empirical evidence. Finally, a review of multilateral assistance to the region shows that the international community is taking a part in the attempt to set the region on a path to sustainable development, as well as to curb potential transboundary pollution and further degradation of "the commons."

I, Patricia A. Buchanan, hereby certify that this thesis, which is approximately 40,000 words in length, has been written by me, that it is the record of work carried out by me and that it has not been submitted in any previous application for a higher degree.

Signature of Candidate \_\_\_\_\_ Date 30/9/94

I was admitted as a student into a taught course at the University of St. Andrews in September 1992; in April 1993 (after recovering from an illness) I shifted to become a research candidate for the degree of M.Phil.--old rules. The higher study for which this is a record was carried out in the University of St. Andrews between April 1993 and September 1994.

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I hereby certify that the candidate has fulfilled the conditions of the Resolution and Regulations appropriate for the degree of M.Phil. in the University of St. Andrews and that the candidate is qualified to submit this thesis in application for that degree.

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# Introduction

In late 1989, members of the Western world watched as citizens of East and West Berlin dismantled the Berlin Wall, symbolizing the collapse of the Soviet Union's power, military might and regional economic system. As intellectuals and political commentators pondered "the end of history," visions of a new central and eastern Europe (CEE)<sup>1</sup> took shape. In the West, particularly, visions emerged of a Europe without a need for American troop deployment, North Atlantic Treaty Organization, Warsaw Pact or economic and political borders. For much of the world community, peace, prosperity and democracy for the former Eastern Bloc states were the hopes of the day. Even the European Union (EU), then the European Community (EC), had high expectations for integration of CEE into the Western capitalistic system, and within two years had established association agreements with some states as a precursor to their economic, political and cultural integration into the Community.<sup>2</sup> Yet despite the EC's actions, as well as other initiatives that took place to aid CEE in its transition to market-based economies, major changes were occurring, and had already occurred, in CEE which made it clear that integration would not come quickly. Democracy and integration could only follow economic restructuring, and the social, political and economic difficulties encountered since the political changes of 1989 have shown that the challenges the states of CEE faced in transforming their command economies to market systems was somewhat underestimated. The removal of Soviet power opened up a Pandora's box of ills in the region, complicating, and in some cases crippling, the reform process. In Yugoslavia, economic dislocation and long-suppressed ethnic animosities escalated into clashes which resulted in a devastating civil war that would break up the state, and age-old ethnic problems led to new international tension such as that between Greece and Yugoslav Macedonia. The division of Czechoslovakia into two states led to a rude awakening for Slovakia, where uncompetitive industries prevented the country from progressing toward its goal of becoming a strong state. In Poland and Hungary, already unmanageable foreign debt deterred borrowing for potentially profitable projects, and disputes over water resources increased tension between Hungary

and the new Slovak republic,<sup>3</sup> thus forcing the two states to contemplate complex changes in political status, international relationships and sovereignty. In the Russian Federation, disaffection with Russian President Boris Yeltsin's political style and pace of economic reforms contributed to an unsuccessful coup d'etat in October 1993 when members of parliament tried to oust him from his position. The October events harked back to another unsuccessful coup in the summer of 1991, which marked the beginning of the end of the Soviet union itself, finally dissolved in December 1991. Conflicts between states such as Armenia and Azerbaijan, and bloody civil wars such as the one in Georgia, would push economic transformation down on the list of priorities.

One problem in the region underlying all the others, both literally and figuratively, has been the problem of environmental degradation. During the 1980s, but particularly after the political changes in 1989-1990, information became available which showed that virtually every state in CEE had pockets of environmental pollution which over the decades had become so severe as to affect the quality of life of many of the region's inhabitants.<sup>4</sup> While it is difficult to prove a direct link between environmental degradation and poor public health (in part due to high rates of smoking and other lifestyle characteristics), World Health Organization data indicate that the prospects for people living in central Europe are the bleakest in the industrialized world.<sup>5</sup> For instance, in Hungary in 1991, life expectancy at age one was 69.5 years, compared with France's, which was 77.1 years, and Sweden's, which was 77.2.<sup>6</sup> Another key health indicator for the same states, infant mortality, also indicates lower quality of life in CEE compared with the West. Infant mortality per 1,000 live births in Hungary in 1989 was 15.74, compared with 7.54 in France, and 5.77 in Sweden. Deaths from diseases of the respiratory system (ages 0-64), an indicator that may be cautiously viewed as representative of environmental quality, show a similar trend. Deaths from respiratory diseases amounted to 20.33 per 100,000 in Hungary in 1989, compared with 8.06 for France and 7.50 for Sweden.<sup>7</sup>

Environmental damage in Central and Eastern Europe can be traced to the command economy and its impact on the distribution and utilization of resources.<sup>8</sup> After World War II when the Soviet Union

was extending its sphere of influence to CEE and command economies were established, resources became subject to a hierarchical system of distribution, and government ministries within each state formed an umbrella for enterprises under their jurisdictions. As a result, materials such as coal were often transported long distances to fuel industries created to fulfill output quotas set by governments rather than by the market. With activity governed by high output targets and prices of raw materials bearing little relationship to relative cost and scarcity, the quantity of energy resources procured and consumed were often not the optimal amount required for production of a particular product.<sup>9</sup> Pressure to meet, and even exceed, ambitious production targets prompted ministries to develop their own, often expensive, sources of energy. This contributed to a delay in the transformation from solid fuels to cleaner and more efficient oil and gas.<sup>10</sup> Much of the sulfur dioxide and nitrogen oxide emissions in CEE is attributed to the burning of brown coal, which has a higher sulfur content and as little as half the energy yield of harder coals.<sup>11</sup> Energy consumption data show that command economies generally used about twice as much energy per inhabitant as market economies with comparable per capita GDPs, and twice as much energy per unit of GDP as either the Third World or the Western industrialized economies.<sup>12</sup> Environmental problems were compounded by the dumping of industrial waste containing heavy metals and toxic chemicals into soil and waterways.<sup>13</sup>

The environment did not go totally unrecognized by the CEE states as an asset worthy of protection. Environmental laws were technically in force in some states as early as the 1960s, becoming more targeted in the 1970s, and state institutions were assigned to deal with the environment.<sup>14</sup> However, the laws went largely unenforced in part due to the seemingly contradictory role the state would have had to play by fining its own enterprises.<sup>15</sup> In the 1980s, the years following the Chernobyl nuclear power plant disaster were marked by increased public participation in groups aimed at making CEE's environmental problems known internationally.<sup>16</sup> In a time of deteriorating economic conditions, activity among non-governmental environmental groups was one of the only tolerated forms of political protest. The efforts of these non-governmental organizations (NGOs) served to expose details which exposed decades of exploitation of the air, water and soil by the region's

industries. In Bulgaria, public outrage regarding intense transboundary air pollution from Romania into the town of Ruse led to the formation of the Committee for Environmental Protection of Ruse. Though short-lived, the committee provided a precedent for a larger group called Ecoglasnost which played a key role in the fall of the political leadership in 1989.<sup>17</sup> In Hungary, the existence of nature protection organizations as early as the 1970s were the precedent for the broad protests in the 1980s against the joint Hungarian-Czechoslovak construction of the Gabčíkovo-Nagymoros Dam on the Danube river.<sup>18</sup> In 1989, the Hungarian environmental movement, which included a broad cross-section of the general public, succeeded in pressuring the Hungarian government to abandon its end of the dam project.<sup>19</sup>

The movements of the 1980s were significant as catalysts in the transition toward more open societies. Yet amid the economic and political upheavals in 1989, green movements across CEE experienced a rapid "ungreening;" as soon as other forms of political protest became acceptable, economic concerns began to take priority at the expense of environmental concerns. Those involved in environmental advocacy organizations such as Bulgaria's Ecoglasnost by necessity had to shift focus to deal with the larger issues of political and economic change. In the winter of 1989-90, Ecoglasnost had membership of about 70,000, but in the few years following, during which time the group joined the coalition seeking to depose the communist government, Ecoglasnost's membership dwindled to between 8,000 and 9,000.<sup>20</sup> In Hungary, too, the environmental movement which succeeded in disengaging the country from the Danube dam project disintegrated not long after the battle was won, and as soon as the challenge of economic and political restructuring began.<sup>21</sup> Government environmental priorities had also shifted: in Slovenia, the Slovenia Environmental project, a government program to address high-priority ecological problems with financing from the World Bank, was shelved as the political turbulence of 1991 commanded attention elsewhere.<sup>22</sup>

The waning of support for green movements in CEE does not obscure the fact that the environment is in need of rehabilitation, and that careful planning must be undertaken to avoid repeating the mistakes of the past. The task of transforming centrally planned economies to market economies is huge: the necessary legal institutions must be set up, finance industries developed, other

industries dismantled or privatized and social guarantees established for those displaced as a result of economic restructuring. Managers need training, ministries need streamlining, and most of all, the region needs foreign investment. The struggle between economic development and the achievement of environmental quality is ever-present in CEE as the states of the region strive towards integration into the world economy, and particularly integration into the EU, which has stringent requirements for accession.<sup>23</sup>

CEE's transition comes at a time when Western states are also evaluating the route they have taken to economic development. The 1992 United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro had as its focus the achievement of *sustainable development* by both industrialized and developing states. The idea of sustainable development first emerged in 1980 in the *World Conservation Strategy* (WCS), produced by the International Union for the Conservation of Nature, World Wildlife Fund, and the United Nations Environmental Program. WCS was widely seen as having neglected economics in its discussion of conservation.<sup>24</sup> Our *Common Future*, also known as the Brundtland report after its chairperson Gro Harlem Brundtland, the Norwegian prime minister, rectified this somewhat by including input from economists and seeking to integrate economic planning and environmental management.<sup>25</sup> The Brundtland Report, which many now see as the primary text on sustainable development, makes little mention of CEE, perhaps because it was written in the early 1980s before much of the information on CEE pollution became available. Yet much of what the report covers can be applied to CEE, particularly its oft-quoted declaration: "Sustainable development seeks to meet the needs and aspirations of the present without compromising the ability to meet those of the future."<sup>26</sup> Other aspects of the report which can be applied to CEE include its position that "in the final analysis, sustainable development must rest on political will."<sup>27</sup> With continuous challenges and difficulties regarding economic restructuring, political will on the part of the CEE states themselves will be crucial in determining their paths to development.

Pearce, Barbier and Markandya, in the Preface to their book *Sustainable Development: Economics and Environment in the Third World*, maintain that the subject of sustainable development is "fuzzy," with "no neat solutions."<sup>28</sup> One of the reasons for the

perceived amorphousness of the concept may be the difficulty many social scientists inevitably have in coming to grips with the multiple subjects required to execute a balanced analysis of the nature and scope of the issues concerning sustainable development. This is particularly true for the states of CEE, where transformation to pluralist market-based societies has required political resiliency, cultural adjustment and major social sacrifice. Any study which identifies the need or prospects for sustainable development must first define the term, and second, must examine the political, economic and social ingredients of such a condition. The "Tragedy of the Commons" theory, originated by Hardin in 1968, considered along with sustainable development can enhance our understanding of how pollution occurred and how similar patterns of growth can be avoided in the future. The theory of the commons seeks to provide an explanation for how and why humans allow problems such as pollution and depletion of natural resources to occur.<sup>29</sup> An understanding of the commons allows us to conceptualize pollution's effect on such natural resources as air, oceans and outer space.

Viewing the problem of environmental degradation in CEE in an international relations context allows us to link the region with the other states and regions. Pollution is by nature transboundary, which means environmental degradation in CEE may be shared with neighboring states, or, in the case of the Chernobyl disaster, other regions. The nature of CEE's problems puts it in a situation of dependency on wealthier states for technical and financial assistance. Attracting investment depends to a great extent on the willingness of the CEE states to provide a favorable atmosphere and guarantee investors protection from existing environmental pollution.<sup>30</sup> This point is crucial in understanding that analyzing prospects for sustainability in a region is in fact a study of the region's ability to manage its own future. Political priorities in such states as Hungary have been such that getting the economy moving is more important to the public than cleaning up the environment; the dwindling of environmental activism has been evidence of this phenomenon.

This dissertation has three chapters which seek to provide an understanding of how CEE got into its present environmental state and what its chances are of progressing toward a cleaner future. The first chapter will deal with the theoretical underpinnings of

environmental politics in international relations. How and why did the environment become an issue-area in the discipline of international relations? What is sustainable development and the theory of the commons and what are their relevance to CEE? What are the primary international relations theories most relevant to discussing environmental issues in CEE? Placing the somewhat amorphous idea of sustainable development into the context of international relations will expose its weaknesses and strengths as a tool for analyzing environmental degradation in CEE.

Chapter Two will give a detailed explanation of how CEE states arrived at their present state of environmental crisis. It will address aspects of Marxist theory which may have provided the ideological basis for utilization of natural resources in the planned economies of CEE. Hungary will be used as a case study to highlight some of the primary pollution problems in the region. In addition, data will be provided indicating that Hungarians are far worse off than western Europeans in terms of human health. An explanation of the command economy structure will serve to highlight aspects of the economic system that contributed to waste and pollution.

Chapter Three will deal with outside guidance and assistance in CEE, highlighting the nature of international activities in the region. The European Union PHARE program, the the European Bank for Reconstruction and Development -- which states in its founding Agreement a commitment to "promote in the full range of its activities environmentally sound and sustainable development"<sup>31</sup> -- and the US Agency for International Development programs will be scrutinized as primary examples of the West's approach.

Environmental rehabilitation and economic development are two goals that can be achieved either together or apart. This study will seek to determine the prospects for the region's success in fusing the two -- an achievement that few states can claim as theirs.

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<sup>1</sup> The term central and eastern Europe (CEE) will be used throughout this study to refer to what prior to the break-up of the USSR was usually referred to as "Eastern Europe." For the purposes of my analysis on environmental degradation in the region, the term CEE applies broadly to the six former full members of the CMEA in the region -- Hungary, Poland, Bulgaria, the states of the former Czechoslovakia, Romania and the GDR -- as well as to the former Yugoslavia and Albania.

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The Soviet Union is not included in my "CEE." However, much of the analysis provided in this study will also apply to the republics of the former USSR. Due to the limited size of this dissertation, Hungary has been chosen as a case study to examine issues affecting states in transition from centrally planned economies to market-based economies. Reasons why will be examined later.

<sup>2</sup> "Towards a closer association with the countries of Central and Eastern Europe," *Commission of the European Communities background report*, 17 February 1993, p. 3.

<sup>3</sup> Karoly Okolicsany, "Slovak-Hungarian Tension: Bratislava Diverts the Danube," *RFE/RL Research Report*, Vol. 1, no. 49, December 11, 1992, pp. 49-54.

<sup>4</sup> Duncan Fisher, *Paradise Deferred: Environmental Policymaking in Central and Eastern Europe* (London: Royal Institute of International Affairs and Ecological Studies Insititue, 1992), pp. 2-3.

See also articles on the environment in CEE: "Darkness at Noon," *Time International*, vol. 135, no. 15., April 9, 1990, pp. 24-25; and "Warning--Freedom can be dangerous to your health," *Time International*, vol. 143., no. 26, June 27, 1994, pp. 18-20.

Articles on the Soviet environmental situation include: Mike Edwards, "Living with Chernobyl," *National Geographic*, August, 1994, pp. 99-115; Mike Edwards, "Pollution in the former USSR--Lethal Legacy," *National Geographic*, August, 1994, pp. 70-98; and "Turning Water to Dust," *Newsweek International*, vol. CXV, no. 4, January 22, 1990, p. 16.

<sup>5</sup> World Resources Institute, *World Resources 1992-93: A Guide to the Global Environment* (Oxford: Oxford University Press, 1992), p. 62.

<sup>6</sup> World Health Organization, Regional Office for Europe, *Health For All*, health indicators database on Europe, Bilthoven, the Netherlands (undated). Figures represent most recent data available for the three countries; 1991 for Hungary, 1990 for France and 1989 for Sweden. These three countries were selected for this comparison because they represent three distinct parts of Europe.

WHO stresses that users of this data should take into consideration varying definitions and measurement practices used in different countries.

<sup>7</sup> *Ibid.*

<sup>8</sup> World Resources Institute, *op. cit.*, pp. 60-61.

<sup>9</sup> Nigel Swain, *Hungary: The rise and fall of feasible socialism* (London: Verso, 1992), p. 57.

<sup>10</sup> Robert Bideleux, *Communism and Development* (London: Methuen and Co., 1985), p. 142.

<sup>11</sup> World Resources Institute, *op. cit.*, pp. 61.

<sup>12</sup> Bideleux, *op. cit.*, p. 151.

<sup>13</sup> World Resources Institute, *op. cit.*, p. 64.

<sup>14</sup> Duncan Fisher, *op. cit.*, p. 4.

<sup>15</sup> Government of Hungary, *Hungary's National Report to United Nations Conference on Environment and Development*, Budapest, December 1991, p. 25.

<sup>16</sup> Duncan Fisher, *op. cit.*, p. 39.

<sup>17</sup> *Ibid.*, pp. 5, 39.

<sup>18</sup> Personal interview with Ivan Gyulai, director of the Ecological Institute for Sustainable Development in Miskolc, Hungary, September, 1993.

<sup>19</sup> Duncan Fisher, *op. cit.*, p. 33.

<sup>20</sup> *Ibid.*, p. 7, 42.

<sup>21</sup> Personal interview with Ivan Gyulai, Director, Ecological Institute for Sustainable Development, Miskolc, Hungary, September 1993.

<sup>22</sup> Duncan Fisher, *op. cit.*, p. 45.

<sup>23</sup> Personal interview with Thomas Glazer, head of PHARE information office, European Union, Brussels, September 1994.

<sup>24</sup> David Pearce, Edward Barbier, Anil Markandya, *Sustainable Development: Economies and environment in the third world* (Aldershot, Hants: Edward Elgar Publications Ltd., 1990), p. ix.

<sup>25</sup> World Commission on Environment and Development, *Our Common Future* (Oxford: Oxford University Press, 1987), p. 37.

<sup>26</sup> *Ibid.*, p. 40.

<sup>27</sup> *Ibid.*, p. 9.

<sup>28</sup> David Pearce, et. al., *op. cit.*, p. x.



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29 Garrett Hardin, 'The Tragedy of the Commons (1968),' in *Managing the Commons*, ed. by Garret Hardin and John Baden (San Francisco: W.H. Freeman and Co., 1977), pp. 19-29.

30 Stephen R. Wassersug, Program Manager, Regional Environmental Center for CEE, "Meeting the Environmental Challenge: Balancing Environmental-Development Goals," presented at Executive Enterprises Inc., Environmental Business Opportunities and Liabilities in CEE, Washington, D.C. (not dated)

31 European Bank for Reconstruction and Development, *Environmental Procedures*, London, 1992, Annex 1, p. 1.

# Chapter 1

## ENVIRONMENTAL POLITICS AND INTERNATIONAL RELATIONS: A THEORETICAL FRAMEWORK

### 1.1 FROM STOCKHOLM TO RIO: THE ENVIRONMENT IN INTERNATIONAL RELATIONS

In order to view the problem of environmental degradation in CEE as an international relations issue, it is useful to place the region into the context of the global environmental debate. Though environmental issues were a matter of international concern prior to the 1970s,<sup>1</sup> it was not until the Stockholm Conference on the Human Environment in 1972 that the environment was formally introduced into global politics as an issue treated holistically. The Stockholm Conference ushered in a new era in international relations as the problem of environmental degradation was elevated onto the world stage.<sup>2</sup> The conference was organized amid growing activity by NGOs concerned with the effects of industrial pollution in the developed world. With representatives from over 100 states (minus the Eastern Bloc, notably absent due to a boycott proclaimed for the West's decision not to recognize the GDR), the conference's existence demonstrated the realization that unilateral actions by states could not solve problems which transcended national boundaries.<sup>3</sup> By its very nature the Stockholm Conference turned concerns about use and abuse of the environment, what used to be merely the concern of scientists or activists, into matters of international relations.<sup>4</sup> Just as significantly, the Stockholm Conference demonstrated the connection between the hitherto separate issues of environment and development and placed them within a North/South context, marking the beginning of a protracted debate which would escalate over subsequent decades, driven by the North's desire to stem the depletion and degradation of the global environment.<sup>5</sup> By this time it had become clear that the biosphere could not tolerate an industrial revolution in the South on the scale of that experienced by the North without new approaches to development, approaches characterized by conservation and cleanliness rather than unlimited consumption and waste-production.

The conference produced a declaration on the Human Environment and an Action Plan for the Human Environment.<sup>6</sup> The Stockholm declaration contains 26 principles on environment and development. Principle 21 acknowledged state sovereignty over national resources but adds that states have "the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction."<sup>7</sup> Principle 21 is seen in international law as a precedent for much of the environmental diplomacy of subsequent decades. The Action Plan contained 109 recommendations on six issues: human settlements, natural resource management, pollution of international significance, educational and social aspects of the environment, development and environment, and international organizations.<sup>8</sup> The conference provided the catalyst for the formation of the United Nations Environment Programme (UNEP), which has played a key role in relations between the UN, governments and NGOs. UNEP, formed under UN General Assembly Resolution XXVII, was organized "as a focal point for environmental action and coordination within the UN system."<sup>9</sup> Based in Nairobi, UNEP is concerned with activities regarding the environment and development, oceans, water, terrestrial ecosystems, arid lands and desertification control, regional and technical cooperation and health and human settlements.<sup>10</sup> Despite a meager annual budget, most of which is based on voluntary contributions (the program budget for 1990-91 set a spending target of just \$68 million),<sup>11</sup> UNEP has played a central role in the adoption of international agreements such as the Vienna Convention for the Protection of the Ozone Layer in 1985 and the subsequent Montreal Protocol on Substances that deplete the Ozone Layer in 1987.<sup>12</sup>

Outside the more formal structure of the United Nations and international conferences, environmental movements gained momentum through the 1980s as the scientific community's view of global environmental problems shifted toward an acknowledgement that the Earth's systems are not as stable and resilient to human abuse as previously thought.<sup>13</sup> This was true in the states of the Soviet bloc as well as in the West.<sup>14</sup> In 1987, geochemist Wallace Broecker commented in the journal *Nature* on recent polar ice-core and ocean-sediment data:

What these records indicate is that Earth's climate does not respond to forcing in a smooth and gradual way. Rather, it responds in sharp jumps which involve large-scale reorganization of Earth's system.... We must consider the possibility that the main responses of the system to our provocation of the atmosphere will come in jumps whose timing and magnitude are unpredictable.<sup>15</sup>

Homer-Dixon calls the mid-1980s discovery of the Antarctic ozone hole a "paradigm-shattering" example of such non-linear reactions as Broecker described.<sup>16</sup> Much of the scientific community's concern spilled over to the general public during the 1980s. Media coverage of the dangers of ozone depletion alerted the public to the potential ill effects environmental degradation could have on humans, and an unusually hot summer in North America in 1988 sparked American fears of global warming. Starting in late 1989, the realization in the West that the Cold War was coming to an end further brought environmental issues to the fore; as concerns about superpower conflict began to fade, other problems surfaced into the public consciousness.<sup>17</sup> The Chernobyl nuclear power plant disaster in Ukraine in April 1986 shocked and horrified Western states as the fallout awakened them to the potential repercussions of transboundary pollution.

In June 1992, the United Nations Conference on the Environment and Development in Rio de Janeiro (UNCED) took environmental politics a step beyond Stockholm, transforming the decades-old quest for a cleaner Earth from a movement dominated by interest groups to a highly publicized intergovernmental debate. In his opening address, UNCED Secretary-General Maurice Strong focused on the future, emphasizing that the conference "is not an end in itself, but a new beginning... The results of this conference will ultimately depend on the credibility and effectiveness of its follow-up."<sup>18</sup> Among Strong's concerns was that any institutional changes made within the United Nations system must "provide an effective and credible basis for its continued leadership of this process."<sup>19</sup> The amount of treaties signed and declarations issued were not to be used as criterion for the meeting's success; rather the conference was to be judged on the basis of its contribution to the overall process of curbing environmental degradation and promoting sustainable and environmentally sound development.<sup>20</sup> To achieve this, one of UNCED's central goals was to harmonize varying paths different states have taken toward environmental protection. This objective was largely

motivated by the knowledge that in poorer states, policies of environmental protection on their own can not solve problems associated with poverty such as hunger and disease; thus the conference's link between environment and development.<sup>21</sup>

Dubbed the "Earth Summit" by the world media, the conference of more than 150 states and 1,400 nongovernmental organizations embedded the problem of global environmental degradation into the public consciousness. Though the "Development" aspect of the conference was given secondary treatment by the popular media, at the conference itself, the economic divide between the developed North and the lesser-developed South was more pronounced than ever.<sup>22</sup> The dichotomy between what structural theories of international relations and the political left have been describing for years as "core" and "periphery" suddenly became tangible as players from each region were pitted against each other on issues ranging from trade protectionism to biodiversity.<sup>23</sup> The North had finally found a forum for its environmental woes, though its approach was not without criticism. Skeptics argued that recent proposals by the North regarding how industrializing states should manage their economic development were merely a form of neo-colonialism.<sup>24</sup>

The Rio Conference was issue-specific--focusing<sup>us</sup> on such issues as climate change, biodiversity and deforestation--not region-specific, and as such did not address the unique environmental challenges of any one region.<sup>25</sup> Thus from the events which transpired at the conference it is difficult to extrapolate the precise attitude of the North regarding the environmental situation in the "other North"--that is, central and eastern Europe. Janos Zlinszky, a team leader at the Regional Environmental Center for Central and Eastern Europe (REC) in Budapest, says UNCED "did not have any real repercussions" in CEE, as the conference focused on creating an agenda for global issues, not regional ones.<sup>26</sup> He adds: "The fact that the US was reluctant to agree to some of the issues at UNCED deflated the conference's impact somewhat." However, from the REC's perspective, UNCED was successful in its mission to bring environmental issues onto the international agenda.<sup>27</sup> Despite a lack of policy formation regarding, for instance, Western Europe's view toward transboundary air pollution from CEE, the fact that the Rio conference even occurred was enough exposure for the cause of environmental rehabilitation for even the heavily bureaucratized EC

to take resolute action. Community statements in the year following UNCED stated its goal to curb transboundary pollution and to assist its eastern neighbors toward a path of sustainable development. The PHARE program (Poland and Hungary Aid to Restructuring Economies), to be discussed in detail in Chapter 3, is a tangible example of this initiative.<sup>28</sup> In another effort to match words with actions, the European Commission in March 1993 approved 20m ECUs for a multilateral fund to improve nuclear safety in the former Soviet Union and central and eastern Europe. By the end of 1993, the Commission had contributed about 330m ECUs to the fund, some 60% of the total agreed by the Group of Seven Industrialized Nations at its July 1992 meeting in Munich. Other contributors included the US (24m ECUs), Japan (19.5m ECUs), Canada (19m ECUs) and the Nordic countries (10m ECUs).<sup>29</sup>

Despite UNCED's lack of regional focus, several documents were signed by heads of governments, among them the Rio Declaration, a statement of broad principles to guide national behavior on environmental protection and development, and Agenda 21, a detailed document outlining work plans for sustainable development, including goals, responsibilities and funding estimates.<sup>30</sup> The Rio Declaration includes 27 principles encompassing key elements of the political agendas of both industrialized and developing states. Principle 2, for example, outlines a state's sovereign right to exploit its own resources in accordance with its own policies without harming the environment outside of its boundaries, while Principle 4 states that environmental protection is an integral part of development.<sup>31</sup> Agenda 21, a 280-page work plan focusing on goals and priorities for resource, environmental, social, legal, financial and institutional issues, includes program descriptions and cost estimates. Chapter Nine on atmosphere seeks to promote action to combat climate change, ozone depletion and transboundary air pollution. Chapter 38 contains the UNCED recommendations for international institutions, among them the establishment of the Commission on Sustainable Development to monitor implementation of the issues discussed at Rio.<sup>32</sup> Inherent in all of Agenda 21 is the goal of reducing activities deemed environmentally harmful such as deforestation and excessive industrial emissions. Though not legally binding, Agenda 21 is intended as a guideline for action. Also signed at UNCED were binding conventions on climate change and biodiversity, which were

not actually negotiated at the conference but were signed in Rio after separate negotiations.<sup>33</sup> An international agreement on tropical forestry was adopted as well, but in the form of a non-legally-binding statement of principles.<sup>34</sup>

Despite the tangible written results which emerged from UNCED, Secretary-General Strong's statement at the beginning of the conference held true: UNCED's main contribution to the cause of environmental rehabilitation and sustainable development was its role in the entire process, and ultimately it was the followup which would transpire after UNCED that would judge the merits of the meeting. Only the passage of time will see Strong's prophesy through, but like Stockholm, UNCED's very existence was testament to the fact that enough people care about the environment to transport their leaders en masse to Brazil for discussion and debate. The massive media attention and NGO activity before, during and after the conference transformed environmental issues from the preoccupation of various groups to the public mindset, exactly where it needs to be if policymakers are ever going to be compelled to take action on environment degradation, in CEE, or anywhere else.

UNCED's failure to address the environmental problems of CEE specifically may have been because the region does not face such dire problems as famine, and therefore requires less urgency. It may also be due to the nature of the meeting as well as to widespread perceptions about the nature of transition in CEE. The conference, with its emphasis on such environmental dilemmas as biodiversity, deforestation and climate change, took a global approach, and the overriding dialogue between participants (or at least that which was publicized) was between the wealthy states of the industrialized North and the poorer developing states of the South. The absence of any major mention of the environmental devastation in CEE so soon after the political and economic changes was noteworthy, and may suggest that the primary actors in the global environmental debate -- North and South -- may still perceive the states of CEE as constituting the single bloc to which they belonged prior to 1989. When they were part of the Soviet sphere, Hungary, Poland, Czechoslovakia, Rumania, Bulgaria and others were viewed largely as one entity, not as dozens of states with unique economic and political characteristics and distinct problems and challenges. The lack of attention at UNCED to CEE's environmental problems is only

now starting to give way to recognition that the "bloc" is a complicated region with complicated problems, and epitomizes the oft-discussed tension between economic development and environmental quality which was at the very heart of the Rio conference.

