A technique for drawing together, in a systematic way, expert quantitative analysis and qualitative assessment of a project's environmental effects, and presenting the results in a way which enables the importance of the predicted effects, and the scope for modifying or mitigating them, to be properly evaluated by the relevant decision making body before decision is given. Environmental assessment techniques can help both developers and public authorities with environmental responsibilities to identify likely effects at an early stage and thus to improve the quality of both project planning and decision making.

(DoE Circular 15/88 on Environmental Assessment, 12 July 1988, paragraph 7, p. 2)

In the formulation of environmental policy the landmark achievement of the EU is a making of Single European Act, as it has collected all the dispersed in environmental laws in any area of the EU constitution. It is also important to look at post-Single European Act as it shows what impact it had on the member states after putting it in their domestic sphere. The clash of institutional command with the domestic parliament of member countries is an important way to check the success or failure of the Environmental policy. In these expressions EC and EU have been used to indicate different stages of the evolution of the institution of EU which has contributed in making the environmental laws at different period of time. Thus expression the EC is used to indicate the period before the Maastricht treaty of 1992. But after that the expression EU is consistently used.

This definition identifies the characteristic features of environmental assessment, which are broadly represented in Table 3.1

<table>
<thead>
<tr>
<th>Environmental Assessment Procedure</th>
<th>a whole system involving a process of evaluating the environmental impacts of a proposed development. In principle at least, there is scope for modification or mitigation of significant anticipated environmental impacts/effects during the decision-making process.</th>
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Table 3.1: Characteristic features of environmental assessment
The above assessment will help in understanding the process of environmental law making within the European Union (EU) in the context of environmental policy. The European Community (EC) has the most extensively developed body of regional rules of international environmental law, with practical experience of developing and applying principles and rules which sets standards, implements procedures and operates institutional arrangements. The process includes integration of environmental considerations into economic obligations, particularly in relation to the rules governing trade, competition, subsidies and intellectual property rights. The EC environmental law binds the twenty-seven member states. Any country that wants to be a part of E.U. needs to adopt the EC environment law as a principle basis upon which any country would develop new environment legislation in preparation for eventual membership of the EC.

In this context it is appropriate to consider the relevance of international environmental law of developments in the EC. The rules of EC environmental law amount to a regional regime of international environmental law: the rules currently bind all the member countries either directly or indirectly. Moreover, the EC is itself an actor in international environmental law-making, and is party to numerous regional and global environmental agreements. This has required changes to the processes of international law-making and enforcement that may enable other regional groupings to participate more effectively in international fora. (The 1991 Espoo Convention 588-92) Finally EC environmental laws illustrate many of the legal difficulties which arise in the integration of environmental and economic concerns.

Similar to international environmental law, the rules of EC environmental law must be considered in the context of the EC’s overall legal and political structure. Although EC law is a part of the old order of public international law from which it grew, (ECJ, Case26/62, Van Gend en Loos[1963] E.C.R. 1.) it is also a specialized legal order of international law, rather like the European Convention of Human Rights’ regional human rights law(Chapter 6, pp.220–2) and similar to the special order of rules of international law applied by international administrative tribunals(See de Merode v. World Bank, W.B.A.T. Rep., Decision No. 1, at 12-131981 ).

The EC legal order is pioneering and has shifted the boundaries of traditional international law. It has changed perceptions of how international law can work as a
dynamic and effective force; by expanding the formal membership of the legal community to which it applies directly beyond states to include companies, environmental groups and associations, granting to them rights that they can enforce before national courts as well as the ECJ; (McCormick, 1999: Chapter 5, pp. 173-5; Chapter 17, 669-71) by applying the doctrines of direct effect, supremacy and implied powers; by creating mechanism for international enforcement; and by instituting a decision-making process based on qualified majority, rather than unanimous voting. While each of these doctrines existed under traditional international law, the EC legal system has developed them significantly.

Historical Development

EC environmental law has developed over four periods: the first is from 1957 to 1972, prior to Stockholm Conference; the second from 1973 to 1986, prior to the SEA amendments to the Treaty of Rome; and the third from 1987 onwards, following these amendments. A fourth period began with the entry into force on 1st November 1993 of the amendments introduced by the 1992 Maastricht Treaty. Until 1986 the EEC Treaty had no express provisions on environmental protection, although this didn’t prevent it from adopting environmental legislation. During the first two periods, until 1986, two EEC Treaty provisions were utilized: Article 100, which empowers the EC council to issue Directives to harmonize laws, regulations or administrative action in member states as directly affect the establishment or functioning of the common market’, and Article 235 which empowers the EC Council to adopt measures which are necessary to attain ‘one of the objectives of the community’ and for which the treaty has not provided the necessary powers. In 1967 with the adoption of a Directive on the classification, packaging and labelling of dangerous substances, (Council Directive 79/831/EEC, OJ L259, 15 October 1979, P. 10) the EC began to address environmental issues. In 1970 the EC Commission declared that it was necessary to draw up a Community Action Programme on the environment and the following year adopted a formal communication on the matter (Commission SEC (71) 2616 final (22July 1971). The 1972 Stockholm Conference was a major catalyst for the development of EC environment law; EC environmental law is one of the most tangible outcomes of the Stockholm Conference. A declaration on the environment was adopted in 1973, and
three further action programmes on the environment were adopted in the period up to 1987.

By July 1987, when the SEA amendments to the EEC treaty came into effect, the EC had more than 150 regulations, directives and decisions on environmental law, and prepared its Fourth Action Programme on the environment between 1973 and 1987. An extensive body of substantive environmental rules had been adopted on water, air, noise-quality, and management of waste and hazardous substances, flora-fauna and the countryside. The EC had also introduced the number of important environmental protection procedures, including legislation on mandatory environmental impact assessment and the requirement that member states notify to the EC Commission certain environmentally harmful activities. Four environmental research programmes had been adopted, together with scientific and technical co-operation agreements with third world countries, a fund for EC environmental action, and a recommendation on the polluter-pays principle. (Chapter 6, pp. 215–17) The EC was a party to a number of environmental treaties during this period, (1974 Paris Convention: Council Decision 75/437/EEC, OJ L194, 25 July 1975, P.5) and its approach to the development of the regional rules of environmental protection began to attract attention in other regions. In 1980, the ECJ endorsed the use of Article 100 to legislate on environmental matters. (Cases 91 and 92/79, Commission of the European Committee v. Italian Republic (1980) E.C.R. 1099 and 1115.)