## 1.2 SUSTAINABLE DEVELOPMENT DEFINED

If UNCED's focus was primarily on the First and Third Worlds, leaving the Second to find its own niche in the global environmental debate, then what about the applicability to CEE of the concept of sustainable development, a central theme at UNCED? To understand the meaning of sustainable development and how it might apply CEE, a region which has only recently attracted mainstream interest for its environmental problems, this section will provide various definitions of the term and seek to apply those definitions to the region. An understanding of sustainable development will set the framework for an analysis in Chapter 2 of which features of the command economy system led to environmental degradation in CEE. Sustainable development can also function as a benchmark with which to analyze environmental activities in CEE as the states make their transition to market-based pluralist societies.<sup>35</sup> Lastly, the concept's applicability to global issues will be compared and contrasted with its applicability to the challenges faced by smaller communities.

Sustainable development is a broad and sometimes elusive concept, but not for a lack of effort in attempting to define it. *Our Common Future*, or the Brundtland report, is widely accepted as providing one of the most comprehensive definitions, and even though it heavily emphasizes problems associated with the world's poor and developing states, much of the report can be applied to CEE as well. Underlying the Brundtland report's view of sustainable development is the idea that environment quality and economic development are not separate challenges, but are "inexorably linked" not only to each other, but also to themselves and to other aspects of society.<sup>36</sup> Environmental problems are linked to one another; for instance, air pollution may contribute to the degradation of forests and lakes, and ill-suited agricultural and industrial policies can cause environmental damage to soil and rivers. Environmental stresses and patterns of economic development are also linked to one another due to the necessity of natural resource use to fuel development.<sup>37</sup> Both



of these links are particularly applicable to the states of CEE, where various types of pollution have exacerbated the effects of other types of pollution. Central planning policies, meanwhile, with their high output targets and lack of a market pricing mechanism, caused stress on the environment as industries used natural resources to excess.<sup>38</sup> The Brundtland report further states that environmental and economic problems are linked to many social and political factors. Though the report gives examples of overpopulation to illustrate this point,<sup>39</sup> this relationship between factors can equally be applied to CEE, where large, polluting industries are being dismantled with severe social and political costs.

The Brundtland report describes sustainable development from many different angles, but one statement makes the point concisely: "Sustainable development seeks to meet the needs and aspirations of the present without compromising the ability to meet those of the future."<sup>40</sup> The beginning of the Brundtland report's chapter on sustainable development states that the concept of "needs" particularly applies to the world's poor, to which overriding priority should be given.<sup>41</sup> The report emphasizes that some burden-sharing will have to occur: "Far from requiring the cessation of economic growth, it recognizes that the problems of poverty and underdevelopment cannot be solved unless we have a new era of growth in which developing countries play a large role and reap large benefits."<sup>42</sup> Strategic imperatives in the pursuit of sustainable development include:

- reviving growth;
- changing the quality of growth;
- meeting essential needs for jobs, food, energy, water and sanitation;
- ensuring a sustainable level of population;
- conserving and enhancing the resource base;
- reorienting technology and managing risk; and
- merging environment and economics in decision-making.<sup>43</sup>

With the exception of population, the above can apply equally well to highly developed states such as the US or UK as they do to CEE or the underdeveloped states. The report states: "The world must quickly design strategies that will allow nations to move from their present, often destructive, processes of growth and development onto sustainable development paths. This will require policy changes in

all countries...".<sup>44</sup>

Another key dimension of sustainable development the report identifies is "the idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs."<sup>45</sup> This suggests that the concept of sustainable development does imply limits, including that of governments (social organizations) and the current state of technology, to achieve sustainability. This point has particular applicability to the states of CEE; prior to 1989, the political systems presented impediments to achieving economic development which was sustainable. As described above, central planning, which was controlled by the Communist Party, mandated output targets which were not necessarily in line with demand, and the lack of a pricing mechanism to reflect supply and demand led to overuse of energy inputs, which contributed to environmental degradation.<sup>46</sup> Central planning will be discussed in greater detail in Chapter 2, and the problem with pricing, or the "zero-price phenomenon," will be discussed in section 1.3.

On the subject of consumption standards, the Brundtland report notes that the average person in an industrial market economy uses more than 80 times as much energy <sup>^</sup>as someone in sub-Saharan Africa,<sup>47</sup> yet to raise developing countries' energy use to industrialized country levels would require increasing present global energy use by a factor of five.<sup>48</sup> The environment could not tolerate such an increase, particularly if the increase consisted of non-renewable fossil fuels, the report maintains; based on the present mix of energy sources, increasing energy use by even a factor of two is unrealistic due to the estimated threat of global warming and acidification of the environment.<sup>49</sup> "Energy efficiency policies must be the cutting edge of national energy strategies for sustainable development, and there is much scope for improvement in this direction."<sup>50</sup> The report suggests more energy-efficient appliances, increased research and development on environmentally sound and ecologically viable energy sources, and changes in energy prices to encourage the adoption of conservation measures.<sup>51</sup>

With industrial production having increased more than fifty times over the past 100 years and more growth likely, the Brundtland report maintains that the time to address sustainable development is now.<sup>52</sup> One of the pressing reasons for this is that industries most

heavily dependent on environmental resources and most heavily polluting are growing most rapidly in developing countries, where there is both more urgency for growth and less capacity to minimize degradation of the environment.<sup>53</sup> The Brundtland report is diligent in addressing the future: "We borrow environmental capital from future generations with no intention or prospect of repaying. They may damn us for our spendthrift ways, but they can never collect on our debt to them. We act as we do because we can get away with it; future generations do not vote; they have no political power or financial power; they cannot challenge our decisions."<sup>54</sup>

Other definitions of sustainable development also address the importance of renewable resources. World Resources Institute sums up sustainable development as the utilization of natural resources in a manner that "does not eliminate or degrade them or otherwise diminish their usefulness for future generations, while maintaining constant or non-declining stocks of natural resources such as soil, groundwater and biomass."<sup>55</sup> Pearce, Markandya and Barbier provide 50 definitions of sustainable development in Annex 1 of *Blueprint for a Green Economy*.<sup>56</sup> A definition by Pearce and Markandya, writing in the journal *Project Appraisal*, is among them: "The basic idea [of sustainable development] is simple in the context of natural resources (excluding exhaustibles) and environments: the use made of these inputs to the development process should be sustainable through time.... If we now apply the idea to resources, sustainability ought to mean that a given stock of resources--trees, soil quality, water and so on--should not decline."<sup>57</sup> Robert Allen, in his book *How to Save the World* (London: Kogan Page, 1980), maintains: "Sustainable development -- development that is likely to achieve lasting satisfaction of human needs and improvement of the quality of human life."<sup>58</sup> Both definitions apply directly to the problems in CEE; natural resource use in the former command-economy systems, as described earlier, has been central to the degradation of the environment.<sup>59</sup> Quality of life is also directly applicable to the region when discussing it in the context of development. Health data cited in Chapter 2 of this study show that life expectancy and other key indicators for CEE indicate that quality of life in the region is far below that of western Europe.<sup>60</sup> Also quoted in the annex of *Blueprint for a Green Economy* is Norwegian Prime Minister Gro Harlem Brundtland, who in a lecture on October 8, 1986, said:

There are many dimensions to sustainability. First, it requires the elimination of poverty and deprivation. Second, it requires the conservation and enhancement of the resources base which alone can ensure that the elimination of the poverty is permanent. Third, it requires a broadening of the concept of development so that it covers not only economic growth but also social and cultural development. Fourth, and most important, it requires the unification of economics and ecology in decision-making at all levels.<sup>61</sup>

Edward Barbier, writing in the journal *Environmental Conservation*, takes a similar tack: "In general terms, the primary objective [of sustainable development] is reducing the absolute poverty of the world's poor through providing lasting and secure livelihoods that minimize resource depletion, environmental degradation, cultural disruption and social instability."<sup>62</sup> With their emphasis on poverty as the focal point for sustainable development, both Brundtland and Barbier's definitions take some creative thinking to apply to the states of the former Soviet bloc. Relative to western Europe, central and east Europeans are poor, but compared with the populations of some African and Asian states, they are relatively well off. Central and east European problems are very different from those in underdeveloped states and should be treated as such. Brundtland's reference to "social and cultural development" is not relevant to CEE (except as it applies to the development of democratic institutions) and would probably be construed by Hungarians, Czechs, Poles and others as insulting. However, Brundtland's reference to "unification of economics and ecology in decision-making at all levels" is extremely relevant to CEE, as it is the polar opposite of policy there prior to 1989.<sup>63</sup>

Robert Costanza, who in his quest to define sustainable development differentiates between the disciplines of conventional ecology, conventional economics and ecological economics, identifies sustainable development as "a relationship between dynamic human economic systems and larger dynamic, but normally slower-changing ecological systems, in which, a) human life can continue indefinitely; b) human individuals can flourish; c) human cultures can develop; but in which d) effects of human activities remain within bounds, so as not to destroy the diversity, complexity and function of the ecological life-support system."<sup>64</sup> Writing in the post-Brundtland, pre-UNCED year of 1991, Costanza accepts as real the struggle between economic growth and sustainability, yet advocates

the "integrative synthesis" of economics and ecology, and urges an end to viewing the two as conflicting forces.<sup>65</sup>

Costanza's view is that ecological economics is the integrative synthesis of conventional ecology and conventional economics.<sup>66</sup> While conventional ecology concerns itself primarily with the unwanted byproducts of production, conventional economics focuses on growth rather than sustainability, and "is very optimistic about the ability of technology ultimately to remove all resource constraints to continued economic growth."<sup>67</sup> Ecological economics, the fusion of the two, views nature as the economy's life-support system and humans as an important component in that system because they have the power to manage it for sustainability. Organizations, institutions and technology play a fundamental role in the process. If development is "an improvement in the quality of life without necessarily causing an increase in quantity of resources consumed," then sustainable development is possible, while *sustainable growth* is not.<sup>68</sup> Many definitions of sustainable development seem to be inspired by the urgent need to address the problems of the world's poor: hunger, disease and poverty. Not addressed directly is poverty of a different sort -- that which was brought on by the collapse of the Soviet-style command economy system. While hunger may not necessarily be an issue in CEE, poverty and quality of life, as measured by health indicators, are.<sup>69</sup> In CEE, just as in states such as the UK, US, Ethiopia and Bangladesh, economic problems and environmental problems are linked. Costanza's approach to sustainable development seems to go beyond the Brundtland approach (which though it can be applied to CEE has a mostly Third-World slant) to a more general approach directly integrating economics and ecology. In that sense, Costanza's sustainable development definition is useful for understanding the challenges CEE faces both in rehabilitating its environment and in preventing future degradation.

Sustainable development is a useful theory for viewing environmental problems in a global, analytical way, but seems to have some difficulty inspiring enthusiasm on the community level. Ivan Gyulai, an environmental activist since the 1970s and director of the Ecological Institute for Sustainable Development (EISD) in Borsod County, Hungary -- a highly industrialized and heavily polluted region -- has become cynical about sustainable development as

political priorities in the newly democratic state turn to economic development and away from environmental concerns. "I used to be enthusiastic about sustainable development. Now I am not so enthusiastic. Solidarity and cooperation [requirements for achieving sustainable development] are lies because they are not the nature of the people. You can't set up big events like the Rio summit...such conferences consist of too much general talk. People have to act and do something for their own communities."<sup>70</sup> Unless governments enact policies to protect the environment and provide funding for environmental research and cleanup projects, sustainable development will not have an impact on the lives of ordinary people. The Brundtland report itself states, "in the final analysis, sustainable development must rest on political will."<sup>71</sup> Thus regardless of what is declared or discussed at international conferences, the key to achieving sustainable development lies with states themselves: If enforcement of environmental laws is lax, and the drafting of new laws a low priority, as has been the case in such states as Hungary, action at the community level will falter.

### 1.3 THE TRAGEDY OF THE COMMONS AND THE ZERO-PRICE PHENOMENON

With CEE presently in a state of varying degrees of environmental degradation and rehabilitation, the concept of sustainable development helps provides a framework for planning future development that won't negatively impact the environment. If sustainable development helps us to plan for the future, another theory is needed to help us to understand how states have allowed their environments to be degraded, a situation that is not limited to any one region or to any one era. The Tragedy of the Commons theory, originated by Hardin in 1968, seeks to provide an explanation for how and why humans allow problems such as pollution and depletion of natural resources to occur.<sup>72</sup>

Hardin used the metaphor of a shared pasture for grazing animals to illustrate his point.

Picture a pasture open to all. It is to be expected that each herdsman will try to keep as many cattle as possible on the commons. Such an arrangement may work reasonably satisfactorily for centuries because tribal wars, poaching, and disease keep the numbers of both man and beast well below the carrying capacity of the land. Finally, however, comes the day of reckoning...<sup>73</sup>

At this point, Harding says, the inherent logic of the commons generates the tragedy. The herdsman can add an animal to his herd in the commons and receive a positive utility of nearly plus one, as he can then receive all the proceeds from the sale of that animal; or, he can refrain from adding to the herd. The negative aspect of him adding an animal to the commons is equal to the negative effects of that amount of overgrazing on the common land. To the herdsman, the negative utility of adding an animal to the commons is only a fraction of minus one. The tragedy occurs when many or all of the herdsmen acting in their own interests opt to add an animal. Under such circumstances the negative effect on the land would be considerable. Harding pinpoints *freedom* in the commons as its own worst enemy.<sup>74</sup> "Each man is locked into a system that compels him to increase his herd without limit--in a world that is limited. Ruin is the destination toward which all men rush, each pursuing his own best interest in a society that believes in the freedom of the commons. Freedom in a commons bring ruin to all."<sup>75</sup>

While Harding primarily address population issues, he also mentions pollution as a fitting example of this phenomenon. With pollution, however, it is the question not of taking something out of the commons, but putting something into it that doesn't belong there; for instance, radioactive waste, sewage and noxious fumes.<sup>76</sup> Harding suggests that with pollution, society has institutionalized a permissiveness that favors dumping waste into the air, water or soil rather than purifying it first. "The rational man finds that his share of the cost of the wastes he discharges into the commons is less than the cost of purifying his wastes before releasing them. ...We are locked into a system of 'fouling our own nest,' so long as we behave only as independent, rational free-enterprisers."<sup>77</sup> Harding proposes coercive measures such as laws or taxing devices to make it cheaper for the polluter to treat his pollutants than to discharge them untreated.<sup>78</sup>

Harding urges the formulation of "definite social arrangements" (such as laws) to prevent the abuse of common areas.<sup>79</sup> Because the morality of an act depends on when and where and under what societal conditions it was performed, certain behavior such as dumping toxic waste from a factory into a nearby river is only bad if it is thought to be bad.<sup>80</sup> Thus in certain political systems regulations are passed to prohibit toxic dumping, or if not prohibit, limit it; while

in others, such as the centrally planned economies of CEE, dumping continued unabated. A parallel example of legislating limits on the commons is the issue of tax evasion, with the commons being the public coffers. If evading taxes is not perceived as bad in a certain society, people will continue to avoid paying in pursuit of their own financial gain with little sense of remorse. If, however, society deems it wrong to evade taxes, laws and other coercive measures are enforced to punish those to fail to pay.<sup>81</sup> Though Harding advocates the restriction of freedoms under certain circumstances such as overpopulation (restricting the right to breed), he stresses that often the closing in of the commons can be a form of freedom.<sup>82</sup> Multilateral treaties signed in recent years on ozone depletion, Antarctica and outer space, for example, set guidelines to penalize polluters who breach certain environmental guidelines, assuring the protection of those commons for the good of all.

Since Harding's essay on the Tragedy of the Commons in 1968, restrictions on the commons such as the Polluter Pays Principle (PPP) have been employed in industrialized economies. PPP is a general term referring to policy mechanisms which require the polluter to take responsibility for the cost of pollution via charges, taxes and compensation.<sup>83</sup> Tradable carbon emission permits are one tactic to make the polluter pay for damage inflicted on the environment. The permit system is market-based, and flexible in that it allows permit holders to trade the right to emit carbon for finance or for any other tradable items such as food or military equipment. The interchange is left up to the permit holders themselves, with direction by local governments. Because the permits are issued to the potential polluters themselves, the system avoids the difficult problem of determining national targets. One proposal for initial allocation of permits would be to distribute them on the basis of population, the theory being that every human has an equal right to use the atmospheric resource. Those who exceed their entitlement would be expected to pay. Thus the industrialized countries with high energy consumption could end up procuring extra permits from developing countries in exchange for technical assistance or some other product or service.<sup>84</sup>

The theory of the commons is a useful foundation for understanding the situation in CEE prior to 1989. The Pearce Report



argues that the underlying reason for environmental degradation is that many natural resources are treated, like the common herding ground, as if they are free.<sup>85</sup> In a market economy where no price is affixed to clean air, an intact ozone layer and clean soil, the cost to industry and individuals of degrading those resources is zero. To state it another way, no marketplace exists in market economies where the value and benefits of many natural resources can be bought and sold. While crude oil is bought and sold with its economic benefits in mind, other natural resources such as coastal wetlands and clean air are not. Outside the framework of a marketplace based on demand, supply and a pricing mechanism, a resource can end up depleted or abused as a result of strong demand and zero price.<sup>86</sup> Examples of this zero-price phenomenon range from the deterioration of common herding ground in the Harding example to deforestation and excessive CO<sub>2</sub> emissions, both of which contribute to the effects of global warming. In the centrally planned economies of CEE, a similar dilemma existed. Just as in market economies, natural resources such as clean air, waterways and soil also had no price fixed to them, and ended up degraded in a way similar to market economies. However, in the centrally planned economies, environmental problems were exacerbated by the fact that energy sources also were not priced to reflect their value and scarcity; thus commodities such as crude oil were not bought and sold with their economic benefits in mind, resulting in undervaluing and overuse of natural resources and the accompanying effect on the environment.<sup>87</sup>

The Pearce Report suggests that one way to protect natural resources from degradation or depletion is to incorporate them into countries' national accounting systems, which can help to forecast future use and identify the environmental impact of such use.<sup>88</sup> For a given resource, the goals of environmental accounting are to identify what stocks are available, their sources and how those stocks can be added to or transformed over time. The accounting could also identify the uses of the resource.<sup>89</sup> In 1983, Williamson proposed a similar change in the way natural resources are accounted for.<sup>90</sup> Williamson argued that oil sales could, or should, be regarded as "capital depreciation," not income. Thus conceptually correct accounting would treat the depletion of oil reserves in the ground on a par with the depletion of produced capital goods. "This would mean that the overwhelming part of oil revenue would not

qualify as a part of net domestic product, although it does of course contribute to GDP."<sup>91</sup> An accounting system such as the one described could aid in the fair evaluation of oil countries' national incomes, which have been grossly exaggerated relative to that of industrial countries.<sup>92</sup>

The fusion of the concepts of sustainable development and the Tragedy of the Commons provides a more refined and accurate picture of environmental degradation than either theory on its own. Sustainable development, as a framework for future development, helps us to think critically about patterns of economic activity which won't degrade the environment. The theory of the commons, which highlights some destructive patterns of natural resource use, allows us to learn from the failure of governments to place restrictions on use and abuse of resources. Examination of the primary international relations theories will provide additional framework in seeking to understand how CEE ended up in its present environmental state, and what kind of activities may be necessary to aid the region on its path to more sustainable development.

#### **1.4 THE ENVIRONMENT IN CEE AND INTERNATIONAL RELATIONS THEORY**

International relations theory, along with the environmental theories addressed above, provides the necessary critical tools with which to address some critical issues regarding the environmental situation in the transitional economies of CEE. While Chapter 2 will provide the empirical data necessary to understanding the situation, this section will detail various ways to view some of the key questions facing the region: To what extent do the environmental problems in the former East bloc complicate their transitions to market economies? How will these states clean up their environments and make the necessary changes toward sustainable development? What kind of outside guidance and assistance are they receiving? All of these issues to a greater or lesser extent involve more than one actor, including international organizations, industry, NGOs, and, in particular, states. How we define and analyze the interaction between these various actors depends on the problem at hand and also on the way we choose to view the various actors. For instance, are states inclined to cooperate with one another, or are they compelled to cooperate because of the nature of the issues involved? A survey

of three primary international relations theories -- realism, pluralism and structuralism -- will highlight the various ways of answering this question.

### **Realism**

Events of the past two decades--the Stockholm Conference on the Human Environment, UNCED, the 1987 Montreal Protocol on Ozone Depleting Substances, and other international agreements--challenge the realist conception of international relations, which maintains that the balance of power between states is the primary determinant of security and prosperity. Theorists who subscribe to the realist paradigm see the world as consisting of distinct, mutually exclusive states. Largely a product of the two world wars and the subsequent tension between the superpowers, realist theory focuses on states as "rational maximizers of power in an anarchic system."<sup>93</sup> Realism also holds that some states have more power than others in a decentralized international system of sovereign states. In this framework, domestic politics is considered separate from foreign policy.<sup>94</sup>

Hans Morgenthau's contribution to realism includes the proposition that political relationships are governed by objective rules rooted in human nature, and that statesmen "think and act in terms of interest defined as power." Sovereign states must vie for that power, with survival being the minimum goal of foreign policy. Morgenthau's view incorporates a hierarchical prioritization of issues; once the state's survival is assured, the nation-state may pursue less pressing problems.<sup>95</sup> George Kennan, another realist, follows Morgenthau's line of thinking in that he views human nature as an underlying force in international relations. Kennan believes that humans are basically selfish and obstinate, with a tendency toward violence. During the Cold War, Kennan was doubtful that organizations such as the United Nations had the ability to resolve East-West problems. Regarding problems of international pollution, Kennan proposed that "leading industrial and maritime nations--the nations which created the most serious problems of pollution, which had the resources to study the problem, and which had it in their power to remedy most of the evils in question" should take the initiative toward resolution of ecological dilemmas.<sup>96</sup>

Regarding the proposition that unilateral action is the only determinant of a state's security and prosperity, consider a hypothetical proposal by domestic environmental groups that the UK radically cut ozone-depleting emissions. If the UK were to take action and the other industrialized powers did not, the overall impact on the environment would be minimal. Furthermore, because of the potential negative effects cutting emissions might have its industrial competitiveness, it would not make rational sense for the UK to take unilateral action to cut emissions without agreement by other countries to do the same. If unilateral action to cut emissions were to take place, its impact would more likely be felt in its negative effect on the UK's position in the world trading system rather than on measured global emissions levels.

Transboundary environmental forces such as the pollution of shared waterways or air demonstrate that states are distinct, sovereign entities only in situations over which they have control. Many natural resources transcend national boundaries, and weaker states have just as much power to pollute or degrade the environment as powerful states. For instance, though countries in South East Asia depend on cutting down trees for a significant portion of their incomes, they can use deforestation as leverage in disputes on global warming and biodiversity: They can agree to scale back deforestation only on the condition that General Agreement on Tariffs and Trade (GATT) restrictions favoring more prosperous countries in semi-manufactured goods be eased.<sup>97</sup> Viewing states as "rational maximizers of power in an anarchic system" willing to use force as an effective instrument of foreign policy has its applications in certain situations, particularly when applied to the tension between the US and Iraq in the years following the Gulf War, or to the superpower arms buildup in the post World War II period. However, Keohane and Nye maintain that, when applied to ecological problems such as deforestation and transboundary pollution, the use of force by one state (or group of states) against another would be largely irrational, as it would have costly effects on non-security goals.<sup>98</sup>

Because the environment is a system of shared natural resources, degradation of one country's air or water means degradation for its neighbors. Thus pressure from environmental groups targeted at improving a country's domestic policies often translate into the country's policy toward other countries, a

contradiction of the realist proposition that domestic policy and foreign policy are separate. In Hungary in 1989, pressure by Hungarian environmental groups, economists and engineers over a hydroelectric dam project led to a decision by Hungary to discontinue work on the project.<sup>99</sup> Problems arose because Czechoslovakia, which was working on another aspect of the project, had already completed much of its share at great expense. Hungary's action led to tension with Austria and Czechoslovakia over financing: Austrian companies, which had agreed to underwrite most of the Hungarian construction costs in exchange for future deliveries of electricity to be generated by the project, demanded compensation, and Prague demanded that Hungary complete its portion of the project or compensate Czechoslovakia \$500 million.<sup>100</sup>

During the time that Czechoslovakia was splitting in two, the line between domestic concerns and foreign policy became blurred in Slovakia as well as in Hungary. In October 1992, Slovakia, whose territory bordered the dam project, began diverting water from the the Danube for its hydroelectric dam system at Gabčíkovo. The diversion of the Danube waters turned the former river into a virtual creek along a 25-kilometer stretch of borderlands between Slovakia and Hungary. Completion of the dam by the Slovaks, which happened to coincide with a national election, had become synonymous with the new republic's pride and independence. As Slovakia's first foreign policy move, the diversion appeared to be a statement of its strength, will and decisiveness. Slovakia's move to divert the Danube left Hungary shocked, and prompted it to turn to international organizations for help.<sup>101</sup>

One aspect of the realist paradigm which does seem to incorporate environmental dilemmas involves geopolitics. The extent to which nations will go in order to secure natural resources--the Falklands War, the Gulf War, and centuries of colonial expansion by the European powers--is evidence that a state's physical resource base is a fundamental element of its aggregate power. Rowlands maintains that "the exploitation of natural resources allows a state to meet the basic needs of its peoples, to build up its economic and industrial base, and to prepare for war."<sup>102</sup> The Brundtland report predicted: "Such conflicts are likely to increase as these resources become scarcer and competition for them increases."<sup>103</sup>

The realist paradigm's general inadequacy in dealing with the analysis and resolution of global environmental problems is inadvertently addressed in the Brundtland report's suggestion that national interests should be put aside in favor of cooperation.<sup>104</sup> Susskind and Ozawa, writing in *The International Politics of the Environment*, suggest that new arrangements are needed among international organizations to ensure formal linkages between environmental protection and development planning. In other words, states and international organizations need to do more to implement the goals of the Brundtland Commission.<sup>105</sup>

### **Pluralism**

Theories of international relations which encompass a more pluralistic approach allow more scope within which to examine environmental problems and the politics surrounding them. Just as power is the primary analytical tool of realist theory, interdependence is the primary tool of pluralistic theory. Pluralism, which is largely as a critique of realist theory in the 1960s and 70s, emerged in a world characterized by the proliferation of multinational corporations, global communications, international trade and the growth of supranational organizations set up to achieve peace and prosperity.<sup>106</sup> Keohane and Nye define interdependence as mutual dependence, and interdependence in world politics as situations characterized by "reciprocal effects" among countries or among actors in different countries.<sup>107</sup> These reciprocal effects are not necessarily symmetrical, and, in order to be considered interdependent, the result of interaction between actors must be costly. Keohane and Nye maintain that in the case of the environment, some costly effects do not necessarily come directly or intentionally from other actors. They add that collective action may be necessary to protect an ecological system threatened by pollution.<sup>108</sup>

Interdependence affects world politics and the behavior of states, but the actions of governments also influence patterns of interdependence, and often affects the sensitivity of one actor to disruption of a situation by another actor.<sup>109</sup> As described earlier, the OPEC oil crisis in the early 1970s was a classic example of an interdependent situation for which import-dependent countries paid

dearly. Japan, which was heavily dependent on foreign oil for its energy needs, was more vulnerable than the US during the crisis. Yet the US still suffered long queues for petrol, rationing and general disruption. Had the US had the time and domestic support to implement an aggressive conservation policy after the first oil shock in 1971, it might have been less sensitive to later shocks in 1973 and 1975.<sup>110</sup>

Keohane and Nye construct an "ideal type": complex interdependence. They contend that though complex interdependence is the a critique of realism, it manages to come closer to reality.<sup>111</sup> One of the main characteristics of complex interdependence is that societies are connected by multiple channels:

These channels can be summarized as interstate, transgovernmental and transnational relations. *Interstate* relations are the normal channels assumed by realists. *Transgovernmental* applies when we relax the realist assumption that states act coherently as units; *transnational* applies when we relax the assumption that states are the only units.<sup>112</sup>

A second tenet of complex interdependence is that issues applying to interstate relationships do not fall into a clear hierarchy. Thus military security issues do not necessarily take precedence over domestic issues. A third characteristic is that in a region where complex interdependence prevails, military force is not used by governments toward other governments within the region. However, the use of force outside the region is possible and sometimes necessary, particularly against a rival bloc.<sup>113</sup>

Just as states are the actors in the realist framework, in a pluralistic framework, governments, international governmental organizations (IGOs; the EU or UN) and non-governmental organizations (NGOs; Greenpeace) are the actors. Rather than pursuing their separate national interests through power politics or the use of military force, governments or groups in the pluralistic framework negotiate or bargain in an effort to manage problems that affect more than one actor. Examples of such negotiation include the Uruguay Round of the GATT and the UN Conference on Environment and Development.<sup>114</sup>

Such multilateral collaboration as can be seen in organizations such as the UN and EU are described in international relations as "functionalist." Functionalism, a theory of political integration within the pluralistic framework, eventually would envisage

organizations for functional collaboration as possibly superseding the political institutions of the state. Mitrany, a theorist who wrote between the two world wars and thereafter, suggested that functionalism evolved as a result of the increasing complexity of governmental systems. This complexity had increased the essentially technical, less political tasks facing governments, leading to a need for highly trained specialists at the national and international levels. Mitrany saw functional collaboration among technicians, not political elites, as necessary to solving new and emerging problems of modern society.<sup>115</sup>

Jacobson establishes several reasons why states create international organizations: to provide information for members, to create norms or standards of conduct, to create rules (either binding or non-binding), to create a supervisory authority (such as the International Atomic Energy Agency) and to provide program or services to members (such as human health or relief activities).<sup>116</sup> Imber states that one of functionalism's central premises is the assumption that there are public goods in international society which require some form of international organization to administer them.<sup>117</sup> Porter and Welsh Brown maintain that global environmental politics "involve interactions among non-state actors, transcending a single region."<sup>118</sup> UN agencies provide the mechanism for states to engage in such interaction. Imber writes in 1989:

The environmental agenda presents the clearest challenge to the ability of the [UN] agencies to fulfil needs that are urgent and genuinely universal. Global warming, ozone depletion and toxic waste dumping are issues that will test the commitment and patience of the members...through the 1990s and beyond.<sup>119</sup>

Yet to inspire cooperation and diplomacy requires a pre-existing peace -- a state of being which serves the notion that functionalism is indeed a stark contrast to realism.<sup>120</sup>

John Garnett, in a critique of realism, points out that the state's power has been diminished by the presence of international organizations. "At the end of the day the economic success of the United Kingdom probably depends on decisions taken by OPEC or the EEC, the Uruguay round of GATT, exchange rates, and, above all, a peaceful trading environment."<sup>121</sup> Garnett asserts that vertically structured states are ill-equipped to handle a whole range of new global problems, among them the environment. Crippled by a



traditional "mind-set," these states "are much more comfortable when they are contending with familiar power political issues than they are with global problems."<sup>122</sup> Case in point: the Gulf War and its subsequent tensions. Saddam Hussein is a much more tangible (and, some might argue, more manageable) problem than global warming.<sup>123</sup>

The development of functionalism as an approach to international relations parallels the evolution of multinational efforts to aid developing countries. Functionalism was partially based on the premise that peace was dependent upon the conquest of poverty, ignorance and backwardness. Resolution of these problems require resources and creativity across national boundaries as well as within states.<sup>124</sup> The UN's role as an umbrella to such agencies as the World Health Organization, the United Nations Environmental Programme (UNEP) and the United Nations International Children's Fund serves these purposes.<sup>125</sup> UNEP, mandated by the Stockholm Conference on the Human Environment, functions as a research and negotiating forum for the protection of the global environment. UNEP provided a forum for the Vienna Convention for the Protection of the Ozone Layer and the subsequent Montreal Protocol, and its Inter-governmental Panel on Climate Change serves as an expert working group on global warming.<sup>126</sup> International non-governmental organizations (INGOs) are also involved in multilateral efforts to resolve problems. INGOs are formed by private citizens, or groups of citizens, from three or more countries. Greenpeace, the International Committee for the Red Cross and Amnesty International are examples of INGOs that work to mobilize public opinion, by, for instance, publicizing severe environmental degradation or human rights abuses.<sup>127</sup>

The ability of international organizations to resolve environmental problems and disputes can, however, be limited. Natural resources such as air and water are indivisible, and selfish behavior by just a few countries can jeopardize the group's effort at an agreement. No international pact, whether binding or non-binding, can in the long-term guarantee Bangladesh protection from rising sea levels. Ensuring compliance to international agreements involves the willingness of participating members to impose sanctions and penalties. Furthermore, the formation of an international organization by one region may not necessarily guarantee benefits for another region, as the two may have starkly different priorities. International trade regimes favoring certain trading blocs is a good

example of such discriminatory "cooperation." The GATT has been accused of favoring the North by failing to act on, for instance, the dumping of European agricultural surplus on development states.<sup>128</sup>

### *Structuralism*

Another approach to international relations which some may view as having particular relevance for the economic and environmental future of central Europe, is structuralism. In the 1960s and 70s, structural theories took shape as an outgrowth of Marxist thinking on inequality and as a critique of realist theory's failure to incorporate economics as a key deterministic element. The inequitable structure of the world economy is the lens through which structuralists see the world.<sup>129</sup> They maintain that some countries, or economies, are conditioned in their development by their dependence on other countries or economies, and that this dependency is structural. Structuralists argue that the Western pattern of industrialization as a route to development is not necessarily the best path, and that the mere existence of Western capitalist economies prevents poorer countries from developing on that model.<sup>130</sup> Dependencia, a Latin American view of such inequality, emphasizes that the region's role as a supplier of primary products to the industrialized world put Latin America at a disadvantage because the terms of trade were moving over the long term against primary products. A.G. Frank, an early dependencia writer, held that surplus is extracted from the poorer agrarian countries on the periphery and transferred to the richer industrialized countries in the core, creating structural development and underdevelopment. Frank believed that attempts by those on the periphery to achieve development could only succeed by severing the bonds which tied their region to the capitalist world system.<sup>131</sup>

Emmanuel Wallerstein, who uses a world systems approach to explain structural inequality, divides the global economy into a core (rich industrialized states), periphery (poor, raw-material producing states) and semi-periphery (a hybrid of the core and periphery).<sup>132</sup> In this framework, politics and social behavior are second to international economic relations. Wallerstein explains colonialism as an economic phenomenon undertaken to procure sources of raw materials. In this international division of labor, core states

dominate the production of manufactured commodities, selling them for profit in the world market. The resulting wealth has been used over several centuries to establish the most powerful states in the world economy. "The existence of powerful state structures enabled the dominant classes in the core to impose their will on weaker societies which were adjacent to, and subsequently became part of, the capitalist world economy."<sup>133</sup> The peripheral regions, by contrast, specialize in low-income generating agricultural and mining activities. Because of their subordinate status in the world economic system, these states are vulnerable to changes in the world economy. Their lack of income limits their power to change their status in the international division of labor. States in the semi-periphery have characteristics of both the core and periphery, with their economic status often in a state of transition. The semi-periphery states are exploited by the core, but in turn exploit the periphery. Countries do not necessarily have the same status forever; empires rise and fall, as we have seen in the decline of the British manufacturing industries.<sup>134</sup>

In emphasizing economics as the key determinant of international relations, Wallerstein questions the very legitimacy of the state. He maintains that the state's development coincided with the birth of the world capitalist system, and that it developed for capitalism. He traces the origin of the state to the 16th century and the failure of the Habsburgs to create a world empire, after which capitalism took hold and established itself. A recession a century later consolidated the European world economy, and the decreased surplus of goods left only one core state--England--surviving.<sup>135</sup> Wallerstein explains inevitable shifts in economic status through the assertion that the world capitalist structure has a determining effect on the behavior of actors within it, and that the structure may constrain some states while enabling others. The mercantilist period was characterized by the shifting of the Netherlands out of the "core" and by England's efforts to resist French efforts to catch up with it. As industrial capitalism took over in the 19th century, the strength of a few states grew, but regions such as Latin America were left on the periphery of the world economy, and countries such as Russia on the semi-periphery. By the 1870s, England had declined as the core state in the world economy, the US rose to core status, and Russia had descended toward the

periphery.<sup>136</sup> The economic power held by the core states is crucial for states on the periphery because the core has the ability to protect its markets from foreign competition, as well as control the amount of financial capital which flows into developing countries either through loans or direct aid.<sup>137</sup> In the case of the countries of CEE--which in 1990 found themselves on the edge of the the world economy--foreign capital inflows and the gradual opening up of markets in the core will be a crucial ticket to joining the core states of Europe. The region's environmental rehabilitation, which can only follow such market adjustments, is thus similarly dependent on such outside assistance. Structural approaches to international relations also highlight the possibility that such outside "assistance" to CEE could take the form of exploitation. As the countries of CEE are integrated into the world economy, they could find themselves being utilized for their cheap labor, not for their human resources. Another concern is that countries lacking a developed environmental protection infrastructure (largely the norm) could be used as a locale for dirty Western industry, as Mexico has been in the past. Thus states CEE, though in some ways well on their way to joining the core (Hungary, Poland and others have Association Agreements with the EU), could also be in danger of being treated like states on the traditional periphery.

In *The Greening of a Red*, MacEwan puts his finger on what he considers to be likely exploitation of CEE in coming years. In the context of a discussion of the events following the 1989 democratic revolutions, he writes:

All the Western businessmen could think about, as they hovered like vultures over the 'corpse' of 'socialism,' was how to lay their greedy hands on Eastern Europe, frankly regarded as the 'new Korea' in which cheap skilled labour offers capital an exceptional rate of profit. 'Freedom' was on everybody's lips, but the freedom that interested the fifty billionaires who control the Western European financial world was freedom to operate in an expanding market.<sup>138</sup>

In this context, the states of CEE are not the stereotypical raw-material producing countries of the periphery, but a whole new breed of dependent states.

On the other hand, the "dependency" situation referred to by structuralists can be viewed from the point of view that CEE's future development, and environmental rehabilitation, cannot progress

without help from outside. Hungarian government officials, for instance, have no qualms about admitting they would be lost without Western investment. Denes Olessak, head of the Division for Environmental Protection and Safety at the Hungarian Ministry of Industry, asserts: "This is a little country. We have had some success on our own, but really we are weak."<sup>139</sup> In fact, one of the criticisms about Western involvement from a Hungarian perspective is that *not enough* money is being invested in solid projects. Foreign involvement in the transitions of the CEE states, it seems, is inevitable. Whether that is a good or a bad thing is a matter of opinion.

### ***Summary***

All three primary international relations theories -- realism, pluralism and structuralism -- provide a useful framework for understanding environmental politics. Realism, though it does not stress cooperation, a major feature of environmental politics in the past 20 years, provides a sobering lesson that must not be forgotten: CEE states are primarily concerned with their own interests. Regardless of international conferences and agreements, states in the former East bloc have more on their minds than achieving sustainable development, namely attracting investment, reducing foreign debt and creating jobs. That said, pluralist theories of international relations provide insight into a future which may well be characterized by international cooperation. Pluralism's emphasis on interdependence is an important basis for understanding the motivations behind collective action, which international treaties on the environment have proven can be achieved. Treaties such as the 1974 Helsinki Convention on Protection of the Marine Environment of the Baltic Sea Area are testament to the fact that cooperation and negotiation work. Finally, structuralist theories, with their emphasis on economics and inequality, are useful for determining the intentions of foreign investment and aid in the former East bloc economies. However, the eagerness of CEE officials, and even environmental groups,<sup>140</sup> to receive help from the West may discount this application of structuralist theory. Sustainable development, the theory of the commons and the above international relations theories will provide a framework for understanding how the states of

CEE ended up in their present environmental condition and what sort of action may need to be taken in the future. Chapter 2 will provide details on environmental degradation in the region, the health situation, and an explanation of aspects of the command economy system which may have contributed to the region's environmental problems.

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3 Caroline Thomas, *The Environment in International Relations*, (London: The Royal Institute of International Affairs, 1992), p. 25.

4 *Ibid.*, p. 25.

5 *Ibid.*, p. 25.

6 Peter M. Haas, Marc A. Levy, and Edward A. Parson, "Appraising the Earth Summit: How should we judge UNCED's success?" *Environment*, vol. 34, no. 8, October 1992, p. 9.

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10 Thomas, *op. cit.*, pp. 25-35, 38.

11 Mark Imber, "Too many cooks? The post-Rio reform of the United Nations," *International Affairs*, vol. 69, no. 1, 1993, p. 62.

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15 Broecker, *op. cit.*, pp. 123-126.

16 Thomas F. Homer-Dixon, "On the threshold," *International Security*, vol. 16, no. 2, Fall 1992, pp. 79-80.

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24 Ian H. Rowlands, "Environmental Issues in Global Politics," *Dilemmas of World Politics*, edited by John Baylis and N.J. Rengger, (Clarendon Press, Oxford, 1992), p. 298.

25 Haas, Levy and Parson, *op. cit.*, p. 7-14.

26 Personal interview by telephone with Janos Zlinszky, Team Leader, Regional Environmental Center for Central and Eastern Europe, September, 1994.

27 *Ibid.*

28 European Parliament, Session Document, *Report of the Committee on the Environment, Public Health and Consumer Protection on the environmental aspects of the PHARE programme in the Visegrad countries*, 30 November 1993.

29 Commission of the European Communities, "The week in Europe," March 11, 1993, p. 1.

30 Edward Parson, Peter Haas, and Marc Levy, *A summary of the major documents signed at the Earth Summit and the Global Forum*, *Environment*, vol. 34, no. 8, October 1992, p. 12.

31 *Ibid.*, p. 12.

- 32 Imber, *op. cit.*, p. 55.
- 33 Parson, Haas, and Levy, *op. cit.*, pp. 12-14.
- 34 Imber, *op. cit.*, p. 55.
- 35 Sustainable development has been stated by such international organizations as the European Bank for Reconstruction and Development as objectives for CEE's future development. See European Bank for Reconstruction and Development, *Environmental Procedures*, (London: EBRD, 1992). Chapter 3 will examine in detail the Bank's goals and activities.
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- 37 *Ibid.*, p. 37.
- 38 World Resources Institute, *World Resources 1992-93: A Guide to the Global Environment* (Oxford: Oxford University Press, 1992), p. 60.
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- 41 *Ibid.*, p. 43.
- 42 *Ibid.*, p. 37.
- 43 *Ibid.*, p. 49.
- 44 *Ibid.*, p. 49.
- 45 *Ibid.*, p. 43.
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- 49 *Ibid.*, p. 14.
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- 60 *Ibid.*, pp. 62-63.
- 61 David Pearce, et.al, *op. cit.*, pp. 174-175.
- 62 *Ibid.*, p. 173.
- 63 Bartłomiej Kaminski, *op. cit.*, pp. 3-6.
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- 76 *Ibid.*, p. 21.
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- 133 *Ibid.*, pp. 108-111.
- 134 *Ibid.*, p. 108-111.
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- 140 Personal interview with Ivan Gyulai, director of the Ecological Institute for Sustainable Development in Miskolc, Hungary, September, 1993. Gyulai's organization has itself participated in US Agency for International Development aid projects in Borsod County, Hungary.

## Chapter 2

### ENVIRONMENTAL DEGRADATION AND THE COMMAND ECONOMY

#### 2.1 POLLUTION AND STATE SELF-INTEREST: FOCUS ON HUNGARY

As discussed above, the conventional realist conception of international relations views international politics and domestic politics as two separate entities, but this means of interpreting international behavior is contradicted by events in CEE such as the Hungarian-Slovakian water disputes.<sup>1</sup> However, the realist paradigm does contain one key point, which on its own can help us to understand why states degrade their environments at the expense of other states which are forced to share the same air and water. Realism maintains that states tend to act in their own self-interest, not only in relations with other states but also in domestic policy-making.<sup>2</sup> Thus if a state has what it perceives to be powerful enough reasons to sacrifice environmental quality in order to achieve high industrial output, it can do just that, despite the language adopted at both the Stockholm Conference on the Human Environment and at UNCED. If ideological and strategic priorities call for the formation of a high-output economy with heavy emphasis on metallurgy and arms manufacturing, priorities may be such that protecting the environment from those industries is at the bottom of the society's political agenda. The conscious decision of a government not to regulate emissions of sulfur dioxide and nitrogen oxides, for example, or not to control the types of vehicles driven (such as those with highly polluting two-stroke engines), may ultimately contribute to the degradation of the global environment as well as the state's environment. Thus one state's self-interested actions contributing to the degradation of the ozone layer or to global warming force other states to suffer. When a state on the receiving end protests, as Hungary did with Slovakia's diversion of the Danube in 1992, what starts out as a domestic issue suddenly turns into an international dispute.<sup>3</sup>

The goal of this chapter is to show that the degradation of the environment in CEE did not occur as a result of economic desperation, as has been the case in some underdeveloped states, but rather as a

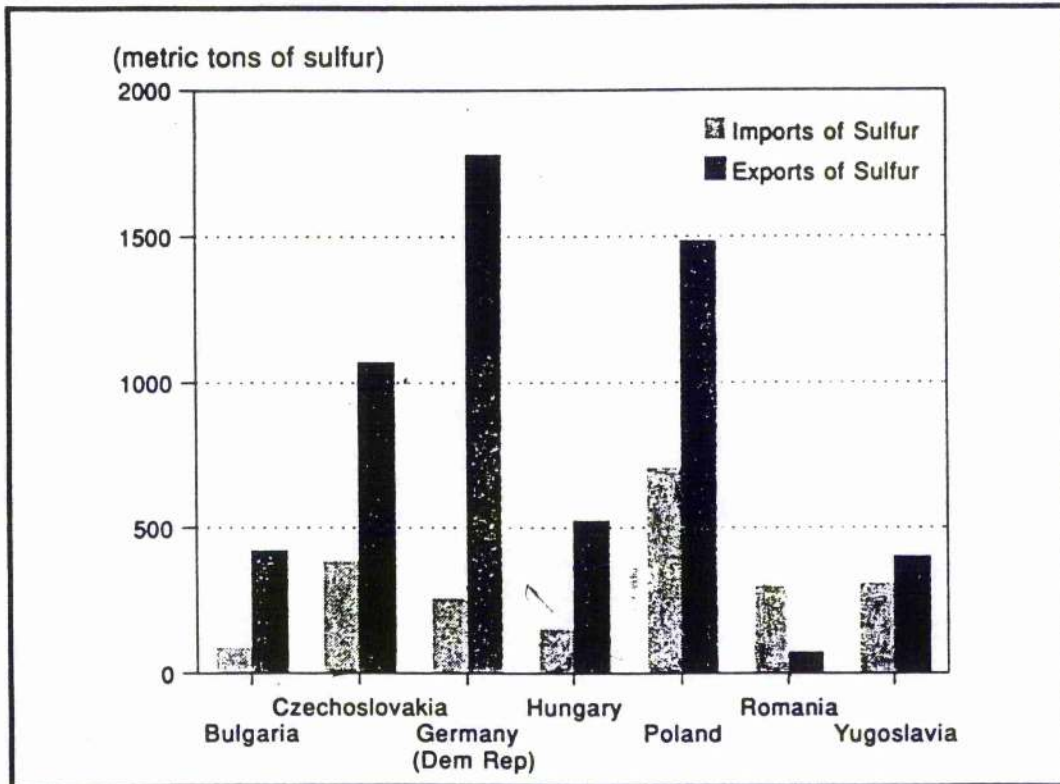
result of self-interested government policies originating in or inspired by the Soviet Union. In contrast to some African states, where the need to pay back international loans has forced overcultivation of the land, resulting in desertification and famine, in the former Soviet satellites prior to 1989 environmental degradation occurred as the result of conscious government decisions to emphasize heavy industry, which sacrificed environmental quality for high output.<sup>4</sup> In the 1980s, CEE environmental movements, as one of the only forms of political protest tolerated under the political regimes, played a key role in drawing attention to decades of environmental degradation.<sup>5</sup> However, now that economies in the region are seeking to move toward market-oriented systems, economic hardship has surpassed the environment as a concern, again pushing the environment down the list of priorities.<sup>6</sup>

This chapter will, through an analysis of empirical data and government documents, seek to show that central and eastern Europe has high levels of pollution, and that the region has contributed disproportionately to global air pollution levels. Air pollution, which is easier to measure than other types of environmental degradation, will be emphasized because of its transboundary, and thus international relations, implications. Figure 2.1 shows the disproportionate amount of sulfur emissions exported from Bulgaria, Czechoslovakia, the former East Germany, Hungary, Poland, Romania and the former Yugoslavia compared with imports of airborne sulfur into their territories. When possible, the data in this chapter will emphasize comparisons with industrialized and more prosperous Western states. While data on the entire CEE region will be presented, the analysis will zone in on Hungary, a state whose worst environmental problem is air pollution.<sup>7</sup>

Hungary's geographical location in the center of Europe positions it both as a potential gateway to the east and as an exporter of air pollution. Having made attempts at economic reform during its years in the Soviet bloc, Hungary gained the reputation of being one of the more prosperous and moderate regimes in the region; its efforts at economic reform in the 1960s and 1970s included periods of less rigorously applied Soviet command economy principles than were found in other parts of CEE.<sup>8</sup> During the New Economic Mechanism reform effort in the 1960s, notable aspects of the

FIGURE 2.1

Transboundary Pollution in Central Europe, 1987



source: Adapted from data in "Emissions are falling...but is it enough?" Acid Magazine (September 9, 1989), p. 5

Stalinist system--central planning in quantitative units and the centralized allocation of resources--were abandoned entirely for a period.<sup>9</sup> Since then it has been perceived as one of the more Westernized and culturally accessible states in the region. In the 1970s and particularly the 1980s, selected areas of public protest,

environmentalism in particular, were tolerated, which is more than was seen in such countries as Romania under Ceaucescu.<sup>10</sup> Yet in spite of all that, in 1989, the last year of the old regime, it still had thirty times the sulfur dioxide emissions per dollar of GNP than France (see table 2.1).<sup>11</sup> Thus even one of the most moderate CEE command systems, both economically and politically, had emissions levels far disproportionate to its output.

Table 2.1 Sulfur Dioxide Emissions, 1989

Country	Total emissions (000 metric tons SO <sub>2</sub> /year)	Per Capita Emissions (kilograms)	Emissions per Dollar GNP (grams)
<i>Central Europe &amp; USSR</i>			
Albania (a)	50	15.6	13.2
Bulgaria	1,030	114.6	49.4
Czechoslovakia	2,800	178.9	22.7
Germany (Dem Rep)	5,210	313.3	32.7
Hungary	1,218	115.2	45.0
Poland	3,910	103.3	58.4
Romania	200	8.6	2.5
Yugoslavia	1,650	69.6	27.9
USSR (b)	9,318	32.4	3.5
<i>Western Europe &amp; US</i>			
Austria	124	16.3	1.1
Belgium	414	41.5	2.6
France	1,520	27.1	1.5
German (Fed Rep)	1,500	24.2	1.2
Italy	2,410	41.9	2.8
Sweden	220	25.9	1.2
United Kingdom	3,552	62.1	4.3
United States (c)	20,700	83.2	4.0

Sources: World Resources Institute, *World Resources 1992-93: A Guide to the Global Environment* (Oxford: Oxford University Press, 1992), p. 64. Items extracted by the authors from Chapter 24, "Atmosphere and Climate," Table 24.5, and Chapter 15, "Basic Economic Indicators," Table 15.1, as well as unpublished data from the World Bank, Washington, D.C., June 1991.

Table 2.1 Nitrogen Oxide Emissions, 1989  
(cont'd)

Country	Total emissions (000 metric tons NO <sub>2</sub> /year)	Per Capita Emissions (kilograms)	Emissions per Dollar GNP (grams)
<i>Central Europe &amp; USSR</i>			
Albania (a)	9	2.8	2.4
Bulgaria	150	16.7	7.2
Czechoslovakia	950	60.7	7.7
Germany (Dem Rep)	708	42.6	4.4
Hungary	259	24.5	9.6
Poland	1,480	39.1	22.1
Romania (a)	390	16.8	4.9
Yugoslavia (a)	190	8.0	3.2
USSR (b)	4,190	14.6	1.6
<i>Western Europe &amp; US</i>			
Austria	211	27.7	1.8
Belgium	297	29.8	1.8
France	1,688	30.1	1.7
German (Fed Rep)	3,000	48.4	2.4
Italy	1,700	29.6	1.9
Sweden	301	35.4	1.6
United Kingdom	2,513	43.9	3.0
United States (c)	19,800	79.6	3.8

Sources: World Resources Institute, p. 65. Items extracted by the authors from Chapter 24, "Atmosphere and Climate," Table 24.5, and Chapter 15, "Basic Economic Indicators," Table 15.1, as well as unpublished data from the World Bank, Washington, D.C., June 1991.

Notes:

- a. Estimated emissions.
- b. Emissions data for European part of USSR only. Per capita and per dollar emissions calculated using population and GNP data for entire country.
- c. 1988 emissions data.

Hungary has had more success than its neighbors in attracting badly needed investment for economic restructuring. The US Commerce Department's provisional estimate for total foreign direct investment in Hungary in 1993 was \$5.5 billion, with US foreign direct investment amounting to \$2.4 billion. By contrast, Poland had \$3 billion of total foreign direct investment in 1993, with \$1 billion of that originating in the US. The Czech Republic's total foreign direct investment in 1993 was \$568 million, with total US foreign

direct investment \$255 million of that total.<sup>12</sup> The Commerce Department attributes Hungary's success at attracting investment to the country's efforts at quickly becoming a member of the General Agreements on Tariffs and Trade and the International Monetary Fund, and allowing the US Chamber of Commerce to secure a presence in the early stages of the country's post-1989 transition to democracy and free markets.<sup>13</sup>

Foreign interest in Hungary has gone beyond investment in economic restructuring; the country has aroused keen interest from the West, as well as Japan, in the area of environmental rehabilitation. The Regional Environmental Center for Central and Eastern Europe (REC) in Budapest, a non-profit information clearinghouse, was established in 1990 by Hungary, the US and the European Community, and is the focal point for many projects and proposals in the region.<sup>14</sup> The location of the REC in Hungary is an interesting parallel to the high levels of investment in the country, and the origins of the REC's initial funding compare directly to the investment trends in Hungary: 20% of the Center's seed money came from the US,<sup>15</sup> and the Center employs US Environmental Protection Agency officials through secondment schemes.<sup>16</sup> Throughout government-sponsored environmental activity in Hungary, evidence<sup>3</sup> of US influence is evident, both in government-to-government advisory services as well as in private consulting.<sup>17</sup> As the Hungarian economy moves toward privatization and economic restructuring, Hungarians have reciprocated the foreign interest with an interest in Western culture and goods.

Hungary's stability seems to be more a cultural characteristic than a fleeting political phenomenon, as shown by the election in May 1994, which elevated the Hungarian Socialist Party, some of whose members were prominent members of the pre-1989 Communist Party, to the majority party in the state Parliament. As the new government led by Gyula Horn takes hold, the expected jitters one would expect from the international investor community have failed to materialize.<sup>18</sup> Though the implications of the recent election are still developing, one thing is clear: the public has become increasingly impatient with the reform process, but that is not particularly bothering Western investors. As can be seen all over CEE, the pressure of economic transformation has apparently proved great enough to send voters seeking comforts of the old system. What

may be keeping investors in Hungary calm is, first, the willingness of the Socialists to form a coalition government with runner-up party Alliance of Free Democrats,<sup>19</sup> and second, the reality that economic restructuring is indeed painful: the election of a Socialist majority may simply be the manifestation of public sentiment that the economic shock people are experiencing should be cushioned. From an environmental perspective, however, the election further drives home the point that the public's priorities include more jobs and better social services, among other things, and the environment as a major social problem has receded from the public mindset. Accompanying this change has been a distinct lack of political will to commit time and resources to ensuring the environment is cleaned up and economic growth is achieved in a sustainable manner.<sup>20</sup>

## **2.2 ENVIRONMENTAL DEGRADATION AND HUMAN HEALTH IN CEE**

This section will survey environmental data on CEE prior to 1990, when enterprises started to become dismantled and pollution levels subsided somewhat.<sup>21</sup> It will also consider health statistics on the region, which have been widely perceived as being related to the environmental problems. However, few direct links will be made between environmental problems and relatively poor health in CEE compared with Western Europe; even the World Health Organization is hesitant to do so, due to a variety of other factors such as work-related stress, high-fat diets, alcoholism, and a higher percentage of smokers, all of which inevitably have had an effect on the quality of health in the region.<sup>22</sup> This section will highlight possible causes of problems such as high sulfur emissions, but Section 2.3, "The command economy and its impact on the environment," will analyze in detail the economic system under which such conditions transpired. As part of the Hungarian case study, a review will be made of government publications such as the country's presentation to UNCED in 1992 and studies on air pollution.

### ***Resource utilization and air pollution***

The primary characteristics of the economies of Hungary and other CEE states which contributed to higher air pollution levels included the widespread use of less energy-efficient fuels and the



employment of lower quality, often obsolete technology in industry.<sup>23</sup> Soviet oil did not become available to Eastern Europe until the early 1970s, so, while Western Europe was receiving cheap oil imports in the 1950s and 60s, central Europe was burning brown coal, or "lignite."<sup>24</sup> Domestic lignite, the primary fuel used in CEE, has a high ash content, a sulfur content that varies considerably from region to region (up to 5% in some areas, and as little as 0.7% in others) and an energy yield that may be only half that of hard coal.<sup>25</sup> Thus more lignite has to be burned in order to meet a given energy demand, resulting in higher emissions of sulfur dioxide and nitrous oxides.<sup>26</sup>

The use of brown coal is responsible for much of the sulfur dioxide and nitrogen oxide emissions in CEE. Excessive amounts of sulfur-dioxide can cause acute, chronic respiratory diseases. SO<sub>2</sub> is a main cause of acid rain, while nitrous oxides are significant contributors to global warming, or the "Greenhouse Effect," as well as to acid rain. Burning coal also produces high quantities of particulates, or dust, which reflect solar radiation and affect the Earth's thermal balance.<sup>27</sup> East Germany, Poland and Czechoslovakia, in particular, became especially dependent on low-quality domestic coal in the decades following World War II.<sup>28</sup>

Table 2.2, which shows commercial energy consumption in various countries in central Europe in 1989, indicates high dependence on solid fuels. Table 2.3 shows that 81% of coal used in Hungary in 1989 was brown coal, while in the OECD Europe states, only 61% of coal used was brown coal, taking into consideration that sulfur contents in eastern Europe tend to be higher than in western Europe.<sup>29</sup> The International Energy Agency in Paris reports that energy efficiency in CEE in 1985, 1989 and 1991 was significantly less than in the more developed OECD Europe (see table 2.4).<sup>30</sup>

Table 2.2 Commercial Energy Consumption  
in Central Europe, 1989

Consumption (petajoules) (a)					
Country	Total	Solid Fuels (b)	Liquid Fuels (c)	Gas (d)	Electricity (e)
Albania	119	42	50	16	11
Bulgaria	1,291	662	355	238	36
Czechoslovakia	2,733	1,702	513	403	114
Germany (Dem Rep)	3,648	2,753	539	303	53
Hungary	1,136	306	313	427	90
Poland	5,062	4,040	605	397	20
Romania	3,047	944	683	1,346	74
Yugoslavia	1,771	810	609	239	113
USSR	54,958	14,510	6,049	22,970	1,429

Consumption by Fuel Type as a % of Total

Country	Solid Fuels	Liquid Fuels	Gas	Electricity
Albania	36	43	13	9
Bulgaria	51	28	18	3
Czechoslovakia	62	19	15	4
Germany (Dem Rep)	75	15	8	1
Hungary	27	28	38	8
Poland	80	12	8	0
Romania	31	22	44	2
Yugoslavia	46	34	13	6
USSR	26	29	42	3

Source: United Nations Statistical Office, UN Energy Tape, United Nations, New York, 1991.

Notes: a. Consumption is defined as domestic production plus net imports, minus net stock increases, minus aircraft and marine bunkers. b. Solid fuels include bituminous coal, lignite, peat and oil shale burned directly. c. Liquid fuels include crude petroleum and natural gas liquids. d. Gas includes natural gas and other petroleum gases. e. Electricity includes primary production from hydro, nuclear, and geothermal sources.

Table 2.3 **Total Coal Requirements, By Type of Coal, 1989, Hungary and OECD Europe (1000 metric tons)**

	Hard Coal(a)	Brown Coal(b) (lignite)	Total	Brown Coal as % of coal use
Hungary	4181	17722	21903	81
OECD	340438	537387	877825	61

Source: Adapted from International Energy Agency, *Energy Statistics and Balances of non-OECD Countries*, 1993.