EC environmental law during this period was legally justified on the basis that it removed non-tariff barriers to intra-community trade by harmonizing the national environmental laws of member states (Council Directives 80/778/EEC, infra, 559). It was rooted within the original intent of the EC treaty to regulate trade and competition, and didn’t develop from the desire to regulate environmental protection as an end in itself. By 1985, however, with a large body of EC environmental rules already adopted, the ECJ ruled that even in the absence of express reference in the Treaty of Rome, the protection of the environment was one of the Community’s ‘essential objectives’ which justified certain limitations on the principle of the free movement of goods, although the Court stressed that these limitations must not go beyond the inevitable restrictions which are justified by the pursuit of the objective of environmental protection. (Case 240/83, (1985) E.C.R.531. at 549.) The SEA amendments formally recognized that environmental protection was an EC objective.
Single European Act

The changes introduced by the SEA added to the momentum of an area of EC law and policy which was still relatively discrete and self-contained. The SEA transformed an extensive but somewhat marginal body of environmental policy and law into one of central importance, bringing environmental considerations to bear on areas which were previously bound the limits of environmental legislation, including those relating to corporations, tax, financial services, broadcasting and civil procedure. Article 25 of the 1986 SEA added a new Title VII on 'Environment', to the EEC Treaty, consisting of Article 130r, 130s and 130t. It went beyond codification of existing environmental law, and established a firm legal basis for its future development, in effect bringing the whole of EC's extensive range of economic activities within the scope of environmental law-making. Article 130r (1) of the amended Treaty of Rome provided that EC action related to the environment must have the following objectives:

1 to preserve, protect and improve the quality of the environment;
2 to contribute towards protecting human health;
3 to ensure a prudent and rational utilization of natural resources. (The 1979 Berne Convention, and Directives 85/337 and 80/68.)

The amended treaty provided that EC action was to be preventive, that environmental damage should as a priority be rectified at source, that the polluter should pay for damage, and that environmental protection should be a component of other EC policies (Article 130r(2)). It also provided specifically that the EC might participate in international environmental agreements. (Article 130r (5)) Under Art 130r(3) environmental action had to take account of available scientific and technical data; environmental conditions in the Community as a whole; potential benefits and costs of action or lack of action; and the economic and sound development of the Community as a whole and balanced development of its regions. Article 130r(4) established the principle of 'subsidiarity' requiring action to be taken at the Community level only when objectives could be better obtained than at the level of individual member states. Environmental actions taken under Article 130r were to be taken by the EC council acting unanimously, unless otherwise agreed by the Council (Article 130s).

Significantly, where measures are taken under Title VII, member states can maintain or
introduce ‘more stringent protective measures compatible with this Treaty’ (Article 130t).

Since 1987, environmental legislation in the EC has become increasingly broad in its scope and ambitious in its intent. The SEA has extended environmental law-making into new substantive areas: the EC has adopted legislation prohibiting television advertisements which encourage behaviour prejudicial to the protection of the environment, (Council Directive 89/552/EEC, 1989 OJ L298, 17 October 1989, 23, at Article 12(e)) as well as laws on eco-labelling (Chapter 16, pp. 620–2) and environmental audits; (Chapter 16, pp. 622–6) new legislation had been proposed on, inter alia, civil liability for damage caused by waste, (COM (91) 219 final, OJ C 192, 23 July 91, 6) and an energy/carbon tax has also been proposed. (Chapter 4, 131–2) Under the SEA the EC adopted legislation to create the European Environment Agency and adopted a Directive to improve rights of public access to information on the environment. (Chapter 16, P. 618) It has also begun work to study the harmonization of citizens’ suit provisions in member states’ environmental laws. Under Article 130s the EC established its first Financial Instrument for the Environment (LIFE) (Chapter 19:742). However, even after the SEA came into force, environmental law-making under Title VII required unanimous voting, resulting in protracted negotiations and watered-down provisions. As the Commission, with the support of the Parliament, proposed increasingly ambitious legislation, particularly enforcement measures, the legislative process slowed down even further as some member states sought to limit the adoption of new rules. The SEA’s new Article 100a in the EEC Treaty provided a means to overcome this institutional foot-dragging. For measures ‘which have as their object the establishment and functioning of the internal market’, Article 100a (1) allows qualified majority voting, rather than unanimous voting. Furthermore, it requires environmental measures to take as a base a high level of environmental protection. (Article 100a (3)) These two provisions in Article 100a created the opportunity for environmental legislation to be adopted by qualified majority voting. In the context of the right of states to exercise the veto under Article 130s, it was not surprising that the

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1 Article 100a allows a member state to adopt national provisions for environmental protection which are more stringent than the Community’s harmonization measures as long as the member states can demonstrate a major need referred to in Article 36: Article 100a(4). Article 100a(5) allows harmonization measures to include a safeguard clause authorizing the member states to take provisional measures for one or more of the non-economic reasons referred to in Article 36, subject to a Community control procedure.
EC Commission proposed environmental legislation on the basis of Article 100a, which is primarily concerned with removing barriers to trade, rather than Article 130.

In 1989, the EC Commission commenced a legal action against the EC Council, challenging its use of Article 130s of the EEC Treaty as the legal basis for the adoption of a Directive on titanium dioxide waste, rather than Article 100a as proposed by the Commission and supported by the Parliament. (Council Directive 89/428/EEC, OJ L201, 14 July 1989, 56) The ECJ found this decision in favour of the Commission and declared the Directive to be void. (Case 300/89, EC Commission v. Council (1991) E.C.R. 2687) The Court considered that the goal and content of the Directive pursued the double objective of environmental protection and improvement of competition, but that reliance on the double legal base of Article 100a and Article 130s was excluded because it would defeat the purpose of ensuring the use of the co-operation procedure to strengthen the participation of the European Parliament in the legislative process. The court justified reliance on Article 100a rather than on Article 130s on three grounds: first, Article 130r(2) provided that environmental protection was to be a component of the Community’s other policies, which implied that a Community measure did not have to be based on Article 130s solely because it pursued environmental aims; second, that this environmental protection measure affected conditions of production in a given industry with the aim of eliminating distortion of competition and came within Article 100a; and third, the requirements under Article 100a(3) that proposals take as a base a high level of environmental protection indicated that the objectives of environmental protection of Article 130r could be effectively pursued by means of a harmonization measure adopted under Article 100a. The judgement opened the door to the Commission’s increased use of Article 100a. However, in March 1993 the ECJ appeared to reserve itself, holding that the Council had been justified in basing Directive 91/156 on waste on Article 130s, and rejecting the Commission’s arguments favoring the use of Article 100a. (Case 155/91, EC Commission v. Council, Judgment of 17 March 1993) The SEA introduced important institutional changes, including the creation of a Court of First Instance and a ‘co-operation’ procedure giving the European Parliament greater influence in the legislative process. (1986 SEA Articles 6,8,11) European Environment Agency is the part of these drastic changes within the EC.
I. European Environment Agency

In 1990, the EC created the European Environment Agency. (Council Regulation 1210/90/EEC OJ L120, 11 May 1990) The Agency is intended to provide the EC and the member states with objective, reliable and comparable information at the European level to enable environmental protection measures to be taken, to assess the results of such measures, and to ensure that the public is properly informed. (Article 1) The agency is an autonomous entity having separate legal personality and is run by a management board, an Executive Director and a scientific committee (Articles 7 to 10).

The Agency’s principal task will be to monitor, gather information, establish the European environment information and observation network, (Article 4(1)) provide the EC and member states with objective information, and record, collate and assess data on the state of the environment. (Article 2(i)-(iii)) Additionally, the Agency must ensure that environmental data at European level are comparable; provide European environmental information to international bodies; ensure broad dissemination of reliable information (including a tri-annual report on the environment); and stimulate the development of environmental forecasting techniques and methods for assessing environmental costs. (Article 2(iv)-(viii)) The Agency’s assessment functions relate to the pressures on the quality and sensitivity of the environment, and address the priority areas, including ‘transfrontier’, plurinational and global phenomena’ and the socio-economic dimension. (Article 3(1) and (2)) Subject to certain conditions the Agency may publish information and make it available to the public. (Article 6) It is open to countries which are not members of the EC, and may be a model for international environmental monitoring arrangements in other regions and globally. (Article 19)

II. Maastricht Treaty on European Union

In February 1992 at Maastricht, the twelve EC member states signed the Treaty on European Union (1992 Maastricht Treaty) which introduced further amendments to the EEC Treaty, including the provisions on environment, with the objective of establishing European Monetary and Political Union. (7 February 1992, in force 1 November 1993 (1992) 1) The Maastricht Treaty establishes a European Community,
which has at its task, by establishing a common market and monetary union and by implementing common policies and activities:

_to promote throughout the Community a harmonious and balanced development of economic activities, sustainable and non-inflationary growth respecting the environment, a high degree of convergence of economic performance, a high level of employment and of social protection, the raising of the standard of living and quality of life, and economic and social cohesion and solidarity among member states._ (Amended Article 2; see Article 3, requiring the EC to adopt 'a policy in the sphere of the environment')

Maastricht elevated environmental protection to one of the fundamental objectives of the Community.

The environmental provisions of the EEC Treaty (introduced by the SEA) are amended by the Maastricht Treaty. Under Article 130r(1) Community policy must now promote international measures to deal with regional or world-wide environmental problems, and under Article 130r(2) environmental policy must aim at 'a high level of Community'. The precautionary principle is added to the list of guiding principles, and implementation of other Community policies, rather than simply being a 'component', as required by the SEA. (Amended Article 130r (2)) A further provision is made for the inclusion, where appropriate, of a 'safeguard clause' in EC harmonization measures to allow member states to take 'provisional measures, for non-economic environmental reasons, subject to a Community inspection procedure.' (Amended Article 130r (2)) The amendments also introduce qualified majority voting as the norm for measures under Article 130r. (Amended Article130s (1) and (3)) Unanimity voting remains the rule, however, for provisions which are primarily of a fiscal nature, measures concerning town and country planning, land use (not waste management or general measures) and management of water resources, as well as measures which significantly affect choice between different energy sources and the general structure of its energy supply. (Amended Article 130s (2) ) The Maastricht Treaty amendments also lay the ground for a distinction being drawn between measures of a community nature and those which might be considered to be more specific to the member states, with the latter being financed and implemented by the member states. (Amended Article 130s (4)) Recognizing that certain measures may impose disproportionate costs on public authorities, provision is also made for temporary derogations by member states and/or financial support from the proposed new Cohesion Fund. (Amended Article 130s (5) )
The principle of ‘subsidiary’, previously limited to environmental measures, is extended by Maastricht to all EC action. (New Article 3(b)) The Maastricht Treaty therefore sets the basis for the further extension and development of environmental policy and law in the EC.

III. Agreement on the European Economic Area

In May 1992, the EC member states and the seven EFTA States signed the Agreement on the European Economic Area (1992 EEA Agreement) to promote a strengthening of trade and economic relations between the parties with ‘equal conditions of competition, and the respect of the same rules, with a view to creating a homogenous area.’ (EEA Agreement, Brussels, 17 March 1993, in force 1 January 1994, OJ L1, 3 January 1994, 572; Article 1(1)) These objectives will be achieved by applying rules on free movement of persons, goods, services and capital, as well as competition rules and closer cooperation on, inter alia, environmental matters. (Article 1(2)) The Preamble to the EEA Agreement reflects the determination of the parties to preserve, protect and improve the quality of the environment and to ensure a prudent and rational utilization of natural resources on the basis, in particular, of the principle of sustainable development, as well as the principle that precautionary and preventive action should be taken and to take a high level of environmental protection as a basis for the further development of rules.