Note: a. OECD total for hard coal includes sub-bituminous for all OECD Europe countries except Turkey and Spain. b. Ash and sulfur content in brown coal may vary.

Table 2.4 **Total Primary Energy Supply per unit of GDP Hungary, Poland and Czech Republic vs OECD (Tonnes of oil equivalent per 000 US \$)**

	1985	1989	1991
Hungary	1.23	1.14	1.21
Poland	2.11	1.79	1.78
Czech Republic	1.50	1.27	1.36
OECD Europe	0.4461	0.4181	0.4073

Source: International Energy Agency, *Energy Statistics and Balances of non-OECD Countries*, 1993.

Due to a lack of investment funds, as well as institutionalized obstacles to innovation (see section 2.3), enterprises were set back further regarding utilization of resources. In the CEE steel industry, for instance, the use of open-hearth technology is far more prevalent than in Western Europe or the US. Open-hearth technology accounts for about 55-60% of steel production in CEE, while it is virtually out of use in Western Europe and accounts for only about 8% of US steel output.<sup>31</sup> The Hungarian government, in a discussion about future environmental policy in its national report to UNCED in

1992, calls its own country's production units "sluggish and out-of-date."<sup>32</sup>

Hungary is still confronted with the serious consequences resulting from the development blunders made in the seventies. In other words, the major industrial investments carried out during the same period either introduced or expanded traditional mass production technologies which had been discarded as out of date in other parts of the world. While industrialized countries were entering a new stage of development called the third technological revolution, Hungary failed to transform its backward economic structure by relying on generous credits available in the seventies...<sup>33</sup>

The Hungarian government blames "the forced rate of development of energetics, coal mining, metallurgical and heavy industry" as having "extremely negative consequences for the environment."<sup>34</sup>

In addition to the heavy use of low-grade coals in CEE, the absence of flue gas desulfurization (FGD) processes in many areas has contributed to the region's disproportionate amount of SO<sub>2</sub> emissions, according to IEA Coal Research, a project within the International Energy Agency.<sup>35</sup> According to IEA Coal Research, it is estimated that CEE is currently responsible for two-thirds of Europe's SO<sub>2</sub> emissions. Combustion modifications, which can be used to achieve low NO<sub>x</sub> emissions equivalent to 80% reductions, are also lacking in CEE.<sup>36</sup> IEA Coal Research, which is funded by the OECD, 14 governments and the Commission of the European Communities, maintains that a lack of financing and generally poor economic conditions in CEE has left a significant percentage of coal-fired industries without FGD processes.<sup>37</sup> A lack of financial resources to upgrade, rebuild and modernize existing coal-fired power generation plants, or to build new plants, has been alleviated somewhat by joint venture projects with Western firms, but a general lack of funds has been an ongoing problem in the challenge to improve air pollution in the region.<sup>38</sup>

#### **Water and soil pollution**

For Hungary at least, water and soil pollution have received slightly less attention than air pollution. This is not necessarily because water and soil have evaded degradation over the past several decades, but rather because air pollution's transboundary nature implies negative effects for more states than Hungary's immediate

neighbors. According to World Resources Institute, water quality in CEE has been degraded through fertilizer and animal waste runoff, the dumping of raw sewage and heavy industrial waste.<sup>39</sup> Dumping of industrial effluents laced with heavy metals and toxic, and sometimes radioactive, chemicals into the region's rivers has made much of the water unfit for drinking or industrial use.<sup>40</sup> A Hungarian government study published in 1990 addresses water quality in the country over the course of three successive five-year plans.<sup>41</sup> The study of five rivers in Hungary--The Kapos, Zala, Zagyva and border sections of the Danube and Tisza -- found steady deterioration in water quality in the period 1971-85. The water quality indicators studied include the following: COD (Chemical Oxygen Demand, which measures how much oxidizing power is needed to break down impurities in water); BOD<sub>5</sub> (Biological Oxygen Demand, or the level of degradable organics in water over a 5-day incubation period); dissolved O<sub>2</sub> (dissolved oxygen, an important measure of crucial gases for fish and aquatic life); ammonium ion, nitrate ion and orthophosphate ion (which are indicators of fertilizer runoff), as well as total dissolved solids (a measure of the amount of salt in the water).<sup>42</sup>

The Kapos River has deteriorated in every category except for nitrate; the Zala River has no improvements except for BOD<sub>5</sub>, dissolved O<sub>2</sub>, and ammonium, and the Zagyva River is worse off except for BOD<sub>5</sub>. The rate of deterioration showed an increasing trend for orthophosphate, but a levelling off for total dissolved solids. Danube water quality, as it enters Hungary, has consistently deteriorated in terms of nitrate and dissolved solids. As the water leaves Hungary it is worse off only in terms of ammonium, nitrate and total dissolved solids; the other components registered improvements. The rate of deterioration of the Tisza River is one of the highest for any body of water in Hungary. As it enters Hungary, the Tisza has consistently deteriorated in terms of ammonium, nitrate and total dissolved solids, while at its outflow measurement point, all components, except for orthophosphate and BOD<sub>5</sub>, indicate poorer water quality. The study concludes that compared with research undertaken 30 years ago, this data reveal a "startling deterioration in water quality."<sup>43</sup> For Hungary as a whole, the ground waters in the 0-20 meter depth range are so polluted that they cannot be considered for drinking water supply.<sup>44</sup>

Water quality in other CEE states has been similarly degraded.<sup>45</sup> In Upper Silesia in Poland, about 950,000 cubic meters of saline water is pumped daily from coal mines, of which about 650,000 cubic meters--containing about 7,000 metric tons of salt--is fed daily into the tributaries of the Oder and Vistula rivers. Surface water in Poland has continued to deteriorate over the last 25 years. Class I water, defined as drinkable after disinfection, constituted 33% of the total length of monitored rivers in the country in 1967. By 1986, Class I water was found in only about 4% of Poland's total river length. "Unclassed" water, or water unfit for even industrial purposes, rose from 23% in 1967 to 39% in 1986.<sup>46</sup> About half of Poland's cities (including Warsaw) and 15% of its industrial facilities have no wastewater treatment systems, and about 32% of wastewater needing treatment is left untreated. In the former Czechoslovakia, groundwater contamination also has increased sharply; over the past 30 years, average nitrate levels in groundwater in the built-up areas of cities and towns rose from 30 to 120 milligrams per liter.<sup>47</sup>

Forest defoliation and soil damage have also been a problem in the region. Table 2.5 outlines forest defoliation in Europe in 1989. While only 12.7% of Hungary's trees nationwide were classified as suffering moderate to severe defoliation, the researchers reported a trend in the deterioration of older trees. The study showed that 33% of the (then) Czechoslovakia's trees were classed having undergone moderate to severe defoliation, and 31.9% of Poland's were classed as such. Belarus had the highest percentage of moderate to severe defoliation, with 76.2% of trees affected (based on a regional sample).

Defoliation is not limited to the East; the European state with the fifth worst percentage of forest defoliation was the United Kingdom, with 28% of trees affected, and the sixth worst, Denmark, with 26% affected. Soil degradation, caused by such activities as inappropriate agricultural techniques, pollution from mining operations and the dumping of industrial, residential and agricultural waste, has also affected states throughout CEE.<sup>48</sup>

Table 2.5

**Forest Defoliation in Europe, 1989**  
(% of trees affected)

Country (a)	Moderate to Severe (Classes 2-4)	No Defoliation (Class 0)
Byelorussia (R)	76.2	15.0
Kaliningrad (R)	35.0	26.9
Czechoslovakia (N)	33.0	26.0
Poland (N)	31.9	22.0
United Kingdom (N)	28.0	41.0
Denmark (N)	26.0	48.0
Bulgaria (N)	24.9	40.5
Slovenia (R)	22.6	60.3
Finland (N)	18.0	60.1
German Dem. Rep. (N)	16.4	45.7
Germany, Fed. Rep. (N)	15.9	47.1
Norway (N) (b)	14.8	57.0
Sweden (N) (b)	12.9	51.9
Hungary (N)	12.7	63.6
Switzerland (N)	12.0	57.0
Italy (N)	9.1	75.8
France (N)	5.6	79.3
Austria (N)	4.4	74.6
Spain (N)	3.3	78.0

Source: Christer Agren, "Forest Decline Continues," *Acid News*, December 1990, p. 5.

## Notes:

- a. Based on Nationwide (N) or regional (R) figures for all tree species, unless noted.  
b. Conifers only.

In Hungary (whose territory constitutes 88% arable land, three-quarters of which is cultivated) over 50% of the country's cultivated land is being exposed to natural or man-made degradation such as soil acidification and erosion.<sup>49</sup> The acceleration of soil acidification has been caused primarily by what the Hungarian government calls "the incompetent use of fertilizers and the widespread application of superphosphate, often containing a great deal of acid residues..."<sup>50</sup> In addition to poor quality fertilizers, the government also cites atmospheric precipitation and inefficient liming practices as contributing to soil acidification. The result, the Hungarian government says, has been a dramatic decline in yields.<sup>51</sup> The post-1989 government blames central planning for Hungary's present soil problems, saying planners did not take into consideration

"differences in natural endowments" and, with high output targets in mind, sanctioned the use of inappropriate machinery for particular soil types, as well as cultivation of row crops in hilly and sloping areas.<sup>52</sup> Hungary, ironically, is much better suited for non-chemical farming than other European states, but because of political pressure to produce high yields, such techniques were never exploited, and in the long-run, fertility was sacrificed.<sup>53</sup> Non-agricultural soil has also been degraded as a result of illegal dumping of industrial waste containing heavy metals or other substances hazardous to human health.<sup>54</sup>

### ***Pre-1989 government policy***

The Hungarian government in its 1992 report to UNCED acknowledged that in developed market economies, where environmental degradation can also be a problem, the role of promoting environmental protection is usually played by a civil society and especially the middle class, which has control over the economy and the state. The government asserts: "In east European countries, however, the low level of civil development as well as totalitarian state socialism prevented the emergence of civil society and the middle classes."<sup>55</sup> The report calls attention to the Gabčíkovo-Nagymoros dam dispute, which played an indirect role in pressuring the government for democratization. However, the government stresses that the general level of ecological consciousness is still rather low. "The majority of people don't want to (and certain social groups are not able to) make any more sacrifices for the sake of environment at the expense of their declining living standards."<sup>56</sup> The report to UNCED calls for greater emphasis on environmental education, though with the changes occurring in education as well, not much progress has been made in increasing environmental awareness.<sup>57</sup>

Hungarian environmental groups are quick to point out that laws existed to protect the environment as far back as the 19th century, and especially since World War II. However, at least during the post-WW II period, laws went largely unenforced. The laws enacted in the 1960s and 70s, on mining (1960), land (1961), forests and forestry (1961), water management (1964), construction activities (1964), medical care (1972), nature conservation (1961) as well as a law-decree on the protection of air purity (1973) contained detailed provisions including environmental standards and norms.<sup>58</sup> However,



the post-1989 government acknowledges that apart from the decree on the protection of air purity, the laws were mostly motivated by the desire to protect resources needed for production, not by ecological concerns.<sup>59</sup> Though Hungary did not participate in the Stockholm Conference on the Human Environment in 1972, policies later began to incorporate the recommendations put forth at the conference.<sup>60</sup> The 1976 Act on Environmental Protection stated that each citizen of Hungary had the right to live in a healthy environment and that society should be interested and involved in the protection of the human environment.<sup>61</sup> The Act summarized targets and principles of environmental policy and provided for the establishment of an independent system to manage environmental protection.<sup>62</sup> Despite well-intentioned sounding declarations on the environment, the fundamental problem of regulation in Hungary and elsewhere in CEE was that if a state-owned enterprise pollutes the environment, the state itself must fine it. A western parallel would be a multinational corporation having to fine its subsidiaries for polluting the environment. The contradiction of the state having to fine itself proved a serious obstacle to enforcement. In its report to UNCED, the post-1989 government asserts: "The general political and economic targets have been in sharp contrast with the declared goals of environmental policy." And furthermore, "The political leadership has refused to take unpopular measures by reallocating economic resources for environmental purposes."<sup>63</sup>

The transboundary nature of air pollution has led to a number of international agreements which have been signed and adopted by several European countries, including the protocols to the United Nations Economic Commission for Europe Convention on Long-Range Transboundary Air Pollution (LRTAP), as well as the European Union directives.<sup>64</sup> The LRTAP convention in 1979 stated general principles of international cooperation for the abatement of air pollution. The SO<sub>2</sub> "30% Club" protocol, also called the Helsinki protocol, has been signed and ratified by 20 member states, including Hungary, Poland and the Czech and Slovak republics. The protocol calls for a 30% reduction in SO<sub>2</sub> emissions as soon as possible, or by 1993.<sup>65</sup> In November 1988, an NO<sub>x</sub> protocol was signed in Sofia, Bulgaria by 24 parties to the convention, including Hungary, Poland and the Czech and Slovak republics, and was subsequently ratified by 19 countries. The NO<sub>x</sub> protocol calls for a freezing of participants' NO<sub>x</sub> emissions

at 1987 levels or levels of any earlier year before December 31, 1994. However, as discussed above, CEE states have had a difficult time meeting the goals of international agreements due to a lack of financial resources to upgrade existing coal-fired generation plants.<sup>66</sup>

### *Health quality in CEE*

Few research organizations are willing to establish a direct link between environmental degradation and poor public health because one of the key measures of health problems -- death from disease -- is difficult to tie to any one factor, namely the environment. This is true particularly in CEE due to a variety of lifestyle factors such as a high incidence of smoking, drinking, poor diets and stress among members of the population in the region, which like the environment are known to contribute to diseases such as emphysema and cancer.<sup>67</sup> However, even when balanced with unhealthy lifestyle characteristics, data on CEE indicate some of the bleakest health conditions in the industrialized world.<sup>68</sup> This section contains two parts: first, an evaluation directly from the Hungarian government which points to environmental factors as the cause of health problems, particularly respiratory problems; and second, data from the World Health Organization (WHO) European Center for Environment and Health in Bilthoven, the Netherlands. For various health indicators, the WHO database is a compilation of information from its own records, individual country statistics, the OECD and various ad hoc reports.<sup>69</sup> The WHO data selected and adapted for this study compare Hungary, France and Sweden, three European states with varying levels of environmental degradation. As a basis for comparison to a CEE state, France and Sweden are useful, as France represents average health performance in Europe, and Sweden represents near-best health performance in Europe.

The Hungarian government states matter-of-factly in its report to UNCED that due to the health-damaging effects of air-polluting substances, acute respiratory diseases are on the rise.<sup>70</sup> In settlements with polluted air, the rate of chronic bronchitis among the adult population is three times above the Hungarian average, while the rate of bronchitis is gradually increasing among children ages 7-17 years. The government further states that the rate of

asthma more than doubled in Budapest between 1979 and 1987, and the city's population, particularly students, are frequently attacked by anaemia and osteogenesis disorders.<sup>71</sup> The Hungarian government, at the time the report to UNCED was written, maintained that the concentration of "carcinogenic, polycyclic and aromatic hydrocarbons" was two to four times higher than permitted in several industrial towns. Hydrocarbon pollution, meanwhile, on the busy roads in Budapest was more than five times higher than the US norm.<sup>72</sup> Conservative estimates put the yearly health damages (including costs and losses) caused by air pollution at at least three times higher than air protection inputs.<sup>73</sup>

The Hungarian government shows little hesitation in stressing that the state of the environment in the country has affected the disease and mortality rates of the population, with air pollution the environmental problem that affects health to the largest extent: "...it is very deplorable that about 44.5% of the population live in polluted and 30% in heavily polluted areas exposed to three kinds of pollutants at least."<sup>74</sup> Another report maintains that Hungarian air is polluted on over 11% of the country's territory.<sup>75</sup> Table 2.6 provides a breakdown of solids, sulfur dioxide and nitrogen oxides emissions in Hungary during the 1980s. Industry has contributed significantly to air pollution levels for reasons that will be discussed later in a more detailed discussion of industrial structure in the command economy.<sup>76</sup>

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Table 2.6                      **Emission of Air Polluting Materials  
in Hungary 1980-1989 (kilotons/year)**

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Year	Polluting Material		
	Solids	Sulfur Dioxide	Nitrogen Oxides
1980	576.6	1632.8	272.9
1985	491.6	1403.6	262.2
1986	463.6	1370.1	268.6
1987	433.6	1291.9	276.0
1988	407.8	1218.0	258.3
1989	343.0	1084.0	249.0

Table 2.6  
(cont'd)

**Emission of Air Polluting Materials  
in Hungary, 1989, by sector  
(kilotons/year)**

	SO <sub>2</sub>	NO <sub>x</sub>	Solids
Power stations	436.4	49.6	39.2
Industry	316.4	45.5	187.1
Agriculture, Forestry	23.8	7.7	7.0
Traffic, transport	16.5	116.1	11.8
Population	249.7	19.9	86.0
Services	27.9	6.8	10.6
Heat supply (other than by the Hungarian electricity board)	13.3	3.4	1.3
<b>TOTAL</b>	<b>1084.0</b>	<b>249.0</b>	<b>343.0</b>

Source: Ministry for Environment and Regional Policy, Government of Hungary,  
*Air Pollution Abatement Policy in Hungary*, Budapest, 1991.

Empirical data from the World Health Organization show that since 1970, life expectancy at age one in Hungary has declined, while it has increased in France and Sweden (see appendix for chart). In Hungary in 1991, life expectancy for both sexes at age one was 69.5 years, down from 70.8 in 1970. By contrast, in France in 1990, life expectancy was 77.10, up from 73.0 in 1970. In Sweden in 1989, life expectancy at age one was 77.20, up from 74.6 in 1970. Another key health indicator, infant mortality, has declined markedly in Hungary since 1970, but is still significantly higher than France and Sweden. Infant mortality per 1,000 live births in Hungary in 1989 was 15.74, compared with 23.97 in 1979 and 35.89 in 1970. In France, infant mortality in 1989 was 7.54, down from 10.01 in 1979 and 15.14 in 1970. Sweden showed the least cases of infant mortality in 1970, with 5.77 per 1,000 live births in 1989, compared with 7.48 in 1979 and 11.0 in 1970.<sup>77</sup>

Using Standardized Death Rate (SDR), a statistical measurement whereby comparative old-age mortality is taken into account, the World Health Organization also charts death rates for various diseases found throughout Europe. The SDR from malignant neoplasms, or cancer, per 100,000 people ages 0-64 in Hungary is significantly higher than in France and Sweden, and has been trending higher over

the past decade. In 1989, Hungary had 132.04 deaths per 100,000 people from malignant neoplasms, up over 18% from 1979 when it had 111.24. In France and Sweden, the number of deaths from malignant neoplasms fell by 1.5% and 9.3%, respectively. France had 97.61 deaths from malignant neoplasms in 1989, down from 99.05 in 1979, while Sweden had 67.19 deaths from cancers in 1989, down from 74.07 in 1979.<sup>78</sup>

Respiratory disease, one of the groups of ailments social scientists seem most willing to link to high pollution levels, is also an area where Hungary is worse off than other parts of Europe. Deaths from diseases of the respiratory system, ages 0-64, were 20.33 per 100,000 in Hungary in 1989, compared with 8.06 for France and 7.50 for Sweden. A similar measure is deaths per 100,000 for all ages from bronchitis, emphysema and asthma, which shows similar country characteristics. For this measure, Hungary had 39.31 deaths in 1989, compared with 10.01 for France and 11.72 for Sweden. Death from diseases of the circulatory system, per 100,000 people ages 0-64, shows Hungary is again far behind western Europe. In 1989, Hungary had 171.38 deaths from circulatory diseases, up 7.8% from 158.92 in 1979, while France had just 42.89, down 32% from 63.04 in 1979. Sweden had 59.85 deaths from circulatory problems in the same age group per 100,000 people in 1989, down 28% from 83.14 in 1979. Occupational health, though improving in Hungary since the late 1970s, is still comparatively worse than in France and Sweden. In 1989, fatalities in work-related accidents, per 100,000, were 4.16 in Hungary, compared with 1.13 in Sweden and 2.10 in France.<sup>79</sup>

Lifestyle characteristics, as stated earlier, are significant factors that must be figured into the human health equation. For instance, in Hungary in 1989, annual cigarette consumption per person in units was 2591.72, up from 2434.55 in 1979. Sweden's annual cigarette consumption that year was 1316.73, down from 1539.12 in 1979. In France, meanwhile, 1989 cigarette consumption in units was 1690.33, down from 1699.59 a decade before.<sup>80</sup> According to World Resources Institute (WRI), the health effects of smoking in CEE are exacerbated due to the high percentage of people smoking high-tar, high-nicotine cigarettes, which are associated with lung and other types of cancers. WRI also points to high-fat diets and alcoholism as contributing to poor health in the region.<sup>81</sup>

The lack of willingness on the part of statisticians to link the environment with poor public health seems to be due less to the fact that the links are precarious than to the fact that large subject areas of central and east European life have yet to be studied. WRI suggests that stress may also contribute to certain diseases in the region.<sup>82</sup> Perhaps rigid work environments in the command economy system, a lack of opportunity for upward mobility and sub-standard living conditions also play a role in quality of health; questions such as why people in CEE smoke and drink more than the populations of western Europe have yet to be answered. What kind of stresses accompanied being a worker in the command economy? Was life in the Soviet bloc such that people were less conscious, or able, to maintain healthy living habits? Substantive research still needs to be carried out on the effects of such factors on public health.<sup>83</sup> Life in CEE prior to 1989 needs to be viewed in its entirety, and until the relevant gaps are filled in, it will not be possible to draw any definitive conclusions about the effects pollution may have had on public health before 1989 and into the future.

#### ***Environmental degradation in CEE and the Western media***

Journalists have been far more vocal about environmental degradation in CEE than have social scientists, and have played the largest part in communicating to the world the conditions under which many central and east Europeans live. Despite a large element of sensationalism in international magazines such as *Time* and *Newsweek* (for instance, cover stories entitled "Deadly Fate: A Health Crisis of Near Epidemic Proportions is Devastating Eastern Europe and Cuba,"<sup>84</sup> and "Wasteland: The Soviet Environmental Nightmare"<sup>85</sup>) the press has served a valuable purpose. Sketchy data on environment and health in CEE have provided the impetus for investigative journalists and photographers to visit environmentally unsafe areas in order to speak with officials, environmentalists, researchers and ordinary people. Photos, articles and documentaries of highly degraded places such as Copsa Mica, Romania, the "black town," whose population suffers from problems ranging from low life expectancy to male impotency due to high blood lead levels, show the world just what central and east Europeans are facing.<sup>86</sup> Other areas that have received graphic media coverage include the city of Mezibori in the

Czech Republic, where children wear face masks to school to protect themselves from severe air pollution,<sup>87</sup> as well as the former Soviet fishing village of Muinak on the Aral Sea, which is now a desert town as a result of water diversion for cotton farming.<sup>88</sup> In 1990, one media report quoted public-health biologists in Hungary as calculating that illnesses traceable to environmental pollution consume more than 13% of the country's health budget. . The same report quoted officials as estimating that at least one out of 17 Hungarians die from environmentally induced causes.<sup>89</sup> Such articles provide the images which help to string together the sketchy environmental data on CEE pollution: *Time* reports that Near Leipzig, Germany, in a town called Espenhain, which is heavily dependent on coal-burning power plants, four out of five children develop chronic bronchitis or heart ailments by the age of seven.<sup>90</sup>

Of course, Chernobyl has also received enormous media attention. Photographs of colts with eight legs, pigs with no eyes and oversize fish in nearby waterways only lead the public to ask what effect the radiation resulting from the disaster must have had on humans.<sup>91</sup> In an article in *National Geographic* in August 1994, Chernobyl researchers are quoted as saying that due to a lack of medical records or carelessly kept records, no one knows how many people died or are ill as a result of ailments suffered following the explosion in 1986. Thousands are thought to have died since 1986 from radiation-related ailments. Better information exists on childhood thyroid cancer in the region, which, once an extremely rare condition in Ukraine, Belarus and Russia, now totals more than 300 cases. Research conducted by Kiev researcher Maria Pilinskaya on children from areas in non-evacuated regions just outside the perceived "danger zone" indicates widespread chromosome damage, which Pilinskaya has linked to thyroid disorders.<sup>92</sup>

Another investigative report in *National Geographic* revealed a bizarre spate of birth defects in Moscow. In two city neighborhoods within three miles of each other, eight children were born within a year of each other with shortened left arms. Worldwide, terminal limb deficiency occurs at a rate of once in 4,000 births. Letters to officials from alarmed parents, united as a result of their own initiative, eventually prompted geneticists to investigate. The researchers in the end declared the cluster of birth defects a coincidence, but the Moscow sanitation office has tentatively blamed

the industrial chemical dioxin. Still other scientists question that assumption, and the likelihood of a definitive diagnosis ever emerging seems remote.<sup>93</sup>

While the media has often seized on the most graphic and manipulative images to convey the problems of environmental degradation in the former Soviet bloc, it nonetheless serves as a valuable disseminator of environmental information on the region. Improved information flow to the Western public since 1989 may encourage environmental groups and individuals to urge their leaders to continue programs of loans and assistance to the region.

### **2.3 THE COMMAND ECONOMY AND ITS IMPACT ON THE ENVIRONMENT**

The above data show that the populations of central and east European states have higher infant mortality, lower life expectancy and a higher propensity toward respiratory ailments and other diseases than their counterparts in western European states. This section will go beyond a description of environment and health in the region to analyze the economic and political conditions underlying these comparatively poor health conditions. It will address the significant features about CEE societies prior to 1989, when much of the environmental damage was done, which set them apart from the West. The most significant economic feature to be addressed here is the command system, whereby resource allocation is based on administrative orders rather than on market signals.<sup>94</sup> The other most significant factor to be addressed is the political system under which these states operated: Soviet-style state socialism, inspired by Marxism-Leninism, and executed by the Communist Party.<sup>95</sup> Unlike Western systems, where economics and politics can be discussed relatively separately, when looking at the CEE systems the two must be considered together.<sup>96</sup> As part of an environmental study of the region, this link is of particular importance. In the CEE systems, economics and politics were inextricably tied, as the Communist Party held the central leadership role in economic planning. The state was in control of all economic activities, as well as the pace of economic growth and capital formation. In this government-controlled system, group interests dominated over individual interests. Kaminski argues that what sets apart state socialism from other systems is "the unique symbiosis of the state with society and the



economy" in what he calls the *fusion principle*.<sup>97</sup> As a result of fusion, both politics and economics lose their distinctive characteristics,<sup>98</sup> a key factor in understanding the system's impact on the environment.

Communism in the Marxist sense envisioned a classless, equitable society in which workers and peasants would not be alienated as they had been under capitalism. The regime's political creed was based on economic equality and fairness, and the way this equality was to be achieved was through command and control of the means of production and distribution.<sup>99</sup> Individual happiness was to be achieved through the economic well-being of the state: collectivism was a higher virtue than individualism. However, what evolved under Josef Stalin in the Soviet Union from the 1920s onward, and in central and eastern Europe after World War II, was a rapidly industrializing, resource-consuming society under which the relative humanization, or dehumanization, of workers and peasants was debatable. The command economy was the system under which this rapid industrialization occurred.<sup>100</sup> From the very start of the Soviet Union's first Five-Year Plan in 1928, the command economy was geared toward transforming a poor, agrarian-based system into the Marxist ideal of an advanced industrial society.<sup>101</sup> The first Plan was completed in just over four years, with 86% of all industrial investment in heavy industry.<sup>102</sup> It was the Stalinist economic and political system which was, with the noteworthy exception of Yugoslavia, (Yugoslavia having split from what it viewed as Soviet hegemony in 1948)<sup>103</sup> transplanted to the CEE states after World War II to greater and lesser degrees. Stalin's goal of rapid industrialization was broadened to its newly acquired satellites after World War II as the Cold War commenced.<sup>104</sup>

This section's primary aim is to describe the Soviet model of economic planning which was, as Swain maintains, the "blueprint" applied to create Communist economies in central and eastern Europe.<sup>105</sup> First, however, a discussion of the role of nature in classical Marxism will provide the background for discussion on the state of the environment in the command economy. In addition, a brief history will be given describing how CEE became incorporated, both economically and politically, into the Soviet sphere after World War II. With the historical backdrop set, a description of the highly politicized command economy will seek to explain how industries in

central and east European states utilized natural resources and interacted with their environments. Included will be a discussion of material balance planning; prices and the allocation of natural resources; and the organization and regulation of economic actors.<sup>106</sup> Specific features about these economies will be addressed in an attempt to pinpoint where the excesses may have occurred which led to environmental degradation and health problems such as those described in the previous section.

It is important to note as a footnote to this discussion that between the late 1940s and 1989, when the Soviet bloc dissolved, major differences existed among the CEE states both culturally and economically, in part based on differing levels of development prior to their integration into the Soviet bloc. Though this study is meant to be a general survey of the command economy system (by necessity emphasizing the Soviet Union) it will again focus in on Hungary as a case study for the reasons described in Section 2.1.