The EEA Agreement includes rules on environmental protection, including provision for the formal incorporation of the most important acts of EC environmental law into the internal law of the EFTA states. Article 73 of the EEA Agreement uses the language of Article 130r(1) and (2) of the EEC Treaty as amended by Maastricht, and Article 74 and Annexure XX identify thirty-two environmental Directives to be applied by the EFTA states, and six further acts of which they and the other parties to the EEA Agreement will ‘take note’. For each of the thirty-eight instruments referred to, any reference in the provisions to ‘member states’ will now be understood as meaning all the parties to the EEA Agreement, and the rights conferred and obligations imposed upon the EC member states or their public entities, undertakings (companies) or individuals in relation to each other ‘shall be understood to be conferred or imposed’ upon the parties to the EEA Agreement, including their competent authorities, public entities, undertakings or individuals. (Protocol I (Horizontal Adaptations), point 7, Art.
In effect the provisions cited will be binding upon and become part of the law of the six EFTA states; these rules of EC environmental law will in practice apply to all the member states (Article 7).

**General Policy and Principles of EU Environmental Policy**

The general objectives and principles of EC environmental law are set out in the EEC Treaty, as amended by the SEA and the Maastricht Treaty. Specific work programmes for future legislation and action have been set out in the Action Programmes on the Environment proposed by the Commission and approved by the Council. Yet in terms of approach and practice, one finds much more continuity then change, with the treaty codifying many principles, which can already be found in earlier policy documents. As with the Third EAP, the economics of European environmental policies remained central to the thinking behind the Fourth EAP, with an assumption of harmony between the objectives of the internal market and environmental protection. The harmonization of environmental standards was to take place at a “high level”. If this condition was met, national measures, which might distort free trade, would not be necessary. The Fifth Action Programme, endorsed by the EC Council in December 1992, which set out the legislative agenda for the period 1993 to 1997 (Fifth EAP, OJ C 138, 17 May 1993, P.1). Harmonisation at a high level was justified as an essential component of the competitiveness of European industries in global markets.

1. **Towards Environmental Policy Integration 1987-1992 (the Fourth EAP)**

The Fourth EAP marks a further change in the approach to environmental policy. The shortcomings of the earlier approaches (i.e. quality policy, emission orientation) were recognized. An approach which depended totally on environmental quality objectives was recognized as shifting problems to other media or other regions (the case of long range trans-boundary pollution). Likewise, it was acknowledged that, an approach which focused on emission controls for stationary sources was unlikely to achieve certain ecosystem or health based quality objectives. The Fourth EAP instead proposed a more integrated approach. For the first time, environmental protection was not perceived as an additive, but rather as an integrated activity within the whole
production process. Part of the integrated approach was to reduce energy or material inputs and to close cycles, so that waste streams could be minimized. Furthermore, pollution control was to systematically control all environmental media (water, air and soil) and involve an evaluation of the problem causing substances. Therefore, the Fourth EAP started to discuss a “sectoral approach”, through analysing the impact of strategic economic sectors on the environment. For the first time ever, the evaluation of new, incentive-based instruments, such as taxes, subsidies or tradable emission permits was announced.

This was an initial commitment for the strategic reorientation of environmental policies in the EC, which gradually took place between 1989 and 1994. The ideas of the Fourth EAP (integrated approach, sector analysis, new instruments) were further elaborated in the following years. This change is often characterized as a “paradigmatic change”, a change from “trade orientation” to a “sustainability frame”. Environmental policy is less perceived as an additive policy in the EU from the beginning of the 1990s onwards. The incorporation of the environmental dimension and the systematic search for “no regret strategies” were promoted. In other words, win-win situations were identified where both environmental and economic objectives could benefit. The White Paper on Growth, Competitiveness and Employment (CEC1993) proposed a new development model, which tried to create employment and improve the efficiency of resource use by a shift in the relative prices of labour and energy. Sustainable development was perceived as a tool for improving the state of the environmental, social efficiency and competitiveness simultaneously.

A number of external factors contributed to the further advancement and elaboration of the new policy apron. Among the most important was the emergence of new global threats:

(a) The respective preparations for the UNCED conference in 1992
(b) The wider support for the economic instruments and
(c) A new wave of environmentalism in Europe.

1. At the end of the 1980s, the debate on global environmental risks, especially that relating to climate change, reached the official agenda. Since 1985 a number of international conferences had been urging for dramatic policy
changes. In 1988, following an initiative from the European Parliament taken two years earlier, the Commission reacted to those international changes with its first general communication to the Council. In its second communication to the Council in the 1990, the Commission proposed a strategy to stabilize emissions by using a mix of efficiency standards, fiscal instruments and research. The climate change debate has some inherent characteristics that require environmental policies beyond end-of-pipe technologies. It requires a long-term perspective, since both the impact of climate change and the redundancy of any effective policy measure can only be experienced in the long run. For CO₂ reduction, traditional end-of-pipe technologies are not yet available. That means that integrated efficient technologies are not yet available. That further means that integrated efficient technologies, structural changes in the economy or even new production and consumption patterns are required. Furthermore, CO₂ reduction requires policy changes in several different sectors (such as energy, transport, agriculture and the chemical industry). To give long-term orientation to all those different sectoral actors a target-led environmental policy approach, as established with the Kyoto-protocol and the EU commitments on reduction targets, is very helpful.

2. Its global character required international action, where the Community could play a major role in “regime building” and as a “leader”. This last characteristic made it attractive to the Commission because it could use as a tool for strengthening European integration and the Commission’s own role in international politics. Global leadership was an important incentive in drafting a proposal on an energy/ CO₂ tax, before the UNCED conference took place in June 1992 (ibid).

3. At the end of the 1980s, a new regulatory approach for environmental policies was promoted by the Commission-especially the use of indirect, economic instruments. The Task Force Report on the Internal Market and the Environment (1989) was not the first document but the most explicit early document to propose environmental taxes. The different initiatives of the Commission became authorized by the “Dublin Declaration” of the European Council from June 1990, which asked the Commission to prepare a
communication on “economic instruments”. In the following years, several studies on the economic, social, and environmental impacts of these instruments were edited. The pilot project for this new approach – the Energy/ CO₂ tax was proposed in May 1992. The tax clearly focused on energy efficiency and fuel substitution, both of which were target-oriented approaches towards structural change. This shift towards economic and fiscal instruments took place in several OECD countries. During this period, the limits of the traditional approach to promote end-of-pipe solutions by regulations had become obvious, namely in the Scandinavian countries, Denmark, the Netherlands, and to a certain extent in Germany. Furthermore, the new regulatory approach fitted better into the “neo-liberal wave” rather than the previous command-and-control approaches, because it focused on market mechanisms, deregulation and self-regulation.