#### *Marxism and the role of nature in the command economy*

The role of nature in the command economy can be directly traced to such 19th century thinkers as Karl Marx and Frederick Engels.<sup>107</sup> In the 19th century when Karl Marx was writing, the concepts of industrial waste and air pollution were barely conceived of,<sup>108</sup> and were about a century away from being seriously incorporated into economic thought. However, the idea of using nature to further human progress and improve man's position in society was very much a factor in Marx's writing, as well as in the writing of his contemporary Engels.<sup>109</sup> While many of their ideas about the way in which society should function have been adapted or adjusted somewhat in their 20th-century applications, man's approach to nature was one area in which the Soviet and CEE economies stuck fairly close to Marxist theory. Marx left few instructions regarding what the socialist society and economy should look like,<sup>110</sup> and likely never imagined the impact that rapid industrialization may have had on future ecosystems. He would have had a difficult enough time applying his conception of class struggle and the evolution of communism to the relatively agrarian Russia, let alone to the rest of the Soviet Union and its satellites (Das Capital was written with England and Germany in mind).<sup>111</sup> The Marxist scenario, which envisions slavery

being replaced by feudalism and feudalism being replaced by capitalism, ends with the overthrow of capitalism and the establishment of a socialist society. In the highest stage, after capitalism is overthrown, class differences should disappear.<sup>112</sup>

In this scenario, the role of nature is subsumed by the urgency of the class issue. To Marx nature was merely the equipment needed by man to fuel his advancement, producing goods as part of an historical process called materialism.<sup>113</sup> Aronowitz, quoting Marx, writes: "Nature is merely the 'raw material' for labor...a 'tool house' that provides labor with 'stones for throwing, grinding, pressing, cutting, etc.'"<sup>114</sup> Aronowitz stresses that the concept of "nature" is an historical creation which demarcates humans from the rest of the environment, and was likely seen so at the time Marx was writing.<sup>115</sup> Also influential in the 19th century were writers such as Thoreau, who, quite the opposite from Marx, viewed nature as something that needed protecting. As part of the anti-urban, anti-industrialist Romanticist movement, thinkers such as Thoreau, Whitman, Emerson and Blake sought to defend nature from the ravages of materialism and other ill effects of civilization.<sup>116</sup> Romanticism differed from the Marxian conviction that industrialization was a progressive force which harnessed technology to natural resources in order to reduce dependency on agriculture and advance human progress.<sup>117</sup> The Romanticists "preached the notion of a bioethic, a sense of responsibility for the earth and a plea for a basic ecological understanding before tampering with its resources."<sup>118</sup> In the 19th century, science as well as Romanticism viewed nature as something separate from humans, contrasting sharply from today's concept of ecology. Aronowitz writes: "The 'awe and wonder' with which the romantics celebrate a tree was scorned by Marx, who reminded the poets that ... a tree was a product of human labor as much as a natural historical thing."<sup>119</sup>

Engels, by contrast, insisted that humans were part of natural history, and that the distinction between them and the natural world should not be made into a sharp dichotomy.<sup>120</sup> In his essay "The Part Played by Labour in the Transition from Ape to Man," Engels asserts that economic growth does not have to disrupt man's harmony with nature.<sup>121</sup> Engels acknowledged that man's mastery of nature could pose a threat to material advance itself.

Let us not, however, flatter ourselves overmuch on account of our human victories over nature. For each such victory nature takes its revenge on us...we are reminded that we by no means rule over nature, like someone standing outside nature, but that we...belong to nature, and exist in its midst, and that all over master of it consists in the fact that we have the advantage over all other creatures of being able to learn its laws and apply them correctly.<sup>122</sup>

Yet Engels had confidence in man's inventiveness to overcome any problems in the course of his modern relationship with nature.

"...With every day that passes we are acquiring a better understanding of [nature's] laws and getting to perceive both the more immediate and the more remote consequences of our interference with the traditional course of nature."<sup>123</sup> Engels' assertion that man should be able to cope with the consequences of his use of nature was unique in Marxist thought.<sup>124</sup>

Despite Engels' influences, the Marxist theory which trickled down to the 20th century and applied to the Soviet Union by Lenin and later by Stalin viewed nature as merely a condition of production.<sup>125</sup>

...Nature itself has no materiality within contemporary Marxist thought. Nor does it really enter the social process except as a suppressed, unconscious instance of history. It appears as catastrophe, unexplained accidents, and the raw materials of human intervention. The burden of science and technology since Bacon and Newton has been to make society independent of nature's metabolism by adjusting it to our rhythms, by factoring it to human production, and historical materialism too knows only one science: History as the dialectic of labor, a practice which is presumed adequate to subsume nature as well as spirit under production.<sup>126</sup>

Koseltsev of Moscow State University takes a similar stance. "Marx and Lenin paid very little attention to environmental issues... The protection of nature...was treated in the classic way, simply as a factor increasing productivity."<sup>127</sup>

Gregory and Stuart maintain that Marxist theory has complicated the breakdown of valuation of environmental damage in the Soviet economy.<sup>128</sup> The application of Marx's labor theory of value, which prejudices against charging for natural resources, meant that natural resources as well as the right to pollute were given to enterprises free of charge, thereby encouraging overuse.<sup>129</sup> The valuation dilemma is not unique to command economies: Capitalist economies have had similar problems assigning costs to pollution and to the depletion of natural resources. Marx's approach to nature was also translated into the economies of CEE in the governments' emphasis on

heavy industry.<sup>130</sup> How the region's economies became so focused on heavy industry after World War II, and the consequences of such policy decisions on the environment, will be discussed below.

### *The polarization of East and West*

The establishment of command economy systems in central and eastern Europe can be traced to the end of World War II and the economic and political polarization of Europe following the Allied victory over the Axis powers. Though rooted in basic ideological differences between the Soviet Union and the western Allies, the division by the superpowers of east and west Europe into two opposite camps was a classic example of realist geopolitics discussed in Chapter 1.<sup>131</sup> The question of Germany's future--how to prevent a resurgence of militarism there, and who would gain more influence over that strategically located state--were among the most critical concerns of both the West and the Soviet Union in the years following the war.<sup>132</sup> After the trauma of the war-time German invasion, and with Stalin growing increasingly paranoid about the United States' use of its nuclear capability as diplomatic leverage, the Soviets were keen to have as many buffer states as they could pull into their camp. In addition to Germany, Poland was a major point of contention. Stalin's concerns were matched by growing anti-communist fervor in the United States.<sup>133</sup> The Truman administration saw the Soviets as viewing capitalism as a system ready to collapse, with socialism set to replace it. Schulzinger maintains that the commander of US forces in Germany, Gen. Lucius D. Clay, similarly believed the Soviets were seeking Communist rule for all of Germany as a first step in their eventual subjugation of Western Europe.<sup>134</sup>

In 1947, President Truman's desire to see communists eliminated from Greece and Turkey was the beginning of the policy of containment that was to be the feature of US foreign policy in Europe and elsewhere for the next several decades. As part of Truman's bid to provide financial aid for anti-communists in Greece and Turkey, the President declared the US's commitment to aid all governments facing domestic leftist insurrections. Dubbed the "Truman Doctrine," the president's declaration was part of the administration's strategy to keep European states devastated by war from moving to the left of the political spectrum, as a move left was perceived as a geopolitical

point for the Soviets.<sup>135</sup> The actual concept of containment was articulated in 1947 in the journal *Foreign Affairs* by George Kennan (writing anonymously), who said Moscow's foreign policy rested on three pillars: traditional Russian imperialism, revolutionary Communist ideology and the paranoid suspicions of Josef Stalin. Kennan was doubtful that the Soviets would be able to maintain a Marxist state. He wrote that while the West waited for the Soviet Union to abandon communism, the US should play an active role to "contain" it in areas of Eastern Europe already under Soviet control. He predicted that the US would have to engage in the support of an array of "satellites, clients, dependents, and puppets" of its own, resulting in a perpetual "Cold War" with the Soviet Union.<sup>136</sup>

A second aspect of the administration's strategy was announced by Secretary of State George C. Marshall, who invited European states to request aid from the US for reconstruction of their badly damaged economies and infrastructure.<sup>137</sup> The European Recovery Plan, as it came to be called, was aimed at preventing a communist seizure of power in such states such as France, Germany and Italy, as well as strengthening markets for American goods. Though the Marshall Plan was not specifically aimed at polarizing Europe, its end result was just that. Though the Czechs and the Poles sent representatives to a meeting to draft the program, the Soviets quickly made it known that they believed participation in the Marshall Plan would permanently link the economies of CEE with the US. The end result was that neither the Soviet Union nor its allies in CEE took part.<sup>138</sup> The Marshall Plan's positive reception in the West was due not only to economic necessity, but also to the fact that the aid recipients were already allies of the US. By contrast, the Soviet Union's success in expanding its influence in central and eastern Europe was far from the result of old friendships with Poland, Hungary and other states; rather, the war had left the region with devastated economies, refugee crises, fears of further German aggression.

The resulting cohesion of the western Allies was institutionalized in the formation of the North Atlantic Treaty Organization in 1949.<sup>139</sup> Other evidence of the division between East and West was seen in the United Nations, when regular confrontations resulted in the Soviet Union's constant use of its Security Council veto power: Of the 80 vetoes issued at the UN between 1945 and 1955, 77 belonged to the Soviet Union.<sup>140</sup> East-West tensions finally came

to a head in Berlin in 1948 when the Soviets stopped the overland supplies of the US, British and French sectors to the divided city. The Soviet effort to blockade much of the city collapsed as US and British planes continuously kept the areas supplied with airlifted goods. Following the Soviet Union's failure in the Berlin blockade, the polarization between East and West was complete with the formation of the Federal Republic of Germany in the Western-occupied zones in 1949, and the German Democratic Republic in the east the same year.<sup>141</sup>

### *The incorporation of CEE into the Soviet bloc*

The actual incorporation of the CEE states into the Soviet bloc came in stages and with different levels of difficulty for the Soviets. The states differed markedly in the strength of their communist movements and their willingness to cooperate with the Soviets. In Poland, for instance, the native Communists were extremely weak, while in Yugoslavia and Albania they had led resistance movements against the Axis powers and had attained dominant positions at the end of the war.<sup>142</sup> Strong communist movements did not necessarily mean pro-Soviet movements. People in the satellites who later would become prominent members of the Soviet-dominated political elite (such as Erich Honeker in East Germany) had spent time in the Soviet Union before and during the war, and this smattering of ideological uniformity was useful to the Soviets as they brought CEE into the fold.<sup>143</sup> Though censorship was imposed and greater cultural and artistic conformity demanded,<sup>144</sup> much of the Soviet Union's efforts towards bringing the war-shattered central and eastern European states into the Soviet sphere were achieved via economic means. Industrialization was pushed forward and central planning bodies established.<sup>145</sup> In states where much of the industrial infrastructure was devastated, there was a basic need to rebuild and there was also a desire for economic advancement in societies such as Romania that were mostly agrarian. Industries were nationalized and agriculture moved toward collectivization.<sup>146</sup> In January 1949 the Communist world trade organization, the Council for Mutual Economic Assistance (CMEA, or Comecon), was established, cementing at least on paper the economic link between the Soviet Union and CEE.<sup>147</sup> The CMEA included the USSR, Poland, Hungary,

Czechoslovakia, Romania, Bulgaria and Albania.<sup>148</sup> Widely viewed as the Soviets' answer to the Marshall Plan, the CMEA was not very active until 1954, though from the 1950s onwards its particular mix of trade would become a key feature of the bloc economies. The creation of planning bodies and implementation of five-year plans in CEE set the region into a Soviet-style command system, where allocation of natural resources, determination of output targets, as well as the accompanying nationalization of property and collectivization of agriculture were determined by central planners.<sup>149</sup>

Transferring societies with different cultures and varying levels of development to the Soviet model was no small task; for instance, at the end of WW II, Czechoslovakia already possessed an industrial infrastructure, while Romania and Bulgaria were largely agrarian. Under 10% of the labour force in Bulgaria and Romania were employed in industry and mining and 73% of the population depended on agriculture as a means of support, compared with 33% in Czechoslovakia (see table 2.7).<sup>150</sup>

Table 2.7 Economic Development Indicators in Central/Eastern Europe In Inter-War Period (Inter-war boundaries)

	Bulgaria	Romania	Poland	Hungary	Czechoslovakia
Per capita income (1948 US \$)	68	60-70	104	112	176
% population dependent on agriculture	73	72	60	52	33
% labor force in agriculture	80	80	65	51	26-37
% population in labor force	57	58	47	46	44
Total population (millions)	6.2	19.2	34.5	8.9	15.2

Source: Figures derived directly from, or estimated from data in N. Spulber, *The Economics of Communist Eastern Europe* (New York: Wiley, 1957), except for per capita income, which came from United Nations, Economic Commission for Europe, *Economic Survey of Europe in 1948*, Geneva, 1949.



The incorporation of CEE into the Soviet fold has been widely perceived as being forceful and totalitarian. Indeed, the use by the Soviets of secret police, purges, and religious repression were widespread.<sup>151</sup> In the Czech lands alone, almost 10,000 people were in prison for political offenses at the end of 1950, and more than 16,000 people were arrested over the next two years by the state security forces. In the four years to the end of 1952 almost 200 people were executed.<sup>152</sup> How the region came to be part of the Soviet economic and political sphere despite the accompanying repression can be attributed to the dire economic situation of the region, and the aspirations of its people to become strong after years of war. The Soviet use of a rapid industrialization scheme to achieve economic development provided people with, among other things, employment, health care, and confidence regarding the looming possibility of a resurgent Germany.

Though the differences between East and West Europe became stark after the war following what many writers call the "Stalinization" of central and eastern Europe, there were some similarities between the two regions which show that the move to the left in CEE was not entirely unique among states under reconstruction. For instance, in the late 1940s, the United Kingdom nationalized its coal, steel and health sectors, and other European states made similar moves toward greater state control. Getting nations back on their feet, as seen in the United States in the 1930s during the New Deal, often involved large state sectors. With that in mind, one can look critically at CEE in the post-war period and observe that the most profound changes that occurred were overridingly political. In the Soviet bloc, the political aspects of the system were by far the dominant force, over economics and everything else. The economic system, with its resulting environmental consequences, to be described below was merely the outgrowth of a larger political orthodoxy.

#### ***The command economy: an emphasis on heavy industry***

The Marxian view that nature should be at the mercy of man's quest for progress had great impact on the formation of the Soviet economic system, and carried through with remarkable clarity to the formation of the command economies of the Soviet satellites a quarter

of a century later.<sup>153</sup> Several features of the CEE economic systems contribute to an explanation of how the region's environment became systematically degraded: the emphasis on heavy industry at the expense of consumer goods' industries, many of which would have been less polluting; the failure to update industrial technology as cleaner technology became available; the lack of a pricing structure to reflect relative scarcity; the absence of clearly defined property rights; and highly politicized, bureaucratized decision-making and management processes.<sup>154</sup> One factor which intersects with all of these points is the allocation, procurement and use of natural resources. With much of the pollution found in CEE Europe related to the burning of fossil fuels,<sup>155</sup> the question of natural resources serves as a good example with which to understand the dynamics of the economic and political system. Heavy industry needed fossil fuels to run, and outdated industrial technology was partly responsible for the failure to screen the environment from harmful emissions.<sup>156</sup> The lack of clearly defined property rights meant the government could exploit natural resources without regard for their depletion, while the lack of a pricing structure tied to supply and demand meant industry could use natural resources to excess without regard for any possible negative environmental consequences.<sup>157</sup> The highly bureaucratized and centralized government planning and management structure had problems managing resources for several reasons which will be explained below.

The emphasis on heavy industry in the former Soviet bloc has been well documented and much discussed. The bias toward heavy industry has its origins in Marx's model of expanded reproduction, which implies that economic growth requires that the output of producers' goods (Department I) should grow faster than the output of consumption goods (Department II).<sup>158</sup> Smith writes that Stalin himself had a preference for the production of machine-building ferrous and non-ferrous metallurgy, fuel and power,<sup>159</sup> and the pressures of WWII reinforced the bias in the Soviet Union toward heavy industry. The Korean War played a major role in spurring the adoption of the full system of Stalinist planning as the pressure to produce armaments grew. In 1950, Stalin instructed Party leaders from across the bloc to revise their targets for heavy industry substantially upwards in order to meet the requirement of the Korean War, and also, in effect, the Cold War.<sup>160</sup>

In addition, heavy industry is a mass employer, and aspiring toward full employment was a necessary political tool for keeping the regime solidly in power. Tables 2.8 and 2.9 on Hungarian investment show a high level of investment in heavy industry during the first five-year plan (see also figure 2.2). Table 2.10 shows that with 25.2% of Hungarian national income devoted to investment at that time, 51.7% went to industrial investment, and of that 92.1% went to heavy industry and construction.<sup>161</sup> This compares with Poland, which during a comparable period had 75% of industrial investment devoted to heavy industry, and with the Soviet Union, which had 85.7 pct of industrial investment devoted to heavy industry during its first five-year plan.<sup>162</sup> The process of building up heavy industry involved investment in the production of iron, steel and engineering products in states throughout the bloc. The Soviet strategy was pursued on an autarkic basis as each state was directed to build up its heavy industries.<sup>163</sup> Regard was not given to the individual conditions in those states, especially the supply of raw materials. The nationalistic bias of many of the bloc states fostered the tendency for them to avoid exploiting their comparative advantages; for instance, Hungary was unwilling to participate in the expansion of Polish coal-mining, preferring to develop its own far less well-endowed deposits.<sup>164</sup>

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Table 2.8 **Three Variants of the Investment Component of the First Hungarian 5-Year Plan (thousand million forints)**

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	April 1949	Dec. 1949	1951
Industry	17.0	21.3	41.0
of which heavy industry	--	18.3	37.5
of which light industry	--	3.0	3.5
Agriculture	6.0	8.0	11.0
Transport	6.0	7.5	10.0
Social, cultural, housebuilding	6.0	7.4	14.0
Other	--	6.7	9.0
<b>Total investment</b>	<b>35.0</b>	<b>50.9</b>	<b>85.0</b>

(Source: I. Peto and S. Szakács, *A Hazai Gazdaság Négy Évtizedének Története 1945-1985. Az Újjáépítés és a Tervutasításos Irányítás Idoszaka 1945-1968*, Budapest 1985, p. 156.)

Table 2.9 **Distribution of Investments in Hungary 1949-54 (%)**

	1949	1950	1951	1952	1953	1954	1950-54
1 Primary material production	--	25.0	29.8	34.4	34.5	30.6	31.2
2 Engineering	--	10.0	12.2	8.7	8.9	5.9	9.5
3 Heavy Industry (1-2)	29.8	35.0	42.0	43.0	43.3	36.5	40.7
4 Light Industry	1.7	1.0	1.5	1.9	1.8	2.5	1.8
5 Food Supply	1.8	2.1	1.5	0.6	1.8	2.5	1.6
6 Industry (3-5)	33.3	38.1	45.0	45.5	47.0	41.5	44.1
7 Construction	--	4.1	3.1	3.0	2.4	0.9	2.7
8 Agriculture	17.5	9.3	10.8	13.0	13.1	22.9	13.8
9 Transport	21.1	18.6	14.0	15.0	10.7	6.8	12.8
10 Commerce	3.5	3.1	2.3	1.8	2.4	3.4	2.5
11 Communal services and administration	22.8	12.4	11.6	10.5	17.9	22.0	14.8
12 Other	1.8	14.4	13.2	11.2	6.5	2.5	9.3
Total (6-12)	100	100	100	100	100	100	100

(Source: Peto and S. Szakács, p. 160.)

Table 2.10 **Comparison of Soviet Bloc Industrialization Plans**

	Investment as % of national income	Industrial investment as % of total investment	Heavy and construction investment as % of industrial investment
Bulgaria 1st 5yr	19.6	43.1	83.5
Czechoslovakia 1st 5yr	22.3	40.6	78.1
Poland 6yr	21.6	45.4	75.0
Hungary 1st 5yr	25.2	51.7	92.1
GDR 1st 5yr	--	53.9	75.2
Romania 1st 5yr	--	53.4	82.6
Soviet Union 1st 5yr	--	49.1	85.7
Soviet Union 2nd 5yr	--	47.8	83.1
Soviet Union 1946-50 fulfillment	21.0	--	--

(Source: Peto and S. Szakács, p. 168.)

Figure 2.2

**Hungarian Plan for Heavy Industry  
in the First 5-Year Plan (1950-54)**

1. Production value to reach 7.725 billion forints, a 138% increase on 1949
2. The value of machinery to increase from 185 to 610 million forints
3. The number of tractors to increase from 2,600 to 4,600 units
4. Railway carriages and trucks to increase from 4,850 to 10,000 units
5. The number of lorries to increase from 3,200 to 9,000 units
6. The number of motorcycles to increase from 12,000 to 23,000 units
7. Steam, electrical and diesel engines to be produced to the value of 520 million forints.
8. The production should commence of, for example, trolley buses, harvesters, diesel tractors and railway cranes, (not then manufactured in Hungary)
9. A total of 4,214 million forints should be invested in a smelting works, machine tool factories, milling industry machinery, machinery for the textile and light industries, oil extraction plants, diesel motor factories, crane factories, screw factories, radiator factories, other manufacturing industry plants
10. A new steel works and railway wheel factory should be created in the Borsod industrial region, and a new bridge and iron structure factory by the Danube

Source: Nigel Swain, *Hungary: The Rise and Fall of Feasible Socialism* (London: Verso, 1994), pp. 55-56.

In the Soviet bloc prior to the political changes of 1989, planning involved determining needs in the economy, setting output targets and allocating resources through the use of a technique called "material balances." Material balance planning contrasts the known sources of goods with the economy's requirements in order to determine how much more of that good, and any necessary intermediary goods, would be necessary to achieve a balance.<sup>165</sup> Resource allocation in material balance planning differs markedly from a market economy, where if the quantity of coal demanded by an industry or a corporation exceeds the quantity of coal supplied at prevailing prices, the relative price of coal will rise until the quantity demanded equals the quantity supplied. Under ordinary circumstances, users of resources in market economies do not have to queue to procure materials, as the price system allows buyers willing to pay the current price to have the goods.<sup>166</sup> In the planned economies of the Soviet Union and its satellites, however, decision makers in the planning hierarchy were responsible for balancing the need for resources with available supply; prices did not reflect scarcity.<sup>167</sup>

Gregory and Stuart point out that in the Soviet model, material balance planning was a highly intense negotiating process at all

levels of the central planning hierarchy. Officials in the ministries, regional and local authorities, the enterprises and the Party struggled, bargained and cajoled for resources.<sup>168</sup> Although this type of system had its positive points, i.e., that the government could target resources at industries they deemed strategic, the often unrealistic output targets and lack of flexible access to supplies in many cases led to stockpiling of materials by enterprises.<sup>169</sup> By overstating input requirements to their immediate superiors, managers were able to procure materials they could later trade or reserve for future use. Stockpiling had two major implications, both of which had long-term environmental implications: 1) scarce resources stand idle and are thus wasted; and 2) planners get inaccurate information.<sup>170</sup> Material balance planning is also sluggish in practice; enterprises would often get their finalized targets for the year as late as March. As a result, enterprises often had to rush to meet output targets, engaging in intensive production known as "storming."<sup>171</sup> The negative implications of storming during certain times of the year likely manifested themselves in unusually high emissions levels and worker fatigue, both of which may have had an effect on human health. Another negative aspect of planning in the Soviet model was that managers<sup>^</sup> were often reluctant to introduce new (and sometimes cleaner) technologies that may have called for a restructuring of established supply channels.<sup>172</sup>

Material balance planning was not the only aspect of the command economy with negative implications regarding resource use. As discussed in section 2.1, Soviet bloc economies were heavily dependent on brown coal, which has lower energy yields than harder coals used in Western Europe. As is the case in many industrialized countries, in the Soviet Bloc energy prices did not take into account the cost of externalities, or pollution. With oil prices artificially low as part of the command-economy structure, individuals and industry consumed more than they actually needed, without regard for the market value of the fuel, and factories bore no financial penalty for excessive use.<sup>173</sup> Junz writes in the *American Economic Review*: "...the CMEA group has traded on the basis of raw material inputs, particularly energy, at below world market prices. This has led to capital stocks and production structures, that, in market terms, are wasteful." Without pressure to produce products as energy-efficiently as possible, industries were left with

no incentive to innovate new manufacturing techniques and develop new technology, resulting in what Junz refers to as capital structures left in a state of "technological senility."<sup>174</sup> A 1987 World Resources Institute study comparing energy use in OECD countries and central Europe found that artificially low prices were the principal reason for central Europe's higher energy intensity.<sup>175</sup> A lack of clear property rights compounded the problem of high-intensity energy use. Since all property was owned by the state, decision-makers were free to order the exploitation of energy resources according to their own set of criteria, without necessarily regarding any danger of possible depletion of that resource.<sup>176</sup> A private mining firm in a market economy, by contrast, in theory would have an interest in controlling mining output in order to keep prices at a desirable level. Industries, meanwhile, under the state-owned system had little incentive to avoid polluting the property on which their plants were located. Environmental fines were rarely imposed, and when they were, the logic of their very existence was questionable: The state would, in essence, be fining itself, since the large polluting enterprises were owned by the state. Ministries and industries included the cost of fines for pollution as part of the regular budgetary process.<sup>177</sup>

Gregory and Stuart point out that theoretically, environmental degradation should not exist in a socialist system, because in a centralized decision-making system, planners should take into account externalities. Thus, no environmental disturbances should occur. In fact, externalities should not even exist, since nothing is theoretically external to the decision-makers.<sup>178</sup> Theorists making the point that there need not be any reason for environmental damage in a socialist system include Oskar Lange, who wrote in 1938 that under socialism, the price system will be more comprehensive and, in effect, a high value will be placed by the central planning apparatus upon a clean environment.<sup>179</sup> In 1969, Maurice Dobb similarly argued that although information availability and digestion may be a problem in the real world, socialist planners will tend to make decisions with maximum global vision and concern about environmental impact.<sup>180</sup> Both Lang and Dobb had valid points about theoretical socialism, but a retrospective view of organization and planning in the Soviet-style economy shows that in practice, environmental protection is outweighed by other concerns.

Instead of using prices and markets to determine relative scarcity, the Communist economies prior to 1989-90 had elaborate bureaucracies whose purpose was to decide how much enterprises should produce in order to keep the economy functioning. The Soviet economy, the model upon which many of the satellites were based, had as its primary actor the Communist Party. The Party's role was to devise overall economic policy, make key appointments in the economy and monitor economic activity from the highest to the lowest level.<sup>181</sup> Beneath the Party was a hierarchical system of councils, directorates and ministries, all of which took part in some way in the planning process.<sup>182</sup> In the Hungarian economy, which was based on the Soviet system, the Party's organ for such activities was the People's Economic Council of the Central Committee. The Council was responsible for determining the overall framework of needs and coordinating the planning bodies and the economic ministries. Those conclusions then went to the Planning Office, which determined approximate preliminary plan figures through material balance planning described above.<sup>183</sup> These preliminary plans were then passed on to the Hungarian ministries, which outlined in more detail yearly and quarterly individual plan directives for a number of industrial directorates. The directorates, one step below the ministries in the hierarchy, outlined detailed plan directives for the enterprises under their jurisdiction. The enterprises, in turn, detailed plan suggestions for their divisions and plants. It was at this level that the actual determination of workers' activities occurred. The plan suggestions were sent back up through the hierarchy in what Swain calls "reaggregating." From these reaggregated figures, the Planning Office determined its actual plan figures which were then "disaggregated" down the hierarchy.<sup>184</sup> The goal of the planning process was to assess the needs of industry via consultation with the various levels of economic bureaucracy. The final plan became law, and bureaucrats and workers at each level of the hierarchy was under legal obligation to implement it. The plans were ambitious, as shown by the details of the goals for heavy industry in the first five-year plan (see figure 2.2). Significantly, the plan did not give details of where the necessary resources would come from to meet the targets.<sup>185</sup>

Exacerbating the already stiff competition for resources was the system of financial incentives that were designed to reward top



managers of enterprises for successful plan completion.<sup>186</sup> Managers had little incentive to innovate not only because of the uncertainties of supplies, but also because of uncertainty created by technological change.<sup>187</sup> The pressure to meet or exceed output targets for their own personal gain caused managers to further stockpile materials. Because they are judged on the basis of output target fulfillment, not on the basis of environmental protection or conservation of natural resources, managers had little incentive to conserve resources or monitor industrial emissions.<sup>188</sup> The lack of environmental interest groups of any strength, at least until the 1980s, was also a factor in the continued heavy use of resources, regardless of their unchecked effects on the environment.<sup>189</sup>

The sheer size of the task of planning all economic activity bureaucracy was, according to Swain, a detriment to economic efficiency.<sup>190</sup> Because the planning periods were very short, there was little attention shown to detail. In the case of Hungary a ministry's proposals for the coming year, based on proposals received from enterprises under its control, had to be passed to the Planning Office by the end of October. The Planning Office then had only two weeks to present its plans to the People's Economic Council. The detailed figures then had to be sent to the ministers by 20 November. The ministries, in turn, had only one week to break down the plans to enterprises, which then had until 8 December to divide the annual targets into quarterly plans. By 1 January of the year for which the plan was drawn up, each workshop theoretically should have had a fully disaggregated plan. Monthly data on production had to be published regularly about 1 1/2 weeks into the following month. Swain cites the preoccupation of the planners with managing data, so much so that they had little time to devote to strategic and long-term planning.<sup>191</sup>

The intricate planning process had a bureaucracy to go with it: In Hungary by early 1953, there were 17 economic ministries, including separate ones for local industry, state farms and construction materials. The heavy and light industry ministries on their own supervised 70 directorates. In 1949, the number of employees in state administrations was 170,000. Four years later it was 260,000, and in 1956 it had swelled to 280,000.<sup>192</sup> In 1949, the wage costs for non-productive employees was 4.53 forints per tonne of coal. By 1954, the wage bill for these employees had increased 184%

to 12.89 forints, even though the wage level for employees in this sector remained mostly static.<sup>193</sup> Constant revisions of plans required major readjustment, particularly if the change affected another enterprise, since all inter-enterprise relations occurred from the center. In Hungary in 1952, the current five-year plan was changed 472 times and the year plan for 1952 was changed 113 times.<sup>194</sup>

The structure of international trade between the Soviet Union and CEE neglected the capitalistic thesis of comparative advantage, which maintains that individual states will gain by specializing in certain activities.<sup>195</sup> Soviet-style economies, with their emphasis on mining, metallurgy, and other heavy industries, were by nature trade averse due to the belief that socialistic states should be largely self-reliant. From the inception of the Soviet regime, the accepted Marxist-Leninist theory established that trade with the capitalist world as ideologically undesirable; comparative advantage was rejected along with other capitalist practices. Gregory and Stuart point out that trade even within the Soviet bloc was underdeveloped due to uncertainties outside relations introduced into the planning process.<sup>196</sup> While much of the bias toward heavy industry in the bloc originated from the Soviet Union, some CEE states favored industrial policies which boosted their individual self-reliance. Romania, for instance, embraced a policy of expanding a heavy industrial base on largely nationalistic lines, while Hungary opposed providing support for an expansion of Polish coal mining, instead preferring to develop its own far less well-endowed deposits.<sup>197</sup> The end result was a bias toward highly polluting heavy industry throughout the bloc.<sup>198</sup>

### **Summary**

The politicization of economics in the former Soviet bloc prior to the political changes of 1989 is the key to understanding how central and eastern Europe arrived in its present state of environmental degradation and possibly its poor public health. With political goals such that high output and military strength came before consumer goods industries, the environment was a subject which, at least among the government planners, was scarcely discussed as a issue relevant to the economic process. Virtually every aspect

of the command economy had some negative effect on the environment. The imbalance in industry favoring highly polluting enterprises, combined with a lack of incentive to innovate new and cleaner industrial technologies, contributed to the degradation of the region's environment. The lack of a clear assignment of property rights, as well as a pricing mechanism for natural resources, led to overconsumption and the failure to incorporate externalities into the price of energy sources. The pressure on enterprise managers to meet output targets caused them to overstate their energy needs and stockpile scarce resources. Last but not least, the use of highly polluting and less efficient fuels led to lower gross domestic product per unit of energy use. The cumulative effect of the economic and political system in CEE, if the Hungarian government is to be believed, has had a marked effect on human health and well being in the region. What exactly is being done about that will be the subject of Chapter 3.

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<sup>1</sup> Koroly Okolicsany, "Slovak-Hungarian Tension: Bratislava Diverts the Danube, *RFE/RL Research Report*, vol. 1, no. 49, 11 December 1992, pp. 49-54.

<sup>2</sup> James E. Dougherty and Robert L. Pfaltzgraff, *Contending Theories of International Relations* (New York: HarperCollins Publishers, 1990), pp. 92-127.

<sup>3</sup> Koroly Okolicsany, *op. cit.*, pp. 49-54.

<sup>4</sup> Roger Manser, *The Squandered Dividend: The free market and the environment in Eastern Europe*, (London: Earthscan Publications Ltd, 1993), pp. 18-26.

<sup>5</sup> Barbara Jancar-Webster, "The East European Environmental Movement and the Transformation of East European Society," in *Environmental Action in Eastern Europe: Responses to Crisis* (New York: M.E. Sharp, 1993), ed. by Barbara Jancar-Webster, pp. 192-217.

<sup>6</sup> Government of Hungary, *Hungary's National Report to United Nations Conference on Environment and Development*, Budapest, December 1991, p. 24.

<sup>7</sup> *Ibid.*, p. 21.

<sup>8</sup> Nigel Swain, *Hungary: The rise and fall of feasible socialism* (London: Verso, 1992), pp. 107-113.

<sup>9</sup> Geoffrey Swain and Nigel Swain, *Eastern Europe since 1945* (London: MacMillan, 1993), pp. 135-137.

<sup>10</sup> Jancar Webster, *op.cit.*, pp. 192-217.

<sup>11</sup> World Resources Institute, *World Resources 1992-93: A Guide to the Global Environment* (Oxford: Oxford University Press, 1992), p. 64.

<sup>12</sup> US Commerce Department, *Statistics for Eastern Europe*, unpublished preliminary data for 1993, Washington, D.C., 1994.

<sup>13</sup> Personal interview (by telephone) with Michael Voll, Eastern Europe Business Information Center, US Commerce Department, Washington, D.C., July 21, 1994.

- 14 Regional Environmental Center for Central and Eastern Europe, *Annual Report 1992*, Budapest, Hungary, 1993, p. 2.
- 15 Interview with Ruth Bell, US Environmental Protection Agency, Washington, D.C., August 1993.
- 16 Personal interview with Stephen Wassersug, program manager (on secondment from the EPA), Regional Environmental Center for Central and Eastern Europe, Budapest, Hungary, September 1993.
- 17 Specific examples of US advice and assistance include: Margaret Bowman, Director of the Environmental Program for CEE at the Environmental Law Institute, an NGO in Washington, D.C., addressed the Hungarian Parliament's Committee on the Environment on March 4, 1992, regarding a draft environmental law. Raymond Ludwiszewski, acting General Counsel of the US EPA, made a similar speech commenting on Hungary's efforts to draft a comprehensive environmental law. Examples of US assistance will be discussed in greater detail in Chapter 3.
- 18 Agence France-Presse, "Horn elected new Hungarian Prime Minister; cabinet named," July 15, 1994.
- 19 Ibid.
- 20 Personal interview with Ivan Gyulai, director of the Ecological Institute for Sustainable Development in Miskolc, Hungary, September, 1993.
- 21 Ibid. Gyulai points out that air pollution levels in the heavily industrialized Borsod County, Hungary, have subsided significantly as the industries become dismantled or privatized.
- 22 World Health Organization, Regional Office for Europe, *Health For All*, health indicators database on Europe, Bilthoven, the Netherlands. Database and insight provided by Henry W. Wyes, project manager, European Center for Environment and Health, in discussions in May 1993.
- 23 World Resources Institute, op. cit., p. 60-61.
- 24 Ibid., p. 61.
- 25 Ibid., p. 61.
- 26 Hermine N. Soud, "Requirements for SO<sub>2</sub>/NO<sub>x</sub> Emissions for Coal-Fired Plants in Europe," paper delivered to UNIPED/IEA Conference, Hamburg, Germany, 1-3 September 1993.
- 27 Struan Simpson, *The Times Guide to the Environment* (London: Times Books, 1990), p. 57, 63.
- 28 World Resources Institute, op. cit., p. 61.
- 29 International Energy Agency, *Energy Statistics and Balances of Non-OECD Countries*, (Paris: International Energy Agency, 1993). Also, World Resources Institute, op. cit., p. 61.
- 30 International Energy Agency, *Energy Indicators for Selected Countries* (Paris: International Energy Agency, 1993).
- 31 World Resources Institute, op.cit., pp. 60-61.
- 32 Government of Hungary, *Hungary's National Report to United Nations Conference on Environment and Development*, Budapest, December 1991, p. 21.
- 33 Ibid., p. 120.
- 34 Government of Hungary, Ministry for Environment and Regional Policy, *The Short and Medium-Term Environmental Action Plan of the Government*, Budapest, 1992, p. 5.
- 35 Hermine N. Soud, op. cit.
- 36 Ibid.

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- 39 World Resources Institute, op.cit., p. 64.
- 40 Ibid., p. 64.
- 41 Government of Hungary, *State of the Hungarian Environment*, Budapest, 1990, pp. 74-76.
- 42 Ibid., p. 74-76.
- 43 Ibid., p. 74-76.
- 44 Ibid., p. 74-76.
- 45 World Resources Institute, op.cit., p. 64.
- 46 Ibid., p. 64.
- 47 Ibid., p. 64.
- 48 Ibid., p. 66.
- 49 Government of Hungary, *Hungary's National Report to the United Nations Conference on Environment and Development*, Budapest, December, 1991, p. 33.
- 50 Ibid., p. 36.
- 51 Ibid., p. 36.
- 52 Ibid., p. 15.
- 53 Ibid., p. 16.
- 54 Personal interview with Ivan Gyulai, director of the Ecological Institute for Sustainable Development in Miskolc, Hungary, September, 1993.
- 55 Government of Hungary, *Hungary's National Report to the UNCED*, p. 23.
- 56 Ibid., p. 24.
- 57 Ibid., p. 25.
- 58 Ibid., p. 25.
- 59 Ibid., p. 25.
- 60 Ibid., p. 23.
- 61 Ibid., p. 26.
- 62 Ibid., p. 26.
- 63 Ibid., p. 28.
- 64 Hermine N. Soud, op. cit.
- 65 Ibid.
- 66 Ibid.
- 67 World Resources Institute, op.cit., pp. 62-63.
- 68 Ibid., pp. 62-63.
- 69 World Health Organization, Regional Office for Europe, *Health For All*, health indicators database on Europe, Bilthoven, the Netherlands (no publication date given, but data supplied is recent, indicating the database was likely completed in 1993-94).
- 70 Government of Hungary, *Hungary's National Report to the UNCED*, p. 49.
- 71 Ibid., p. 49. The Hungarian government does not provide an age group to describe what it means by "students." From the nature of the disorders, however, it would appear that the statement may apply to children who are still growing.

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- 73 Ibid., p. 23.
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- 75 Government of Hungary, *State of the Environment in Hungary: The short and medium term environment protection action plan of the government*, Budapest, January 1992, p. 16.
- 76 World Resources Institute, op.cit., pp. 60-61.
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- 79 Ibid.
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- 81 World Resources Institute, op.cit., pp. 62-63..
- 82 Ibid., p. 62.
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- 94 Paul R. Gregory and Robert C. Stuart, *Soviet Economic Structure and Performance*, (New York: Harper and Row, 1986), p. 17.
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- 102 Ibid., p. 496.
- 103 Ibid., p. 536.
- 104 Keith Sword, ed., *The Times Guide to Eastern Europe: Inside the Other Europe*, (London: Times Books, 1990), pp. 18-19.
- 105 Swain, op. cit., p. 54.
- 106 Ibid., p. 54.

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- 107 Stanley Aronowitz, *The Crisis in Historical Materialism: Class, Politics and Culture in Marxist Theory* (London: Macmillan, 1990), pp. 72-78.
- 108 However, such thinkers as Blake, who feared that "Satanic Mills" of industry were invading England's green pastures, can be viewed as expressing early environmentalist sentiments. See Aronowitz, p. 74.
- 109 *Ibid.*, pp. 74-75.
- 110 Gregory and Stuart, *op. cit.*, p. 79.
- 111 Shlomo Avineri, *The Social and Political Thought of Karl Marx* (Cambridge: Cambridge University Press, 1968), p. 42.
- 112 Gregory and Stuart, *op. cit.*, p. 79.
- 113 Michael Redclift, *Development and the Environmental Crisis: Red or Green Alternatives?* (London: Methuen, 1984), pp. 7-9.
- 114 Aronowitz, *op. cit.*, p. 74-75.
- 115 *Ibid.*, p. 75.
- 116 *Ibid.*, p. 74.
- 117 Redclift, *op. cit.*, p. 7.
- 118 *Ibid.*, p. 40.
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# Chapter 3

## WESTERN AID AND PROSPECTS FOR SUSTAINABLE DEVELOPMENT

The disintegration of the Soviet Union and the subsequent break-up of the political and economic structures of the East Bloc left the states of CEE in a state of turmoil and uncertainty. The economies, for the reasons described in Chapter 2, were in crisis, and the relative well-being of the populations, measured by their state of health, was far below the rest of Europe.<sup>1</sup> Huge national debts had accumulated during the 1980s in order to prop up ailing industries and maintain the population's standard of living. The World Bank estimates that Hungary's external debt in 1989 was \$20.6 billion, with borrowing per capita at \$218.<sup>2</sup> This compares with Poland, which despite having more than twice the amount of external debt in 1989, had borrowing per capita of just \$7.20.<sup>3</sup> Hungary, Poland, Czechoslovakia and others acknowledged that their command economy systems had failed to live up to expectations, but the job of restructuring proved more difficult than anticipated. Initial flirtation with the free market exposed the need for widespread changes in production and distribution, management practices and resource utilization, as well as the need for investment in public-sector infrastructure projects and social guarantees for those who would be affected by liquidation and restructuring of state enterprises.<sup>4</sup> The CEE states needed technology transfer, technical assistance, and especially investment to aid in structural adjustment, privatization and environmental rehabilitation.<sup>5</sup>

The reaction by Western governments to the economic, environmental and social problems that emerged in CEE after 1989 is subject to debate. Widespread perceptions are that Western leaders, in their jubilation over the apparent end of the Cold War, underestimated the difficulties the CEE states would encounter in their transitions to Western-style democracy and free markets. However, the analysis that the West was operating under a veil of naivete in 1989-90 does not take into consideration that its jubilation must have been partly a reaction to several years of uncertainty and confrontation. The pressure associated with decades of Cold War -- including massive arms buildups, geopolitical

struggles, and, toward the end of the Cold War, talk of an "Evil Empire" -- was lifted as the Berlin Wall came down piece by piece. This chapter describes some of the multilateral steps taken since 1989 which show that underlying West's optimism in 1989-90 was caution, not naivete. A hard-line coup in the Soviet Union in August 1991, though unsuccessful, reaffirmed the West's sense of caution, reinforcing efforts to establish stability in the East. . In the years following the major political changes of 1989-90, the West knew action had to be taken quickly to keep the former Soviet Union and CEE from slipping into economic and potentially political crisis.<sup>6</sup> Establishing stability was a priority, not only for security reasons, but for economic ones as well. Based on examples to be addressed below, it is possible to infer that bilateral aid and investment may not have seemed to be a coherent enough policy to guarantee prosperity and stability in the newly independent East Bloc states, which found themselves islands in an economically interdependent Europe. Multilateral efforts at stability in CEE would quickly secure the region as a future market for Western goods and a potential target for Western investment, similar to the objectives the Marshall Plan accomplished in Western Europe following WWII.<sup>7</sup>

Just as the pluralist theorists of international relations maintain, from a Western perspective the realization that economic, political, as well as environmental, crises could erupt in CEE forced the West to view the disintegration of the East Bloc as an interdependent phenomenon.<sup>8</sup> A region with a history of ethnic strife (animosity between nationalities in the Balkans provided a catalyst for WW I) and a transboundary environmental crisis on the scale of Chernobyl meets Keohane and Nye's criteria of interdependence discussed in Chapter 1.<sup>9</sup> States in Europe, and indeed the world, are mutually dependent on each other for stability and safety; the "reciprocal effects" of severe nuclear fallout blowing from one state to the next is catastrophic, and ethnic strife can set off a chain reaction of events that could prove costly and dangerous.<sup>10</sup> After the political changes in CEE in 1989, the West knew it must act collectively to promote order and stability. The West's reaction to the economic and environmental crisis in CEE, while not extensive, has not been insignificant, nor has it been naive. Within a few years of the political changes in CEE, the following were set up: an international development bank for the region with a mandate to

strive for sustainable development, a technical assistance program from the European Union to prepare CEE for future EU membership, an information clearinghouse on the environment based in CEE, and countless technology transfer and joint venture agreements with Western firms. This chapter will focus primarily on examples of collective action from the West to the 1989 changes in CEE, though some attention will be given to bilateral assistance from the US, which, when considered along with assistance from the EU, can also be interpreted as part of a larger multinational effort.

### 3.1 THE EUROPEAN BANK FOR RECONSTRUCTION AND DEVELOPMENT

During a political crisis or major change such as that which occurred in CEE in the late 1980s, the way in which other states react is often symbolic of their long-term intentions, not just for the region in question, but for their overall approach to international relations.<sup>11</sup> In May 1990, 40 states and two European organizations, the European Community and the European Investment Bank, signed an Articles of Agreement to establish the European Bank for Reconstruction and Development (EBRD), whose purpose would be "to foster the transition towards open market-oriented economies and to promote private and entrepreneurial initiative in the Central and East European countries committed to and applying the principles of multiparty democracy, pluralism, and market economies."<sup>12</sup> The EBRD, based in London with resident offices throughout the East, was intended to fill a niche in the business of international lending. It has a strong microeconomic outlook, i.e., emphasizing the development of the private sector, and its lending and investing are dedicated exclusively to the states of CEE, as well as to those of the former Soviet Union.<sup>13</sup> In these ways, the EBRD differs from the World Bank, whose activities are not targeted at any one region and whose focus is "to promote economic development that benefits poor people in developing countries," thus its emphasis on macroeconomics and structural adjustment, with less of a focus on the private sector.<sup>14</sup> The EBRD is required to have 60% of its activities focused on the private sector, and assists with reducing the role of the state through demonopolization and privatization. The EBRD is involved with state-owned enterprises undergoing privatization, existing private companies, as well as the creation of new companies,

including joint ventures with international strategic investors.<sup>15</sup> The remainder of the EBRD's funding is directed toward infrastructure or other public-sector projects. In states where the private-sector is more advanced, such as in Hungary, the bank is able to achieve a higher level of private-sector activity than in poorer CEE states, where it targets its lending and investing more toward the public sector.<sup>16</sup> The EBRD is the first international financial institution with a mandate in its founding charter on environmental protection and restoration. The bank states in its policy guidelines that it is required to "promote in the full range of its activities environmentally sound and sustainable development."<sup>17</sup> The founding of an international bank for CEE on these principles is indicative of the strategic importance Western Europe, the United States and others see for the region in the future, from an economic, political and environmental perspective.

The EBRD's shareholder breakdown is as follows: members of the European Union, the EU itself, and the European Investment Bank, 51%; United States, 10%; Japan 8.5%; CEE and states of the former Soviet Union, 12%; and other states, 18.5%. As an organization, the EU's shareholding is 30,000 shares, or 3% of the total, the same holdings as the European Investment Bank. France, Germany, Italy and the United Kingdom each hold 85,175 shares, or about 8.5% each. Canada, with less than 3.5%, is the smallest EBRD shareholder of any member of the Group of Seven Industrialized Nations.<sup>18</sup> In ECU terms thus far, the bank's largest board-approved project financings have been in the telecommunications and financial institutions sectors. In terms of numbers of projects approved, the largest sectors are financial institutions, manufacturing and agribusiness.<sup>19</sup> Board approval of a project does not necessarily mean the money is automatically disbursed, as many projects must wait to be signed, and then once signed are often held up for reasons beyond the bank's control. One source of delay is that the loan agreement may require the passage of certain legislation in the country involved, and until it passes the funds cannot be disbursed.<sup>20</sup> As of September 1994, the EBRD since its inception had approved projects totalling 4.5 billion ECUs, but only 813.6 million ECUs had been disbursed.<sup>21</sup> The slowness of disbursements presented problems for the EBRD in its first year. In April 1993, an article in the *Financial Times* reported that the bank has a record of loan disbursements lower than the amount the

bank had spent on itself. In its first 20 months of operations, the EBRD spent 160 million ECUs on outfitting its offices and paying its staff while distributing only 126 million ECUs to its target countries.<sup>22</sup> Theo Waigel, the chairman of the bank's board of governors, rebuked Jacques Attali, the president, for spending money on Italian marble for the bank's headquarters, private jets and lavish parties.<sup>23</sup> The scandal eventually led to Attali's resignation in June 1993.<sup>24</sup> Under the new president, Jacques de Larosière, the bank approved 91 investment projects in 1993, compared with 54 in 1992.<sup>25</sup>

The EBRD's stated goals incorporate an environmental and a political mandate, to assure the development of a private sector that observes the principles of sustainable development as well as human rights.<sup>26</sup> It seeks to halt, albeit gradually, the degradation of the environment and assure the market economies of CEE develop in a way that will depart from the environmental abuses of the past.<sup>27</sup> The EBRD's policy guidelines state that "major environmental improvements, direct restorative investments and integration of environmental concerns into new investments are prerequisites for the successful transition to a market-oriented economy."<sup>28</sup> The EBRD promises assistance to the countries of CEE in forming environmental policies, developing legal and regulatory instruments, adopting appropriate emissions and effluents standards and creating the institutional and professional structure to monitor and enforce them.<sup>29</sup> The bank also states that it will encourage the development of environmental goods and services industries in the countries where it operates, as well as promote commercially viable investments in environmental technologies and pollution prevention and control.<sup>30</sup>

As part of its general activities, the EBRD requires environmental assessment, planning and environmental monitoring procedures throughout the life of its projects, a key determinant in guaranteeing the achievement of its policy goals.<sup>31</sup> The bank is particularly aware of the lack of adequate legal and regulatory procedures in CEE to deal with the environmental problems which resulted from the old economic system, as well as new environmental problems that may arise as the states become targets for foreign investment and development.<sup>32</sup> Eight principles, borrowed from the European Community's Single European Act of 1987, outline the bank's goals:

- preventative action to avoid environmental degradation;
- development and implementation of effective national policies, environmental standards and monitoring systems;
- promotion of the efficient use of natural resources (e.g., energy, water, raw materials, etc.);
- adoption of the polluter-pays principle wherever possible;
- establishment of primary responsibility for environmental damage;
- due regard for economic efficiency and cost-effectiveness;
- recognition that legal instruments should be readily applicable and enforceable; and
- involvement of local and national authorities, technical experts, non-governmental organizations, affected populations and the general public in environmental matters.<sup>33</sup>

The EBRD's stated environmental goals are integrated into every aspect of the project preparation and approval process.<sup>34</sup> During the very early stages of a project, the bank requests that project sponsors provide relevant information about the project, including environmental information. It is at this stage that the level of environmental investigation required is determined.<sup>35</sup> Next is an environmental screening, which also occurs during the exploratory stages in the life a project. The bank's staff determine the environmental information required and whether the project will later require an environmental assessment or audit. In addition, any suggestions for environmental benefits and enhancements to the project are put forward.<sup>36</sup> The next stage is an investigation conducted to generate any information required by the bank. If a project is deemed as having significant environmental impact, a full Environmental Assessment may be carried out.<sup>37</sup> The project is then reviewed, and any environmental covenants are incorporated into the loan agreement. While a loan is being supervised by the bank, observation takes place to ensure the environmental measures specified in the loan agreement are being carried out. Once the project is completed, an environmental evaluation is written and provisions made for any necessary environmental monitoring.<sup>38</sup> Additionally, EBRD staff is required to find ways in which the public can participate in a project by checking for available information on NGOs and for any history of the bank's involvement with them. Using information from the EBRD, the United Nations and local resources,

searches are carried out for grassroots organizations in the area affected by the project. Once found, their technical expertise are sought during the environmental assessment process, as well as their input on the community's understanding of the project.<sup>39</sup> In its 1993 annual report, the EBRD states that its principal contribution to improving the environment in CEE is "investment in projects that are more energy and resource efficient and less polluting than the facilities they replace." In particular, the bank seeks to invest in modern energy production and transmission and encourage closure of old, polluting facilities.<sup>40</sup> Examples of such investment include gas-fired power plants and gas pipelines to reduce dependency on lignite. For new or upgraded industrial plants, the bank encourages cleaner technologies, better resource utilization, waste minimization and contamination clean-up.<sup>41</sup> The bank unequivocally states that "environmental deterioration in the countries of central and eastern Europe has reached such alarming proportions that economic growth and the maintenance of the social fabric depend upon restoring the environment."<sup>42</sup>

The EBRD's political mandate is designed to assure the development of democracy and a legal system, which it states as being essential in the CEE states' transition to market economies: "...the successful transition of member countries to market-oriented economies is closely linked to parallel progress towards democracy and the rule of law."<sup>43</sup> It states as requirements that participating states hold free elections and have representative government in which the executive is accountable to the elected legislature or the electorate. The bank states that it is the duty of a state's government and public authorities to act in accordance with the constitution and law, and that the state must be separate from political parties.<sup>44</sup> States must have an independent judiciary and provide equal protection for all, including minorities, under the law, and criminal procedures must be fair. People should be guaranteed freedom of speech, press, association and peaceful assembly, as well as of conscience and religion. They should be guaranteed freedom of movement, the right to private property and the right to form trade unions and to strike.<sup>45</sup> The EBRD's efforts at encouraging public participation and consultation in the preparation of projects, as described above regarding the environment, is a direct outgrowth of its political mandate; for some of its projects,



the EBRD encourages the establishment of consumer protection bodies.<sup>46</sup> The EBRD requires its Board of Directors to review at least annually the bank's operations and lending strategy in each CEE state to ensure that EBRD requirements are met.<sup>47</sup> The bank further assesses the progress of states through cooperation with other institutions and NGOs, such as the Council of Europe. States that are admitted to the Council of Europe and ratify the European Convention on Human Rights are viewed favorably.<sup>48</sup> Failure to meet the bank's political requirements, depending on the degree of departure from the set principles, are grounds for postponement of proposed operations, restrictions on operations already underway or outright suspension of operations.<sup>49</sup>

Hungary is one of the more advanced loan and investment recipients, and as a result 85% of the EBRD's activities there have been in the private sector.<sup>50</sup> Because of Hungary's large external debt, the government is hesitant to guarantee loans, so loans are made primarily through an intermediary called a concession company that acts as guarantor.<sup>51</sup> Some recent activities include a loan, co-financed with Banque Nationale de Paris (BNP), to Framochem Kft, a Hungarian joint venture owned by a French firm and a Hungarian firm. Though the loan was only for 3 million ECUs, it was used to upgrade and enlarge Framochem's plant, which produces chemicals for the plastics and agrochemicals industries. The EBRD said in a news release the loan will be used to increase health and safety standards. An environmental action plan, presented to the EBRD by Framochem, aims to increase maintenance levels, personnel safety and environmental training. Another example of an EBRD project with environmental impact was a 61-million-ECU loan to the Municipality of Budapest to improve its public transport system. Mario Sarcinelli, vice-president of the EBRD, said the loan will improve the service quality of the bus and tram system in Budapest, reducing noxious emissions by about 24%, as well as moving the Budapest Transport Company toward "commercialization." The loan was to be used to replace one-quarter of Budapest Transport's bus fleet and upgrade a further one-third of the company's bus engines. The remainder of the financing for the project came from the World Bank and the Municipal budget.<sup>52</sup>

The EBRD's approach to the changes in CEE represents a commitment on the part of its multinational shareholders to link

environmental rehabilitation and market reform, a link necessary if sustainable development is to be achieved.<sup>53</sup> Encouraging appropriate legislation, public participation and environmentally responsible investment projects is the EBRD member states' way of encouraging economic and political stability in the region.<sup>54</sup> Foreign investment which disregards the environment would compound the pollution that already exists from the pre-1989 economic system, and failure to address existing pollution could discourage future investment.<sup>55</sup> The EBRD's stringent environmental requirements are an important model for other investment in the region, and represent the short- and long-term intentions of Western industrialized states.

### 3.2 THE EUROPEAN UNION PHARE PROGRAM

As an international organization acting in the interests of its 12 member states, the EU's reaction to the changes in CEE in 1989-90 was to plan for the eventual integration of the former Soviet bloc states into the EU through the Europe Agreements, which establish economic, political and cultural cooperation.<sup>56</sup> The EU's actions during the period following the political changes to the East represent the recognition by its member states that achieving stability and prosperity in CEE is necessary to the stability and prosperity in Europe. The EU's intentions are in this way similar to the intentions behind the formation of the EBRD.<sup>57</sup> In December 1991, the then-European Community signed association pacts with Poland, Hungary and Czechoslovakia (after division the Czech and Slovak successor states established individual relationships with the EU). Agreements with Romania and Bulgaria followed.<sup>58</sup> The Community stated as its goals for the agreements eventual free trade with the EC, industrial, technical and scientific cooperation, a long-term program of financial support, and a mechanism for political dialogue.<sup>59</sup> The agreements state the Community's aim to secure industrial free trade by the end of 10 years.<sup>60</sup> The EU's venue for coordination of economic, technical and scientific cooperation is the PHARE program (Poland/Hungary Aid for Restructuring of Economies).<sup>61</sup> The PHARE programme was conceived in July 1989 at the Paris meeting of the Group of Seven Industrialized Nations, where the G-7 charged the European Commission with the coordination of international aid to Poland and Hungary.<sup>62</sup> PHARE has since become the EU's central

mechanism for assistance to central and east European countries in their transitions to market economies. The programme was extended to Romania, Bulgaria, Czechoslovakia and Yugoslavia in mid-1990, to Albania and the three Baltic republics in December 1991, and to Slovenia in summer 1992. Yugoslavia was dropped from the programme in 1991 due to the civil war and subsequent disintegration of the state.<sup>63</sup> Funding for PHARE is provided by the EU budget and given via grant. According to the PHARE information office in Brussels, the program thus far has had a total budget of 4.284 billion ECUs, of which 9% has been allocated to nuclear safety and the environment.<sup>64</sup>

The programme's goal is to lay the foundations for market economies while supporting the development of civil institutions.<sup>65</sup> PHARE aid programmes emphasize private-sector development in agriculture, industry, investments, energy, education, environmental protection, trade and services. Its "instruments of reform" include support of parliamentary practices, human rights, independent media, the development of non-governmental organizations, local democracy and education.<sup>66</sup> PHARE does not support programmes of macroeconomic stabilization, nor does it provide export guarantees or risk capital for the establishment of private firms.<sup>67</sup> Though PHARE was meant to end in 1992, it was extended in order to assist countries which joined after the program's inception and to continue to prepare all participating states for greater integration with the EU.<sup>68</sup> The extension will take into account the association agreements, as well as progress toward reform. PHARE's focus will continue to be technical assistance, although some activities will focus on the stimulation of investment. The program's scope will be extended to investment in small and medium-sized enterprises, regional reconversion activities and agricultural restructuring. The EU expects the EBRD and other institutions like it to play a major role in attracting and securing investment for the region.<sup>69</sup>

PHARE's priority areas for Hungary include assisting in the country's economic transformation through strengthening market elements, helping to create infrastructure and institutions, and assisting in creating a healthy environment.<sup>70</sup> PHARE's aim is to concentrate on a limited number of problem areas, and identifying projects which are likely to show major and fast results at relatively moderate costs. In 1990, the PHARE program committed 100 million ECUs to Hungary, 21 million of which were targeted at the

development of small- and medium-sized enterprises.<sup>71</sup> The program sought to promote private-sector activity through providing support for loan financing, technical assistance and business services. Of the 100 million ECUs budgeted for Hungary, 25 million were applied to the PHARE Environmental Protection Program. Among the environmental program's goals were to strengthen air and water monitoring capacity, improve waste disposal and nature conservation, and reduce harmful industrial emissions. In addition, 2 million ECUS was budgeted for the Regional Environmental Center for Central and Eastern Europe in Budapest.<sup>72</sup>

Another aspect of the 1990 PHARE funding for Hungary included 5 million ECUs for the Technical Support for Privatization Program, which included training for the staff of Hungary's privatization body, the State Property Agency, as well as funding of office equipment and foreign consulting services for to address privatization cases.<sup>73</sup> An additional 1.3 million ECUs was budgeted for modernization of foreign trade infrastructure, including the supply of equipment for testing and certification laboratories of goods destined abroad. Twenty million ECUs were slated for a market-oriented agricultural program, and 5 million for technical assistance to the Hungarian banking and finance industries. The 1990 budget also provided 3 million ECUs for science and technology research, 4.5 million for higher education and vocational education, 6.2 million for TEMPUS, or Trans-European Mobility Scheme for University Studies, as well as 3 million for social programs such as job-creation schemes.<sup>74</sup>