4. At the end of the 1980s, there was a mounting wave of environmentalism. Membership of environmental organizations increased considerably. Green parties were popular in several EU countries, and achieved good results at national level and in the European Parliament. Enquiries into environmental preferences confirm the rising level of public expectation between 1988 and 1992. At European level, a considerable number of new ECO (Environmental Citizens’ Organization) offices, mainly establishing access to the EU institutions for their national members, were set up between 1986 and 1992. Their capacity in terms of staff, professionalism and networking with members and experts increased considerably during the nineties. Thus, the new approach was greatly supported by increased public concern for the environment in general and strengthened capacities of “green” organizations and parties in particular.

This strategic reorientation was then explicitly formulated in the Fifth Environmental Action Programme (1992-1999). The most interesting and innovative elements of the Fifth Environmental Action Programme included:

- The principal aim of sustainable development according to the definition of the Brundtland Report.
• Reference to the sectoral approach, which integrates an environmental dimension into polluting sectors (transport, energy, agriculture and so on), and the limits of old end-of-pipe approaches. Instead, the action programme proposed structural changes in favour of public transport, energy efficiency and waste prevention.

• The emphasis on new instruments, especially on market-oriented instruments such as fiscal incentives or voluntary instruments, which strengthen producers’ and consumers’ interests in environmental decision-making.

• The new consensus-oriented approach taking into account the crucial role of non-governmental programme protagonists and local/regional authorities to resent the general interest of the environment. This may contribute to innovative concepts, raise public awareness and enforce the implementations of EU directives.

• The setting of medium and long-term objectives for the reduction of some pollutants, and proposed instruments to achieve these objectives.

Hence, the Fifth Environmental Action Programme had in its philosophical part, all the necessary elements of a policy oriented towards “ecological structural change”.


The new approach of the Commission met considerable resistance from the Member States. The period after the UNCED conference can be characterized as a downward cycle of environmental policies. Unfortunately this bold initiative from the Commission did not find the sufficient support amongst Member States. Shortly after the UNCED conference a new agenda was promoted by several Member States, which concentrated mainly on the competitiveness of industries and decentralization of environmental policies. This new agenda partly contradicted the ambitious ideas of the Fifth EAP. Therefore little progress could be achieved on the more innovative projects of the Fifth EAP, whereas decisions on others were taken relatively rapidly.
The proposal for an energy/CO₂ tax, a pilot project for using the new approach, was watered down during two years of negotiations and finally dropped as a community tax in 1994. In May 1995, the Commission presented a new proposal which re-nationalized the responsibility for introducing such a tax for an interim period. Also, several other initiatives and ideas for reform came to standstill because of strong opposition from certain industries, from other Directorates General of the European Commission, and from Member States. Some of these have been put nicely in the documents, including the watering down of the originally ambitious objectives of the packaging directive in 1994 (EIAD, 92), the delays in the Strategic Environmental Impact Assessment directive proposal and progress in environmental taxation in sectors other than the energy sector (for example, transport).

Member States reacted to the more ambitious elements of the Fifth EAP with demands to re-nationalize environmental policies according to the subsidiary principal. Upon the initiative of Germany and UK, a high level expert group was set up to analyze the potential to reduce regulations that impose excessive costs on the industrial sector. The so-called "Molitor-Group" systematically scrutinized environmental legislation that was only perceived in terms of its perceived cost dimension to the economy (CEC 1995). Existing legislation was attacked particularly in the fields of water protection (the drinking water directive), waste (i.e. the principle of proximity; or the promotion re-use systems) and procedural law (Environmental Impact Assessment Directive).

As a response to the new agenda of several Member States, a new regulatory approach emerged that focused on procedural requirements, framework directives, voluntary agreements and self-regulatory information and management tools. Such instruments are rather consensus-oriented and require the co-operation of industries. They are less demanding on European standards and are less substantive, but leave more flexibility and leeway to Member States.

As to the principal approach and the objectives, however, the Commission confirmed and further refined the approach of the Fifth EAP in its first and second progress reports on its implementation.
There are a number of reasons for the “roll-back of environmental policies”. These are:

1. During this period, it became obvious that the Commission was overly optimistic about the willingness of Member States to follow “paradigmatic change”. Some Member States were not willing to follow the new approach in substance. They were reluctant to support the new quality of European integration. The failure of the Fifth Environmental Action Programme was interpreted as a symptom for the limits to European integration in environmental policies.

2. The pending economic crisis and difficulties in rectifying the Maastricht Treaty contributed to a more cautious attitude from the Commission as regards the promotion of innovative and far reaching new proposals. Furthermore, the pragmatic impetus met with considerable resistance from both governments and interest groups - especially from those who would have to bear the cost of such a new approach. Difficulties in getting the Energy/ CO₂ tax proposal approved by the Council was just the symptom of the problem of implementing the “paradigmatic change” mentioned above. Evaluative reports concluded that progress on policies directed towards structural change “has been piecemeal and slow”. The reports even observed a standstill in the efforts towards structural change.

3. Due to reunification the preference structure completely changed in one of the potential leaders of EU environmental policies Germany. The discussion on the modernization of environmental policies there came to a standstill, whereas the economic problems of reunification, especially high unemployment, became a primary concern.