In 1991, PHARE budgeted 114 million ECUs to Hungary, including 10 million ECUs for environmental protection.<sup>75</sup> The 1991 environmental protection program included programs on air pollution abatement, municipal solid waste and nature conservation management. PHARE also emphasized the preparation of a national environment strategy, including policy-making, organizational development and a public awareness campaign.<sup>76</sup> Other aspects of the PHARE program in 1991 included a 40-million-ECU Enterprise Restructuring and Privatization program, which by far constituted the largest proportion of the 1991 budget. The program consisted primarily of technical assistance to those responsible for privatization of state industries.<sup>77</sup> The next largest budget appropriation in 1991 was for the privatization of agriculture and agroprocessing at 13 million

ECUs. Among the remaining budget appropriations was 5 million ECUs for energy, which covered assistance for the restructuring of the coal and electricity sectors.<sup>78</sup>

Hungary received a PHARE budget allocation of 104 million ECUs in 1992, of which a newly defined sector, "Environment, Energy and Infrastructure" received 10 million.<sup>79</sup> Sixty percent of the environment, energy and infrastructure budget was spent on direct investment, and over 30% on feasibility studies.<sup>80</sup> Special attention was given to develop policies aimed at reducing harmful effects from production, consumption and transportation.<sup>81</sup> Other aspects of the 1992 budget included 16 million ECUs for the TEMPUS program, started in 1990 with an allocation of just 6.2 million. Further assistance was provided in 1992 for the Small- and Medium-Sized Enterprises program: 11 million ECUs, which included establishing special services for small- and medium-sized enterprises in local banks.<sup>82</sup> Another 10 million ECUs were budgeted towards an upgrade of the Hungarian statistical system. The assistance is targeted at enabling the Hungarian Central Statistical Office to become a main supplier of information required by the structural changes occurring in Hungarian society. Priorities were ensuring easy access to reliable information and assisting in the integration of the Hungarian statistical system into the European standard. Another aspect of the 1992 budget, the General Technical Assistance Facility for the Implementation of the Europe Agreement, with a budget of 4 million ECUs, had as its goal the identification of economic and financial barriers to Hungary's eventual integration with the European Union.<sup>83</sup> For 1993, the PHARE budget allocation for Hungary was 100 million ECUs, including 30.5 million for agriculture, 31 million for private-sector development and small- and medium-sized enterprises, and 16 million for education and training.<sup>84</sup> The 1993 budget did not allocate funds for the environment, as the Hungarian government did not request it; funds from earlier years were still being used up. Funding for 1994 (proposed at 85 million ECUs) includes 15.5 million ECUs for energy and the environment, the bulk of which is to be used for the environment, and 16.5 million for private-sector development.<sup>85</sup>

One of PHARE's cross-border activities that is part of a larger multinational effort is the Environmental Program for the Danube River Basin. Under the program, PHARE is involved in a scheme to

monitor pollution levels in the Danube. Agriculture, as well as industries such as mining and pulp and paper manufacturing, have compounded the problem of pollution in the Danube in the several states through which it passes on its way to the Black Sea. According to the PHARE information office, the Danube's most acute pollution problems originate not in central and eastern Europe, but from cow manure in the German state of Bavaria. The Danube Accident and Emergency Warning System, based on similar programs for the Elbe and Rhine rivers, links 11 alert centers along the river's path. Water quality monitoring and reporting takes place in order to warn states down the river of problems coming their way. The program's central office in Vienna coordinates a database on toxicological and operational information regarding the river, and all alert centers are linked by a satellite communications system.<sup>86</sup>

About 3.5% of the total PHARE budget for CEE is allocated to nuclear activities, and a large chunk of that is used for safety and repair programs at the Kozloduy nuclear power plant in Bulgaria.<sup>87</sup> Despite the plant's outdated technology and problems with safety, it has had to be maintained rather than dismantled because it supplies 40% of Bulgaria's electricity.<sup>88</sup> Electricity demand in the country is expected to grow by as much as 14% between 1990 and 1995, and by 9% over the following five years.<sup>89</sup> The Dukovany power station in the Czech Republic is also undergoing safety studies, some of which occurred off-site, and the Bobunice site in Slovakia is receiving extensive assistance with a large number of experts on-site.<sup>90</sup> In Lithuania, the two units at the Ignalina power plant received safety equipment and technical expertise under the PHARE program. The Paks nuclear power plant in Hungary is, according to PHARE, one of the best run plants in Eastern Europe, and requires the least amount of assistance.<sup>91</sup>

### 3.3 THE US AGENCY FOR INTERNATIONAL DEVELOPMENT

The US has responded to the political changes in CEE with a program that has similar objectives to the PHARE program: support and assistance for private-sector development, economic restructuring, pluralism, environmental rehabilitation, and the drafting of accompanying legislation to provide the legal framework for transition to democratic market-based systems.<sup>92</sup> In 1990, the US

Support for Eastern Europe Democracy Act (SEED Act) was passed by the US Congress designating the US Agency for International Development (USAID) the coordinator of US assistance to CEE.<sup>93</sup> Under the SEED Act, assistance has been authorized through USAID for Hungary, Poland, Czechoslovakia, Romania, Bulgaria, Albania, Slovenia, Croatia, Bosnia, Serbia, Montenegro, Macedonia, Estonia, Latvia and Lithuania. Other legislation, the Freedom Support Act, provided aid for the former Soviet Union.<sup>94</sup> USAID distributes funds to such recipients as the US Environmental Protection Agency (EPA), the US Department of Agriculture, the Department of Energy and US environmental consulting firms to provide technical assistance and advisory services to government and industry in CEE.<sup>95</sup> The agency states that solving the environmental problems in CEE "will require significant policy changes, more efficient environmental investments in both the public and private sectors, and more effective institutions."<sup>96</sup> Helping CEE to attract investment for private-sector projects is a priority; thus AID's emphasis on encouraging legislation to deal with such sticky issues for foreign investors as liability for pre-existing environmental degradation. Since 1990 when USAID became the coordinator for aid to CEE, \$1.53 billion have been committed to aid for the region.<sup>97</sup>

USAID's priorities for assistance to Hungary are privatization and business infrastructure development, financial sector reform, helping to address select key social issues such as unemployment, and improving environmental quality.<sup>98</sup> As of September 1993, committed funds for US SEED assistance to Hungary totalled \$152.25 million.<sup>99</sup> US aid to Hungary falls under the following categories: Banking and Financial Services, Divestiture and Privatization, Enterprise Development, Management Training, Energy, Telecommunications, Agriculture, Trade and Investment Promotion, Environment, Housing, Labor, Health, Private Voluntary Initiatives (such as the YMCA), and Democratic Initiatives.<sup>100</sup> The agency's objectives for environmental assistance to Hungary include the reform of environmental and economic policies, including pricing, legislation and regulation; improving the efficiency and effectiveness of public-sector environmental investment; and supporting the expansion of private-sector involvement. The AID-coordinated programs are, for the most part, low cost and training oriented.<sup>101</sup> The US Environmental Protection Agency (EPA), for instance, provided training to the

Ministry of Environment in enforcement of environmental laws, risk assessment, financing and environmental investments, hazardous site ranking at the national level, and environmental impact assessment. The EPA training is aimed at improving public-sector performance. In addition, the EPA has advised the Hungarian government on wetlands preservation and fund-raising for environmental projects. The EPA also organized environmental education for local governments, primary school teachers and communities to increase awareness about the environment.<sup>102</sup> Other USAID-funded projects provided training for staff members of the State Property Agency on environmental liability and procedures related to the privatization process, and technical assistance to the Ministry of Finance on principles of environmental economics, development of economic instruments and financing. Environmental economists assisted the Hungarian government in reforming fuel taxes.<sup>103</sup> In the area of energy, USAID-funded efforts are varied. Early in the SEED program, USAID provided a \$10 million energy sector grant to support the major energy price reforms adopted by the Hungarian government. US funds helped cushion the price increases for fixed-income energy customers such as pensioners and large families.<sup>104</sup> In addition, the US Department of Energy has implemented a small program of training and technical support to improve the safety of operations at Hungary's Paks Nuclear Power Plant. USAID assistance also influenced the design of a project by the Municipality of Budapest to require catalytic converters.<sup>105</sup> Other energy-oriented activities include management training to Hungarian energy service companies.<sup>106</sup>

The SEED Act that established USAID's functions in CEE also provided \$5 million to set up the Regional Environmental Center (REC) for Central and Eastern Europe, an independent, non-governmental, non-profit organization.<sup>107</sup> The idea for the REC was put forward by US President George Bush during a visit to CEE in 1989.<sup>108</sup> The center's other founders included the EU and Hungary; other donors include Canada, Austria, Denmark, Finland, Japan, the Netherlands New Zealand and Norway. Based in Budapest, with outreach offices in Warsaw, Bratislava, Bucharest and Sofia, the REC has collected large quantities of information and data on the environment in CEE.<sup>109</sup> As well as functioning as an information clearinghouse and sponsoring conferences and workshops, the REC has organized task forces to advise governments on the drafting of legislation.<sup>110</sup> The REC's



stated mission is to "address the host of pressing environmental problems, common throughout the region, though the development of a civic society,"<sup>111</sup> and also to promote "ecologically sustainable development".<sup>112</sup> The center accomplishes this through encouraging interaction and cooperation among environmental groups in the region, and acting as a catalyst for the support of organizations and individuals that develop or implement solutions to environmental problems.<sup>113</sup> The center cites the constituencies it serves as non-governmental organizations, national governments, local and municipal governments, academic and scientific institutions and businesses, with a special emphasis on supporting grass-roots environmental movements. Above all, the REC seeks to influence policy making and promote transboundary and international cooperation on environmental issues.<sup>114</sup>

Stephen Wassersug of the Environmental Protection Agency, who during his three-year secondment to the REC participated in advising the Hungarian government regarding environmental liability, typifies US activities in the region. Wassersug believes that among Hungary's biggest environmental problems are a lack of effective laws, a lack of effective training, outdated infrastructure and the fact that the country's institutions are in a state of transition.<sup>115</sup> In a speech to a business conference in Washington, D.C., Wassersug quotes a survey conducted by the Organization for Economic Cooperation and Development and the World Bank on the impact of environmental issues on western industrial investments in the region. The survey concluded that environmental issues such as soil cleanup and uncertainty of emission standards present impediments to Western investment. Nearly 62% of survey respondents indicated that environmental issues are equally important impediments to investment as non-environmental issues such as unstable economic reform and exchange-rate risks.<sup>116</sup> "US investors do not want to get stuck with another lemon site, where unlimited future liability haunts.... Unfortunately, there are generally no clear working policies or legislation for handling privatization. Potential investors from the US visit the region [and] often leave discouraged when faced with the lack of a policy and inability to calculate the investment costs. Many governments have simply not faced up to the relationship between investment and environmental liability."<sup>117</sup> Hungary is a good example of a state without a new and improved environmental law<sup>118</sup> to address investor

liability, despite efforts by foreign advisers to assist in the formation of such a law.<sup>119</sup>

USAID's work is not simply charitable; under the SEED Act a large portion of funds are applied to the activities of US consultants involved in advising Hungary on the environment or creating feasibility studies for potential projects. For instance, World Environment Center, a non-profit New York-based consulting firm, provides US industry consultants to visit Hungary and offer technical assistance and training in industrial environmental efficiency, industrial health safety, pollution prevention and environmental economics.<sup>120</sup> The experts provide environmental assessments and suggestions for industrial process and management reforms. In the case of one Budapest battery plant, worker lead exposure was reduced to zero based on World Environment Center's recommendations. The experts provide their services pro bono (travel expenses provided by AID) and in exchange might manage to drum up business for themselves following their recommendations.<sup>121</sup> The Hungarian response to such capitalistic assistance is mixed. Some industry and government officials criticize both US-AID and PHARE for not using Hungarian consultants and engineers, others wish the foreign "donors" would shift from writing feasibility studies to engaging in investment in solid projects.<sup>122</sup> One Budapest newspaper article, addressing the tide of consultants pouring into the country, quotes a Hungarian entrepreneur, Péter László, as saying: "What we need from the west is investment. We are fed up with father-like advice, rules and classes and teachings. We know our own problems, we know what we need to achieve, we can best figure it out for ourselves."<sup>123</sup> The reality, however, is that bilateral and multilateral aid is limited, and technical assistance is the dominant theme. For loans and investment, CEE will have to look to the EBRD and other international lenders.

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<sup>1</sup> World Resources Institute, *World Resources 1992-93: A Guide to the Global Environment*, (Oxford: Oxford University Press, 1992), pp. 57-72.

<sup>2</sup> *Ibid.*, p. 239.

<sup>3</sup> *Ibid.*, p. 239.

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- 4 Duncan Fisher, *Paradise Deferred: Environmental Policymaking in Central and Eastern Europe* (London: Royal Institute of International Affairs and Ecological Studies Institute, 1992), p. ix.
- 5 US Agency for International Development, Bureau for Europe, *Freedom, Fresh air and Free Enterprise: US Environmental Assistance to Central and Eastern Europe*, Washington, D.C., 1992.
- 6 I am grateful to Steve Weber of University of California/Berkeley, Council on Foreign Relations International Affairs Fellow at the EBRD in 1992, for his ideas on multilateral action in CEE after 1989. His unpublished paper, "Origins of the European Bank for Reconstruction and Development," written in May 1992 while a fellow at the EBRD, provided the theoretical basis for my Chapter 3's premise on multilateral efforts in CEE since 1989.
- 7 John Lewis Gaddis, *The United States and the End of the Cold War: Implications, Reconsiderations, Provocations* (New York: Oxford University Press, 1992), p. 210.
- 8 Robert Keohane and Joseph Nye, *Power and Interdependence* (New York: HarperCollins Publishers, 1989), pp. 1-15.
- 9 *Ibid.*, pp. 1-15.
- 10 *Ibid.*, pp. 1-15.
- 11 Steve Weber, *op. cit.*
- 12 European Bank for Reconstruction and Development pamphlet: *Political Aspects of the Mandate of the EBRD*, London, undated.
- 13 Personal interviews with Keiko Itoh, EBRD communications officer, September 1994.
- 14 World Bank, *The World Bank in Fiscal 1993: Annual Report Highlights* (media information), Washington, D.C., World Bank, 1994.
- 15 European Bank for Reconstruction and Development pamphlet: *Financing Private Sector Enterprises in Central and Eastern Europe*, London.
- 16 Personal interviews with Keiko Itoh, EBRD communications officer, September 1994.
- 17 European Bank for Reconstruction and Development, *Environmental Procedures*, London, 1992, Annex 1, p. 1.
- 18 Adapted from European Bank for Reconstruction and Development, *Annual Report 1993*, London, 1994, p. 48.
- 19 *Ibid.*, p. 13.
- 20 Personal interviews with Keiko Itoh, EBRD communications officer, September 1994.
- 21 Personal interviews with Keiko Itoh, as well as *EBRD Information Sheets and Press Releases: Hungary September 1991-May 1994*, London, 1994.
- 22 Karoly Okolicsanyi, "Eastern Views of the EBRD," *RFE/RL Research Report*, vol. 2, no. 23, June 1993, p. 50.
- 23 "Affluent Apparatchicks," *The Economist*, vol. 377, no. 7808, p. 105.
- 24 Robert Preston, et. al., "Attali quits as EBRD chief 'in bank's interest,'" *Financial Times*, June 26-27, p. 1.
- 25 European Bank for Reconstruction and Development, *Annual Report 1993*, London, 1994, p. 7.
- 26 EBRD, *Environmental Procedures*, and *Political Aspects of the Mandate of the EBRD*, London, undated.
- 27 EBRD, *Environmental Procedures*, Annex 1, p. 1.
- 28 *Ibid.*, Annex 1, p. 1.

- 29 Ibid., Annex 1, p. 1.
- 30 Ibid., Annex 1, p. 2.
- 31 Ibid., Annex 1, p. 2.
- 32 Ibid., Annex 1, p. 2.
- 33 Ibid., Annex 1, p. 3.
- 34 Ibid., Annex 1, p. 4.
- 35 Ibid., p. 1.
- 36 Ibid., pp. 1, 4.
- 37 Ibid., pp. 4-5.
- 38 Ibid., p. 5.
- 39 Ibid., Annex 4, p. 1-4.
- 40 EBRD, Annual Report 1993, p. 27.
- 41 Ibid., p. 27.
- 42 EBRD, *Environmental Procedures*, Annex 1, p. 1.
- 43 EBRD, *Political Aspects of the Mandate of the EBRD*, p. 2.
- 44 Ibid., p. 4.
- 45 Ibid., p. 4.
- 46 Ibid., p. 4.
- 47 Ibid., p. 2.
- 48 Ibid., p. 5.
- 49 Ibid., p. 5.
- 50 Personal interviews with Keiko Itoh, EBRD communications officer, September 1994.
- 51 Ibid.
- 52 EBRD, *EBRD Information Sheets and Press Releases: Hungary September 1991-May 1994*.
- 53 EBRD shareholders, as listed in the 1993 Annual Report, are:  
**EU members:** Belgium, Denmark, France, German, Greece, Ireland, Italy Luxembourg, Netherlands, Portugal, Spain, United Kingdom, European Community, European Investment Bank.  
**Other European countries:** Austria, Cyprus, Finland, Iceland, Israel, Liechtenstein, Malta, Norway, Sweden, Switzerland, Turkey.  
**Countries in which the Bank operates:** Albania, Armenia, Azerbaijan, Belarus, Bulgaria, Croatia, Czech Republic, Estonia, Former Yugoslav Republic of Macedonia, Georgia, Hungary, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Moldova, Poland, Romania, Russian Federation, Slovak Republic, Slovenia, Tajikistan, Turkmenistan, Ukraine, Uzbekistan, Unallocated Former Yugoslavia.  
**Non-European countries:** Australia, Canada, Egypt, Japan, Republic of Korea, Mexico, Morocco, New Zealand, USA.
- 54 EBRD, *Annual Report 1993*, inside cover.
- 55 Stephen R. Wassersug, Program Manager, Regional Environmental Center for CEE, "Meeting the Environmental Challenge: Balancing Environmental-Development Goals," presented at Executive Enterprises Inc., Environmental Business Opportunities and Liabilities in CEE, Washington, D.C., May 26-27 (no year provided). Wassersug quotes survey conducted by the Organization for Economic Cooperation and Development and the World Bank on the impact of environmental issues upon western industrial investments in the region. Survey will be discussed in more detail in Section 3.2 of this study.
- 56 Commission of the European Communities background report, 17 February 1993, p. 2.

- 57 Steve Weber, op. cit.
- 58 Personal interview with Thomas Glazer (by phone), head of PHARE information office, European Union, Brussels, September 22, 1994.
- 59 "The Community and its Eastern Neighbors," Commission of the European Communities pamphlet, January 1991, p. 3.
- 60 Jim Rollo and Alasdair Smith, "EC trade with Eastern Europe," *Economic Policy*, April 1993, p. 140.
- 61 Commission of the European Communities report, *PHARE General Guidelines 1993-97*, p. 1.
- 62 Heinz Kramer, "The EC's Response to the 'New Eastern Europe,'" *Journal of Common Market Studies*, vol. 31., no. 2, June 1993, p. 222-225. The European Commission's activities following the G-7 conference were a major part of what is known as the G-24 aid program. This loosely structured (and thus difficult to define) program, coordinated by the EU, consists of market access for industrial products, technical assistance for economic restructuring and financial assistance for macroeconomic stabilization. The EU is the primary contributor to the G-24 aid program.
- 63 Commission of the European Communities background report, 17 February 1993.
- 64 Personal interview with Thomas Glazer, head of PHARE information office, European Union, Brussels, September 22, 1994.
- 65 Commission of the European Communities report, *PHARE General Guidelines 1993-97*.
- 66 Commission of the European Communities, "The Week in Europe," April 22, 1993.
- 67 Kramer, op. cit., pp. 222-223.
- 68 Personal interview with Thomas Glazer, head of PHARE information office, European Union, Brussels, September 22, 1994.
- 69 Kramer, op. cit., pp. 223-224.
- 70 Republic of Hungary, Ministry of International Economic Relations, OECD Countries Aid Secretariat, *PHARE 1990-93: Hungary*, March 1993, pp. 6-7.
- 71 Ibid., pp. 6, 8.
- 72 Ibid., pp. 9-12.
- 73 Ibid., p. 9.
- 74 Ibid., p. 9-11.
- 75 Ibid., pp. 6, 13.
- 76 Ibid., p. 13.
- 77 Ibid., p. 12.
- 78 Ibid., pp. 13, 14.
- 79 Ibid., pp. 6, 13.
- 80 Interview with Andras Diosi, deputy head of unit, PHARE program, Budapest, Hungary, September 1993.
- 81 Republic of Hungary, *PHARE 1990-93: Hungary*, p. 19.
- 82 Ibid., pp. 16, 19.
- 83 Ibid., pp. 17, 19.
- 84 Personal interview with Thomas Glazer, head of PHARE information office, European Union, Brussels, September 22, 1994.
- 85 Ibid.
- 86 Ibid.

- 87 Commission of the European Communities, Programme of Assistance for Economic Restructuring in the Countries of Central and Eastern Europe, *PHARE and TACIS-- Nuclear Safety in Central and Eastern Europe: Present and Future Activities*, Brussels, April 1993, p. 7.
- 88 European Bank for Reconstruction and Development, *Energy Operations Policy*, London, undated, p. 28.
- 89 *Ibid.*, p. 28. According to the EBRD, while predicted demand figures for countries in transition are not always reliable, they are indicative of the way the governments see their constraints, and thus are important in influencing energy policy decisions.
- 90 Commission of the European Communities, *PHARE and TACIS -- Nuclear Safety in Central and Eastern Europe: Present and Future Activities*, p. 7.
- 91 *Ibid.*, p. 7.
- 92 US Agency for International Development, *Freedom, Fresh air and Free Enterprise: US Environmental Assistance to Central and Eastern Europe*.
- 93 Personal interview with Ruth Bell, Environmental Protection Agency, Washington, D.C., August 1993.
- 94 Personal interview with assistant to Ann Kittlaus, information officer, US Agency for International Development, Washington, D.C., September 1994.
- 95 US Agency for International Development, *Freedom, Fresh air and Free Enterprise: US Environmental Assistance to Central and Eastern Europe*.
- 96 *Ibid.*
- 97 Personal interview with assistant to Ann Kittlaus, information officer, US Agency for International Development, Washington, D.C., September 1994.
- 98 US Agency for International Development, *US Assistance to Hungary*, January 1994.
- 99 *Ibid.*
- 100 *Ibid.*
- 101 *Ibid.*
- 102 *Ibid.*
- 103 *Ibid.*
- 104 *Ibid.*
- 105 *Ibid.*
- 106 *Ibid.*
- 107 Personal interview with Stephen Wassersug, Program Manager, Regional Environmental Center for Central and Eastern Europe, Budapest, Hungary, September 1993.
- 108 US Agency for International Development, *Freedom, Fresh air and Free Enterprise: US Environmental Assistance to Central and Eastern Europe*.
- 109 Regional Environmental Center for Central and Eastern Europe, *Annual Report 1992*, Budapest, Hungary, 1993, pp. 2, 13, 38.
- 110 *Ibid.*, pp. 2, 10-11.
- 111 *Ibid.*, p. 2.
- 112 REC pamphlet, "Regional Environmental Center for Central and Eastern Europe," Budapest, Hungary, undated.
- 113 REC, *Annual Report 1992*, p. 2.
- 114 *Ibid.*, p. 2.

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115 Personal interview with Stephen Wassersug, Program Manager, Regional Environmental Center for CEE, Budapest, Hungary, September 1993.

116 Stephen Wassersug, "Meeting the Environmental Challenge: Balancing Environmental-Development Goals," speech presented at Executive Enterprises Inc., Environmental Business Opportunities and Liabilities in CEE, Washington, D.C. (undated). 191 respondents were included in the survey.

117 Ibid.

118 As stated in Chapter 2, environmental laws have been "on the books" since the 1970s, but enforcement has been lacking.

119 Stephen Wassersug, "Meeting the Environmental Challenge: Balancing Environmental-Development Goals," speech presented at Executive Enterprises Inc., Environmental Business Opportunities and Liabilities in CEE, Washington, D.C. (undated).

120 US Agency for International Development, *US Assistance to Hungary*, January 1994.

121 Ibid.

122 Henry Copeland, "Consultants: Brain Gain or Boondoggle?" *Budapest Week*, April 23-29, 1992, p. 5. A Ministry of Industry official, who did not want to be named, confirmed this sentiment to me in an interview in September 1993.

123 Ibid., p. 5.

## Conclusion

The body of this work has demonstrated that multilateral activities in CEE have played a key part in setting precedents for sustainable development, thus establishing that a pluralist theoretical approach is a useful framework for evaluating the problems of environmental degradation in the region. Environmental activities by the EBRD, the EU and the US, while only scratching the surface of CEE's financial needs (one estimate for achieving a 70% reduction in SO<sub>2</sub> emissions was \$8.6 billion<sup>1</sup>), are noteworthy because they constitute a large portion of the environmental aid to the region. The EBRD, with its mandate to strive for environmentally sound and sustainable development, has set an example for future investment in the region. The bank's stringent environmental evaluation requirements, particularly its policy of involving grass-roots organizations in local projects, go a long way toward differentiating between sustainable development as a concept confined to discussion at international conferences and a concept that is implemented in a tangible and meaningful way. The European Union has also contributed to setting higher environmental standards in CEE through its PHARE program. Though PHARE has been criticized for allocating much of its funds to technical assistance and feasibility studies,<sup>2</sup> and not enough to actual investment, its underlying goal of incorporating central and east European states into the EU is significant; its requirement that CEE must meet EU environmental standards before accession will contribute towards improving the region's environmental performance. The US AID program, though it also tends to emphasize technical assistance and advisory services over actual project investment, has made some headway in changing mindsets in CEE about potential paths to development. The REC is a good example of a US-spearheaded activity that has encouraged local participation in addressing environmental issues as well as encouraging international cooperation in the region. By functioning as a regional information clearinghouse, the REC has provided a valuable resource for potential investors seeking assistance with such issues as environmental liability.

Chapter Two provided the historical background to the environmental crisis in CEE. For a state such as Hungary, the



establishment after WWII of a planned economy, modelled after the Soviet Union's, put the country on a path of economic development that by its very nature contributed to a systematic degradation of the environment. Natural resource allocation was governed by political goals for production, rather than on the basis of supply and demand; this, combined with a lack of a pricing mechanism to determine relative scarcity, contributed to overconsumption of energy resources. The resulting impact on the environment included high SO<sub>2</sub> and NO<sub>x</sub> emissions per dollar GNP. The system of central planning, with its demanding output targets, did not encourage resource conservation or technological innovation, and in fact resulted in the overuse of resources. After the political changes of 1989-90, the availability of information from CEE into the public domain exposed health problems in the region that can not easily be explained, but may be related to environmental pollution. Life expectancy, infant mortality and deaths from illnesses such as respiratory diseases and cancer show that CEE is far worse off than its Western neighbors.

Viewing CEE's environmental problems in the context of the global environmental debate is useful in that it highlights the fact that the region has not yet been incorporated into that debate. The absence of any significant discussion on the region at UNCED in 1992, so soon after the dramatic political changes of 1989-90, is testament to the fact that CEE environmental problems are not being perceived for what they are: transboundary, multi-faceted and in some cases a serious threat to human health. As stated in Chapter 1, the lack of attention to CEE at UNCED may be due to the fact that the region in some peoples' minds is still a "bloc" rather than a large group of states with distinct problems and challenges. However, a grimmer view is that five years after the "Democratic Revolutions" of 1989, interest and commitment to CEE may have declined to the point where economic restructuring in the region, let alone environmental degradation, has faded from the public consciousness. The G7 conference in Naples in July 1994 is a further example of limited international interest in environmental degradation in CEE. The final communique contained nothing specific on the environment, short of an "action plan" for the closure of the Chernobyl nuclear power plant in Ukraine.<sup>3</sup> The only specific mention of funds for the Chernobyl action plan was "an initial amount of up to \$200 million in grants." The rest was vague, saying, "loans should be provided by

the international financial institutions," and calling on "other donors" to join the action plan.<sup>4</sup> The lack of specific financial promises in the communique regarding Chernobyl makes any significant action plan difficult to fathom; ensuring the future safety and clean-up in the area surrounding reactor Number 4, the one that blew up in 1986, alone will cost about \$1 billion.<sup>5</sup> The G7 communique's section on the environment (listed separately from the section on nuclear safety) did not even mention CEE.<sup>6</sup> Perhaps the only hope for getting the problems in CEE recognized as part of the global environmental debate will be when the region's economies become competitive enough to warrant discussions about a level playing field in trade relationships.

Determining the central and east European states' prospects for achieving sustainable development is difficult, primarily because the governments and the people are so absorbed with economic transformation and its accompanying social and political demands that their interest in the environment, which seemed so avid in the few years prior to 1989, has declined.<sup>7</sup> The dwindling of central and east European environmental activism is evidence of this phenomenon.<sup>8</sup> The pressure to create jobs, provide health care, and bring the general quality of life up to Western standards has pushed environmental concerns down on the political agenda. The CEE states' problem is straightforward: Their economies are restructuring, their environments are degraded, and, when forced to choose, people would prefer to have the basic necessities of life -- and a few non-necessities as well -- rather than a flue gas desulfurization unit at their local power plant. Taking the environment into consideration when rebuilding an economy is a luxury some states seem to have decided they cannot afford. In the case of Hungary, determining the government's intentions is difficult. The government's report to UNCED showed little hesitation in blaming the old regime for Hungary's environmental problems, referring to the country's "backward economic structure" and "sluggish and out-of-date" production units, as well as going a step beyond the World Health Organization and others in linking some health problems with environmental pollution. While these statements are not false, and in fact hold much truth, the lack of action to enact a new and comprehensive environmental law, despite extensive foreign advisory assistance on the subject, is evidence that the environment is not

high on the list of priorities. In the recent Hungarian election, the environment was not a major issue on the agenda; as Janos Zlinszky at the REC in Budapest asserts, no party was going to win or lose the election based on its environmental stance during the campaign.<sup>9</sup>

Pearce, Barbier and Markandya, as stated earlier, call sustainable development "fuzzy," with "no neat solutions."<sup>10</sup> In the case of CEE, this statement holds particular applicability. Just as the Brundtland report maintains, economic development and environmental quality are inextricably linked; when applied to CEE, however, that link is tenuous. Sustainable development can only be achieved at a cost -- a cost states in the region do not seem willing to bear. The Brundtland report does point out that the pursuit of sustainable development must take into consideration the idea of limitations imposed by "social organizations."<sup>11</sup> In CEE, those limitations are the lack of political determination, the lack of public willingness to make sacrifices for the good of the environment, and the limited ability or desire of other states to provide aid and assistance. Ruth Bell of the US Environmental Protection Agency sees hope for CEE in the "mosaic" of education and technical assistance that can be provided at a relatively low cost through foreign advisory services.<sup>12</sup>

In 1993, a 32-poster poem in English and Hungarian lined the walls of the Parliament underground station in Budapest. The following is an excerpt:

*As she has fed you  
For endless centuries  
You must decide now  
What you will do  
For your vanishing Danube  
Her flow has never been blue  
Nor has it ever been green  
You learned too little  
From your river-fearing fathers  
Like water through the fingers  
Your future slowly drips away.*

The sponsors, Fuji film, Coca-Cola, Canon and Peron, seem to have put their finger on the pulse of Hungary's environmental predicament. A popular perception about the states of CEE is that their governments should seize the opportunity to learn from the West's mistakes, as well as their own, and diligently strive to restructure their

economies in a revolutionary new way -- a sustainable way. Unfortunately, the pressure to strive for a "better," more Western life, and its material trappings, seems to be weighing against efforts towards environmental rehabilitation. At the moment, the ideal of sustainable development in Hungary, and elsewhere in the region, seems just that: an ideal.

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<sup>1</sup> Joseph Alamo, ed., *Coping with Crisis in Eastern Europe's Environment* (Camforth, England: Parthenon Publishing Group, 1992), pp. 7-8. Citation in article did not define what states constituted its reference to "CEE."

<sup>2</sup> Another criticism of the PHARE program is that its environmental expenditure has "fallen alarmingly" in recent years and that some feasibility projects are carried out "without due consideration of the cost and affordability to CEE countries' governments and enterprises." The criticisms came in a session document of the European Parliament, by the Committee on the Environment, Public Health and Consumer Protection, on the environmental aspects of the PHARE program in Poland, Hungary and the Czech and Slovak republics.

<sup>3</sup> Group of Seven Industrialized Nations, Summit Communique, July 9, 1994, pp. 4, 6.

<sup>4</sup> *Ibid.*, p. 6.

<sup>5</sup> Mike Edwards, "Living with Chernobyl," *National Geographic*, August, 1994, p. 110.

<sup>6</sup> Group of Seven Industrialized Nations, *op. cit.*, p. 4.

<sup>7</sup> Bernd Baumgartl, "West Provides No New Aid to Clean Up Eastern Europe," *RFE/RL Research Report*, vol. 2, no. 29, 16 July 1993.

<sup>8</sup> Duncan Fisher, *op. cit.*, pp. 1-4.

<sup>9</sup> Personal interview by telephone with Janos Zlinszky, Team Leader, Regional Environmental Center for Central and Eastern Europe, September, 1994.

<sup>10</sup> David Pearce, Edward Barbier, Anil Markandya, *Sustainable Development: Economies and environment in the third world* (Aldershot, Hants: Edward Elgar Publications Ltd., 1990), p. x.

<sup>11</sup> World Commission on Environment and Development, *op. cit.*, p. 43.

<sup>12</sup> Personal interview with Ruth Bell, Environmental Protection Agency, Washington, D.C., August 1993.

# APPENDIX

## FIGURES

- Figure 1 Life expectancy at age 1, in years
- Figure 2 Infant mortality rate, per 1,000 live births
- Figure 3 SDR\* malignant neoplasms, ages 0-64.
- Figure 4 SDR diseases of respiratory system, ages 0-64
- Figure 5 SDR bronchitis/emphysema/asthma, all ages
- Figure 6 Annual cigarette consumption per person, in units
- Figure 7 SDR chronic liver disease and cirrhosis, all ages

\* Standardized Death Rate is a statistical measurement whereby comparative old-age mortality is taken into account.



# Health for All 2000

060201 Life expectancy at age 1, in years

Total

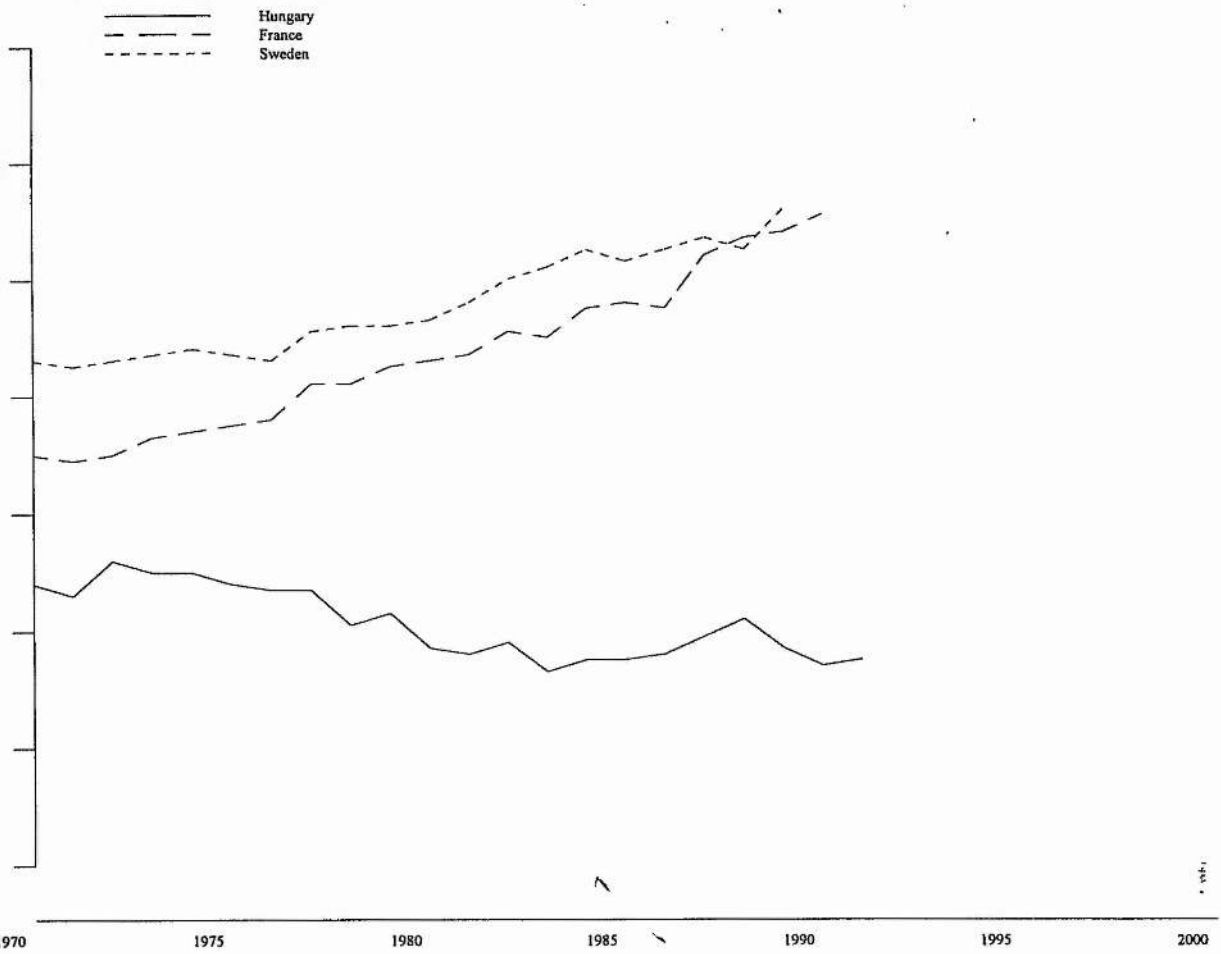


FIGURE 1

Source: World Health Organization, *Health for All*, health indicators database on Europe, (Bilthoven: World Health Organization, 1993)



# Health for All 2000

070100 Infant mortality rate, per 1000 live births

Total

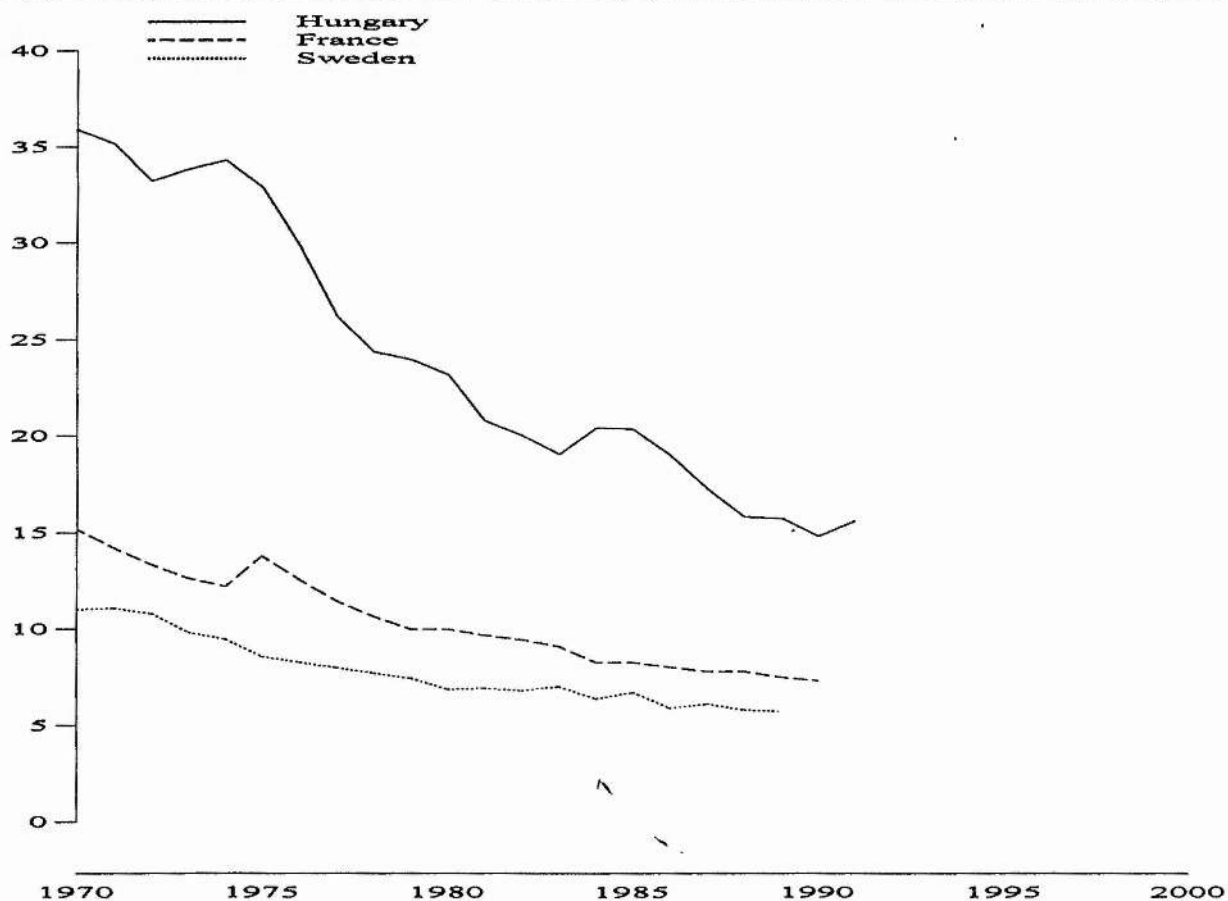


FIGURE 2

Source: World Health Organization, *Health for All*, health indicators database on Europe, (Bilthoven: World Health Organization, 1993)





# Health for All 2000

100101 SDR malignant neoplasms, 0-64, per 100000

Total

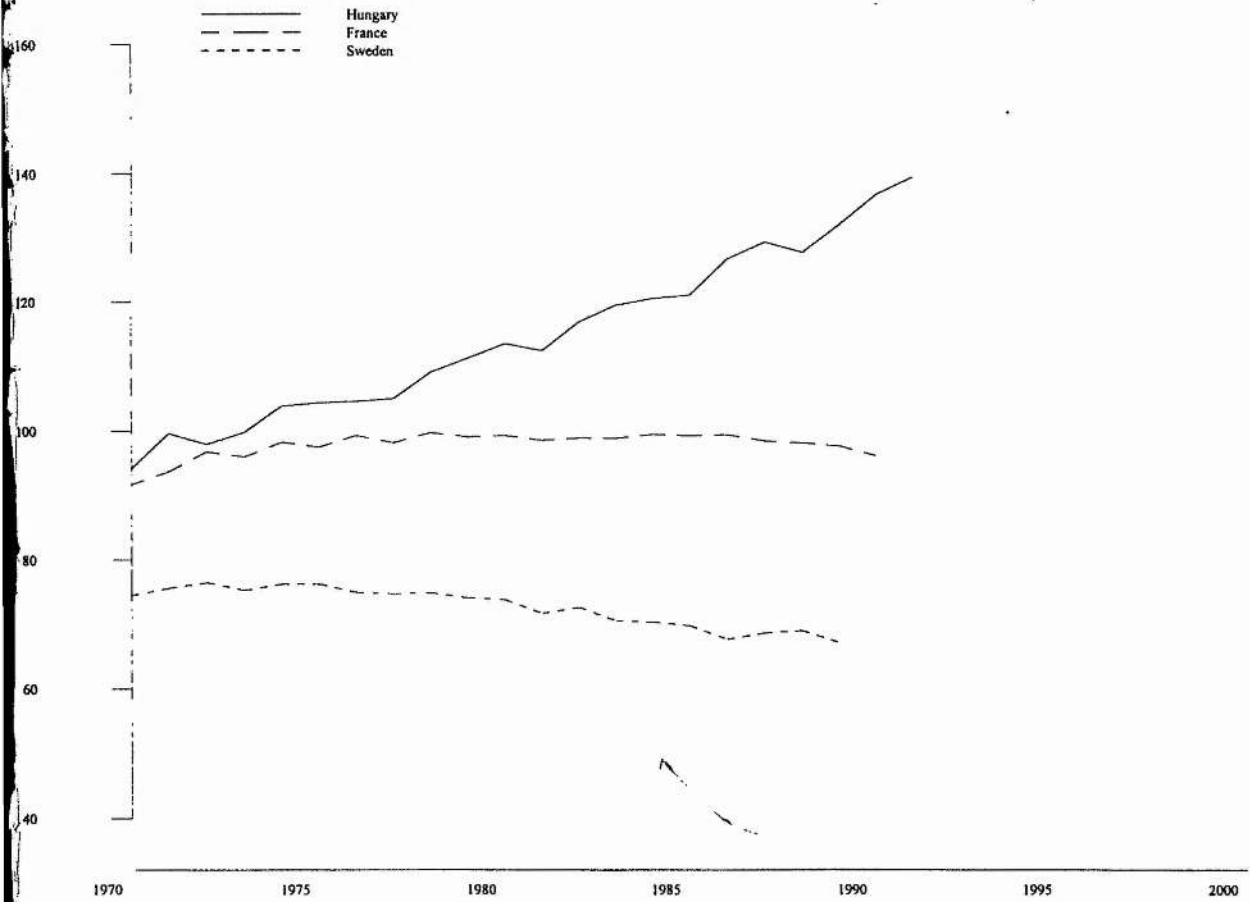


FIGURE 3

Source: World Health Organization, *Health for All*, health indicators database on Europe, (Bilthoven: World Health Organization, 1993)



# Health for All 2000

993201 SDR diseases of respiratory system, 0-64, per 100000

Total

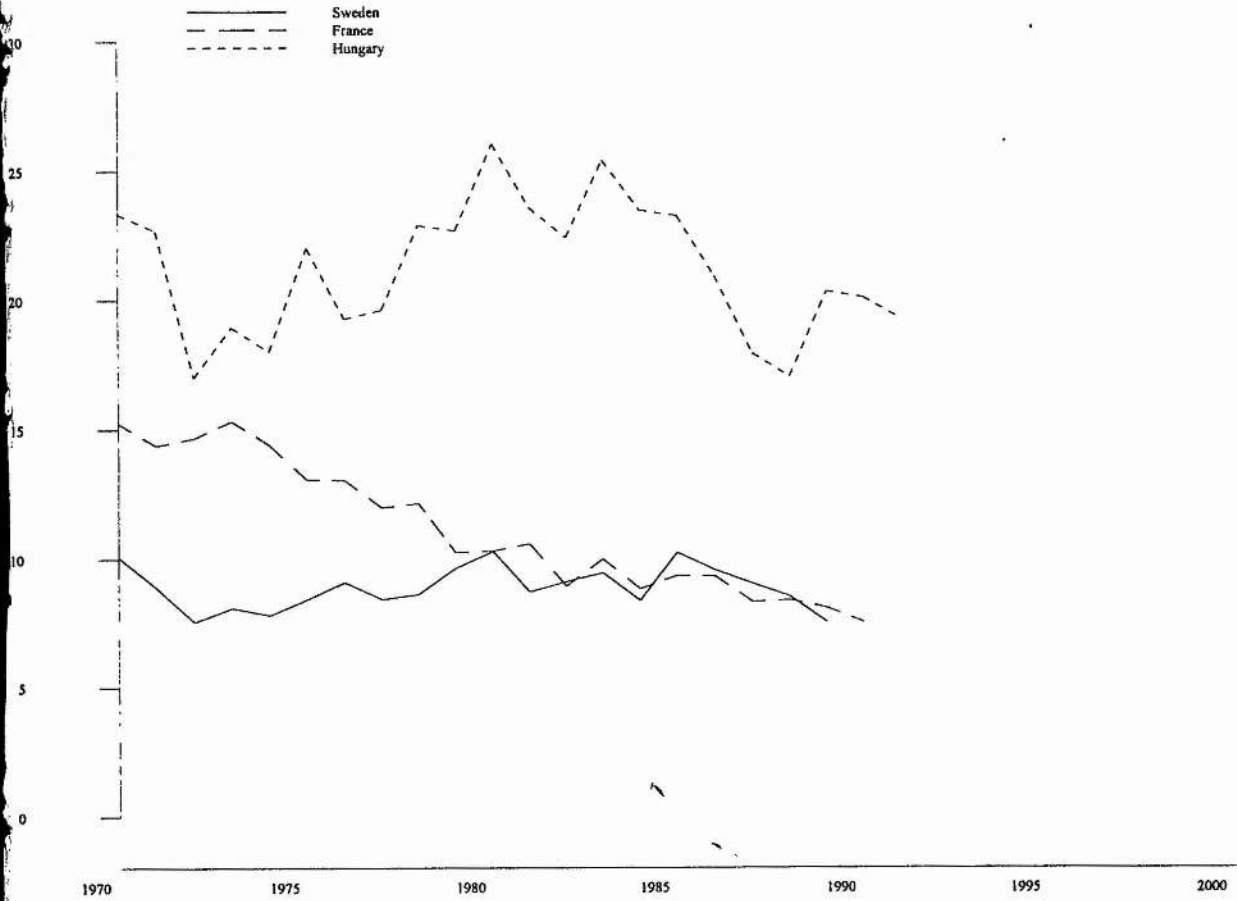


FIGURE 4

Source: World Health Organization, *Health for All*, health indicators database on Europe, (Bilthoven: World Health Organization, 1993)



# Health for All 2000

990201 SDR bronchitis/emphysema/asthma, all ages, per 100000

Total

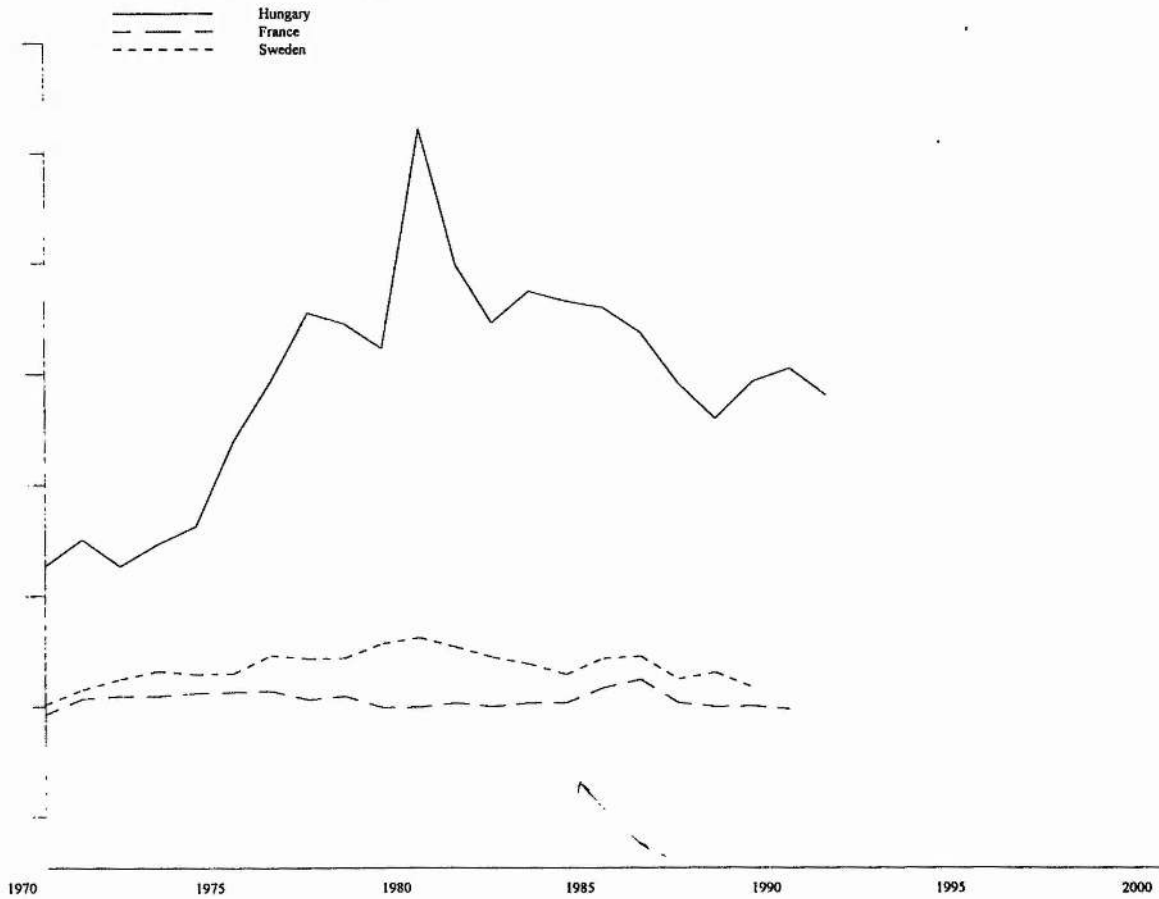


FIGURE 5

Source: World Health Organization, *Health for All*, health indicators database on Europe, (Bilthoven: World Health Organization, 1993)



# Health for All 2000

170902 Annual cigarette consumption per person, in units

Total

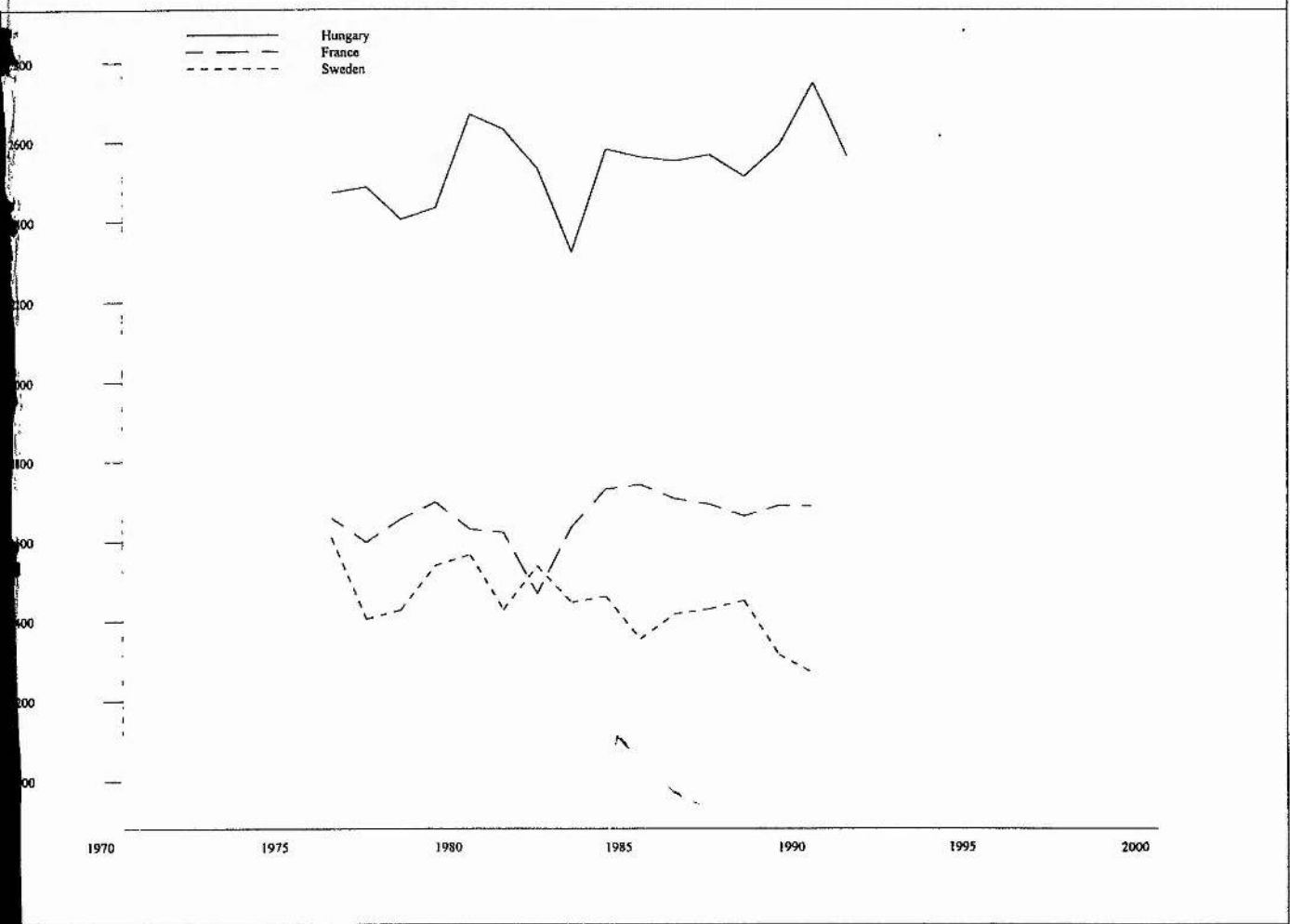


FIGURE 6

Source: World Health Organization, *Health for All*, health indicators database on Europe, (Bilthoven: World Health Organization, 1993)



# Health for All 2000

891705 SDR chronic liver disease and cirrhosis, all ages, per 100000

Total

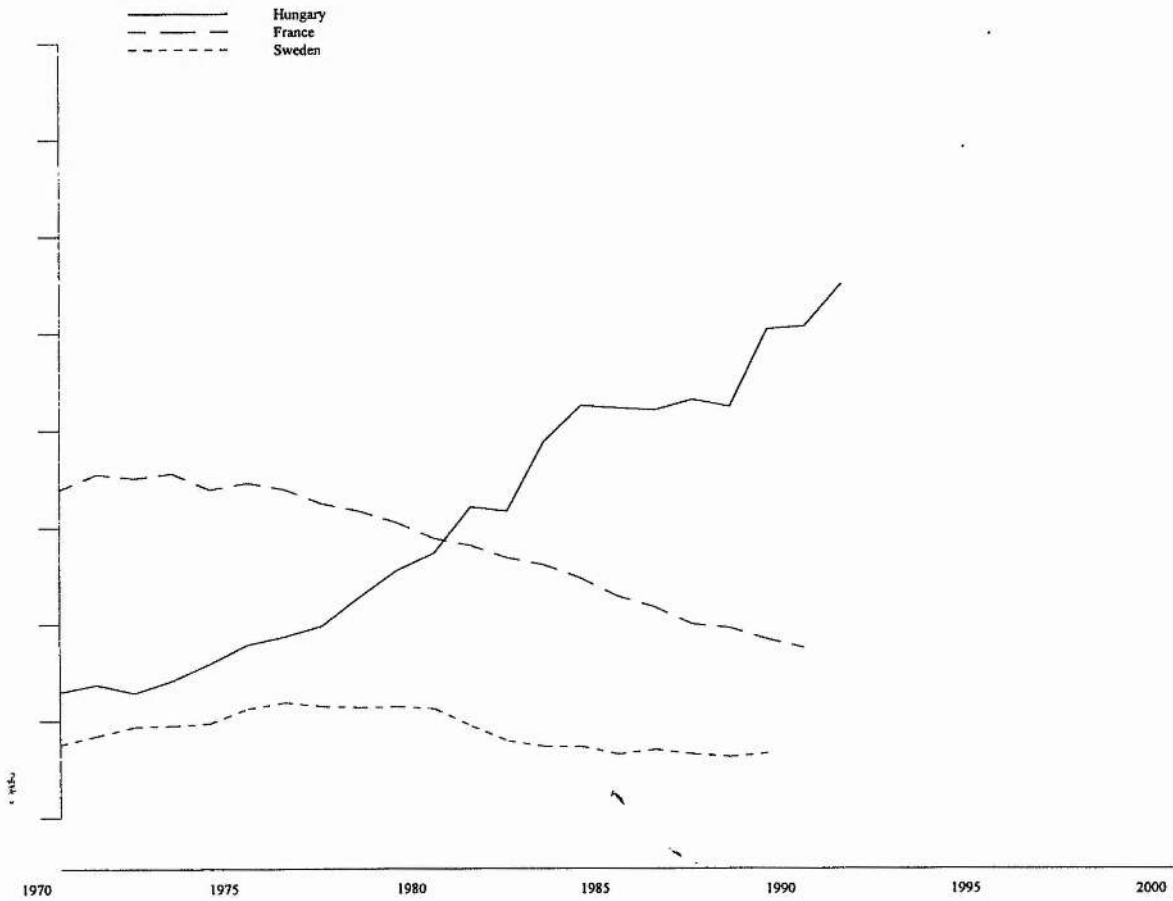


FIGURE 7

Source: World Health Organization, *Health for All*, health indicators database on Europe, (Bilthoven: World Health Organization, 1993)

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