III. 1997–2003: The Last Wave of Environmental Regulation?

At the end of the 90s, one can observe a collage of different, partially contradictory trends, with different environmental policy approaches being promoted simultaneously. There was a certain revival of the “sustainability approach”. New ambitious legislation partly strengthening the emission oriented policies of the eighties can be observed, as well as continuing attempts at deregulation and diffusion of competencies.
Sustainability remains on the agenda. After it was strengthened as a Community target in the Amsterdam Treaty from 1997, the Commission and several Presidencies launched an initiative for environmental policy integration, called the Cardiff Process. Environmental Policy integration and sustainable development became key elements of a complex architecture of strategy documents. The Commission shifted from its previous top-down approach and its instrumental focus of environmental policy integration towards a broader and less committed approach: basically sectoral Council formations were asked to identify the key problems of their sectors, to define objectives and to formulate activities in order to meet the objectives. Generally most of the sector strategies lacked commitments were vague and lacked innovation. The hopes of the Commission, that sectoral self-responsibility and voluntary action by transport, agriculture or economic ministers would work, were left frustrated. Some progress was achieved on indicators, as were some sectors targets, namely for transport and energy (EEB 1999, 2001). A serious target setting process on some key environmental issues was not launched by the Commission (see SRU 2002).

However the revival of environmental legislation in the late 90s was impressive. An unprecedented regulatory boom on many technical but also some very political issues started in 1996. This included:

- New complex and holistic framework legislation, such as the Ambient Air Quality Directive (96/62), the Water Framework Directive (2000/60) or the IPCC Directive (1996/61), formulating an ambitious work programme for several decades, while delegating many decisions and tasks to member states, bureaucratic networks and to civil society and business. The reform of European Chemicals Policies launched in the late nineties and proposed in 2003 also belongs to this category. It is still to be seen if these new tools of cooperative governance mobilize sufficient resources and enthusiasm can drive environmental innovation.

- New target oriented legislation, setting maximum national emission ceiling for key pollutants, but leaving member states the freedom to choose how to achieve necessary reductions. The NEC-Directive (2001/81) is the most sophisticated example of this approach. Based upon long-term targets and an assessment of a cost-effective reduction curve, the EU has set nationally differentiated emission ceilings for 4 pollutants. With the 2003 Emission Trading Directive, another
target-oriented policy, setting nationally differentiated CO₂ targets the so called burden-sharing agreement became legally binding.

- The completion, revision or modernization of existing legislative programmes, such as the daughter directives on air quality (1999/30; 2000/69; 2002/3), on emission control for cars (98/69) and lorries (99/96), fuel standards (in 1998) or the large combustion plants (2001) and the incineration directives (2000/76), the landfill directive/ 1999/31) or the revision of the Seveso, the Ecolabel and EMAS – directives generally lead to more ambitious standards and a more comprehensive system of protection.

- The introduction of many new environmental policy instruments namely the establishment of producer responsibility, take back and recovery targets for some waste streams: End of Life Vehicles (2000/53) and WEEE (2002/96), Strategic Environmental Impact Assessment (2001/42), Environmental Liability (2004), CO₂-Emission Trading (2003/87). All are incentive-based instruments, internalizing the external costs of giving feed-back to economic and public decisions.

- New procedural legislation or the revision of existing legislation strengthening civil society rights, notably the three Aarhus pillars: freedom to information, participation rights and access to justice (Directives 2003/4, 2003/35 and CEC Directive proposal 2003/624).

Furthermore policy preparation at EU level became much more participatory, inviting environmental NGOs to play a role in committees, expert networks and numerous consultation processes and hence to slightly counterbalance influential industry lobbying at all levels of the Commission.

Each of those pieces of legislation had more or less serious shortcomings and deficits. However the system of environmental programmes, duties, rights and incentives made impressive progress during the phase. New committed Member States, the environmental Commissioners of that period, the strong and constructive support of “rainbow” coalitions of the European Parliament and of a majority of Green and Social Democrats Ministers in the Environmental Council all contributed to the unprecedented dynamics of that period. A “green triangle” of environmental policy-making between
Commission, Environmental Council and the European Parliament was able to successfully bypass traditional veto players, pursuing economic or institutional interests and succeeded in introducing new instruments, which would have politically failed even in so-called pioneering member states without European support. National environmental policies have become mainly EU driven.

IV. The Sixth EAP and the Thematic Strategies

The Sixth EAP may fall within a secular change in support for ambitious environmental policies. The overall political agenda is driven by the development concerns of new member states, a new wave of deregulation linked with the debate on European Governance and the increasing relevance of economic considerations. All this is also reflected in a change of political majorities in Europe.

The Sixth EAP does not share the ambitious goals of its predecessors. It is both more reluctant to set targets and to identify key instruments. The starting point of the Sixth EAP is that so-called persistent environmental problems, such as climate change, the loss of bio-diversity or the over-consumption of resources require a broader approach beyond environmental legislation. Furthermore, the need for the consolidation of existing legislation is increasing, especially in the view of the enlargement. Basically the sixth EAP formulates a framework of general principles and objectives, which will be more specified by so-called thematic strategies on key issues such as pesticides, resources, recycling, soils, the urban environment, the marine environment and clean air. The reform of chemicals policy and policies to reduce EU green house gas emission also belongs to the key policy priorities for the first decade of the new millennium.

The sixth EAP adopts a very cautious approach. It identifies themes and principles. Specification takes place by strategies, which are partially frameworks for further frameworks. The political strategy of the sixth EAP is to postpone potentially contentious and controversial political decisions to later phases or to avoid them altogether by relying on cooperative approaches to environmental policy making. Cooperative approaches with industry, such as integrated product policies, the wider use of standardization for environmental policies, voluntary agreements co-operation with Member States’ expert for environmental policy making or both (e.g. chemical
policy reform) rank high on the political agenda in order to manage complex risks, where knowledge both on the scale of the problem and on the availability of solutions is limited. It is evident that those new governance approaches relieve the legislator and strengthen the role of private and public professionals with specific technical skills. Furthermore, the Commission is changing its key role from an initiator of legislation to a manager of policy processes. Environmental policy may hence lose its previous profile and become more and more a theme for small specialist expert communities. Those communities are responsive to scientific evidence, but the selection criteria for representatives from civil society wanting to participate in those communities have also increased. The cooperative management of the policy processes is very demanding in terms of resources and staff and some processes simply fail to gain momentum because of its insufficient public investment, integrated product policy is certainly a case in point. So it is far from evident that cooperative arrangements deliver more than the traditional regulatory instruments. This applies especially to countries and situation where the negotiations capacity and expertise of public service and of environmental organizations is in the early stages of development. A further problem is that approaches become over complex. Holistic and integrated approaches promise to tackle and balance everything with everything at the same time. However, the risk is that in the end they amount only to fine rhetoric on principles with little action.

The implementation of EU environment policy is not uniform in all the member countries. So to check the impact of EU environmental policy it is important to divide the study into two blocks: Western European countries and Central and East European countries. There is a huge divide in these two blocks due to various economic, political, environmental, social as well as historical reasons.

**Environmental Policy in Western Europe**

As the EU's environmental policy-making competence expanded in the 1970s and early 1980s, policy implementation remained in member states hands, and the Commission made little efforts to ensure that Community law was applied in practice. The Treaty of Rome required member states to take necessary action to implement community law (Article 5) and required the Commission to oversee this implement
process and ensure that the law was in fact applied (Article 155). However, until the mid-1980s, the Commission did not put more importance to the application and implementation part of the environmental law. The EU also played little role in financing the implementation of Community environmental law. Some member states government took Community laws lightly, viewing them as "little more than policy intentions or aspirations rather than as distinct legal obligations" (Macrory 1994: 4). The absence of strict enforcement facilitated the expansion of the scope of EU environment legislation. Anticipating that they would not have to comply strictly made it easier for recalcitrant member states to accept new Community environmental regulations (Kelemen 1995; Golub 1996). This neglect of uneven environmental laws implementation has lead to the distortion of internal market. Therefore, the result of these factors comes up as a criticism from EP.

The Commission responded to this by increasing its enforcement activities on member states governments after the Fourth EAP. As mentioned above, in the early years of Community environmental policy, some member states’ governments did not view Community laws as strict legal requirements. But by the end of the 1980s, after the Commission had intensified its enforcement activities, they could not sustain this view. By that time a large body of environmental regulation was already in force and member states were obliged to implement it.

While much of the Community’s early activity in the sphere of environment was driven by the pressures on the single market, the pressure to harmonize environmental law has come less from the unexpected ramifications of economic integration, and more from what has become known as the leader-laggard dynamic (Haas, 1993, p. 138) and from the need to build a political consensus among the member states. ‘Leader’ countries are those with more stringent sectoral environmental measures and more ambitious policy goals, and whose governments are pressed by industry and public opinion to encourage other governments to adopt similar measures and to aspire to similar goals. Meanwhile, the ‘laggards’ are those countries which have adopted relatively weak environmental measures (or none at all) and which are more reluctant to accept stronger standards.

The west and northern wealthier member states such as Denmark, Germany and the Netherlands have earned a reputation – not always entirely merited – as the leaders (joined in 1995 by Finland and Sweden), while Greece, Italy, Portugal and Spain – and
occasionally Britain and France – have come to be seen as the laggards. Governments and interest groups in leader states often complain that EU policy is not sufficiently ambitious, while there is relatively little political support in laggard states for the domestic policy changes required by EU law. It would even be fair to say that member states such as Greece and Portugal would probably have little in the way of domestic environmental policies were it not for the requirements of EU law.

The differences between the leaders and the laggards are usually explained by a combination of economic and cultural factors. In wealthier societies with a high standard of living, more people have more time to think about – and become concerned about – the extent to which their hard-won affluence is compromised by the problems such as polluted air and water. In poorer societies, meanwhile, the cost of holding industry liable to tightened environmental management controls and of promoting changes in the choices made by the consumers may be seen as the potential brake on economic development, and may thus generate more opposition.

Leader states are credited with having created the pressure for change either through developing national laws which pose a threat to the single market, and demand a response from the other member states, or through exerting pressure for policy changes at the EU level. Examples include the following:

- The most important element in the EU response to acid pollution was the 1988 directive limiting emissions from large combustion plants (88/609), which was not only modeled on a piece of German domestic law, but whose development and adoption were prompted largely by German political pressure.

- Part of the reason why the Commission began developing its controversial proposal for a carbon tax in the early 1990s was because Denmark, Germany and the Netherlands were considering the development of national taxes, and there was concern that these would interfere with the functioning of the single market.

- Changes in domestic politics in Sweden and Britain in 1997-98 led to the pressure for a wide ranging review of EU chemical policy, the record on which had by then been modest at best.

- The EU began developing a Directive on the recycling of electric goods in 1998 mainly because similar laws were under development in Denmark, Germany, the Netherlands and Sweden.
The leader-laggards idea must be treated with caution for three main reasons. First words are informal. As Keohane, Haas and Levy argue (1993: 18):

*Environmental politics is replete with symbolic action, aimed at pacifying aroused publics and injured neighbours without imposing severe costs on domestic industrial and agricultural interests. The environmental rabbit that is pulled at the last minute from an organizational hat may turn out to be illusory or ephemeral.*

Second, it would be misleading to suggest that some countries always lead while others consistently lag. It is more accurate to argue that all member states have a mixed record on different issues at different times, with tendencies either to lead, or to lag, or to come somewhere between the two. For example, Britain, or more accurately, the Thatcher administration proved an early laggard on acid rain, but became a leader once Thatcher changed her views in the late 1980s. It has also been a leader on marine oil pollution and climate change, so the common accusations that Britain has slowed down progress in developing the EU policy agenda are not entirely deserved.

Third, leader states may be good at suggesting policy initiatives, but may not have such a good record on policy implementation. For example, Germany is often described as leader, but has only a middling record when it comes to notifying national implementation measures for EU environmental laws, while Ireland - usually described as a laggard - has one of the best such records in the EU.

Fourth, differences in the 'legislative culture' will mean some member states take longer than others to agree new national laws; and finally, member states may occasionally decide that it is politically expedient for some reasons to drag their feet on transposal.

Though the above mentioned points are the factors responsible for the implementation and neglect of the EU environmental policy in western and northern European countries,, in 2001 the fifteen Central and East European countries (Cyprus, the Czech republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, the Slovak Republic and Slovenia) joined the EU and thus the ignorance of EU Environmental policy has become a minor issue. The reason behind this is that all the 15 countries had more uneven environmental policy in comparison to the West and Northern European countries of EU.
Environment Policy in Central and Eastern Europe

As some scholars have argued, that what David L. Ellison calls the *positive leverage* exercised by the EU has brought about beneficial changes to the legal and economic framework in the Central and East European countries. (Moravcsik and Vachudova, 2003: 47) Most authors in this general framework tend to suggest that the degree of change pursued by the Central and East European countries (in terms of democracy or environmental regulation) has been leveraged on these states with the 'carrot' of EU membership. Others still, arguing both from a Central European and a Western perspective, argue/allege that EU government represents a significant check on the governments of Central and East European states. In this regard, the participation of EU governments makes Central and East European governments more accountable and ensures a proper transition toward democracy and/or stronger environmental regulation. Finally, the carrot of EU membership is often thought to have provided strong motivations for governments to pursue EU environmental policy as rapidly as possible in order to appear more prepared for EU membership than other states (Slocock, 1996: 508), or to have strengthened the hand of environmental ministries that wanted to pursue a stronger environmental agenda (Slocock, 1999: 157).

On the other hand, as Pavlinek and Pickles observe, under Communism, the centralization of policy-making at the national level had disastrous consequences for the protection of the environment at the local level. The Soviet "centralization" of policymaking was responsible for disrupting patterns of environmental protection and sustainable development that had been cultivated over decades and centuries by local level village assemblies. The introduction of centralized, bureaucratic (and authoritarian) control likewise brought in nationally appointed officials from other regions with little local knowledge or expertise. Given that these officials spent little time in individual regions, the history of local development and expertise was typically lost in the new soviet style form of economic management (2000: 75-79). The second problem that the introduction of EU policy imposes is the problem of "one-size-fits-all". As Mungiu-Pippidi (2000) has noted for Central Europe and EU

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1 Kováč (2002), for example, argues in more general terms, while Lynch (2000) builds an argument around environmental regulation and compliance.
policy as a whole, the countries of Central and Eastern Europe are quite different, one from the other, and again, from other EU member states. Thus one can reasonably question the advisability and potential effectiveness of one centralized EU environmental policy to deal with the full range of environmental problems in Central and Eastern Europe.

Bhagwati (1994), on the other hand, raises two basic objections to this approach in the developed world. First he argues that since countries might be expected to have different needs and preferences regarding the appropriate mix of environmental policies, environmental policy should fall within the purview of national governments and not international policy-makers. Second, he argues that the introduction of universalized national standards may erode any comparative advantage enjoyed by individual countries and that this occurs at the behest of producer groups in more advanced countries that hope to "level the playing field". Implicit in these criticisms is the recognition that exporting developed country policies to the developing world may entail significant concessions on the part of developing countries in foregone economic development while advanced countries are likely to gain in competitiveness.\(^4\)

Finally, a number of authors have pointed out that the imposition of the EU environmental regulatory framework (and EU policy in general) is likely to have a negative impact overall on any positive legacy already present in the countries of Central and Eastern Europe. This basic argument has several strains. For example, some authors argue that the environmental policy framework in place at the time of transition had positive elements worth safeguarding. The requirement of adopting EU environmental policy has led to the utter abandonment of "old" policy strategies in favour of EU policy strategies without any serious thought given to these positive elements (Gille, forthcoming; Gille, 2000). On the other hand some have argued that the more general focus on the introduction of markets has distracted attention from

\(^4\) Realist theorists typically view the adoption of universal environmental standards as problematic even across countries at similar levels of economic development. The realist approach to international environmental agreements presents a relatively pessimistic outlook on the likelihood of successfully concluding such agreements. The competing and conflicting interests of states (and or domestic interests groups within states) are typically the source of these problems. Moreover, states that are not likely to benefit from such arrangements are typically coerced or leveraged into them, either through the use of side payments or through the exercise of influence (Sprinz and Vaahtoranta, 1994).
features of the socialist systems that could have a positive impact on the environment. Ürge-Vorsatz, Paizs and Pesic (2003). A number of authors have, likewise, argued that the lack of policy flexibility associated with the requirement of adopting the Acquis Communautaires (the current body of EU legislation) leaves the Central and East European countries with too little policy autonomy (Caddy, 1997; Zylicz and Holzinger, 2000). Finally, a number of authors have argued that the dominance of western strategies of environmental activism has overshadowed the development of Central and East European social movement organizations. Central and East European NGO's have been weakened by their turn to western funding sources and strategies of environmental activism, their ensuing professionalization and the weakening of their links to Central and East European civil society (Jancar-Webster, 1998; Waller, 1998).

Thus the literature above identifies several ways in which EU membership and the requirement of adopting the body of EU legislation – in contrast to the notion of positive leverage – could potentially have a more negative impact on the development of civil society and the environmental policy making process in Central and Eastern Europe. The first is the potential lack of attention paid to local, regional or even state level environmental preferences, interests and concerns. The second is the potentially negative implication of imposing more advanced country environmental policies on less developed economies for economic competitiveness. The third is the likelihood that any positive legacies are likely to be eroded or simply forgotten in the wake of the wholesale adoption of EU level environmental policy. Finally, though EU environmental policy is only partially and indirectly responsible, EU policy dominance may weaken civil society and its links to emerging Central and East European NGO's. This dynamism however is remarkably important with respect to the ability of Central and East European countries to develop independent movements rooted in the advocacy and defence of local, regional and state level environmental interests.

These observations raise several important questions. What are the consequences of EU membership for individual policy areas and what do these consequences imply about the advisability of “one-size-fits-all” arrangements? Are such arrangements well suited to deal with local, regional and state-level preferences, interests and
concerns? Are there important ways in which such arrangements ignore these interests? What are the costs that agreements of this kind impose on lower levels or less advanced states? Do such costs have implications for the potential development of economic competitiveness? To what extent will such arrangements hinder the development of more locally-based interests and concerns and what are the longer-term costs attached to this?

The drive for EU membership has in some senses awakened the same spectre of overly centralized and excessively bureaucratic policy-making from above. This is in fact a great irony. Citizens in the Central and East European states struggled vigorously to remove the yolk of a centralized planning system dominated by Moscow, and have replaced that with another centralized planning system dominated by Brussels. While there are of course significant and important differences between these two opposite poles, jumping into the middle of the EU framework at the current stage of EU development essentially binds the New Member States to accept both the "rules of the game" and the "state of play" as they currently stand. Thus EU environmental policy has now been substituted for national-level policy. This last point is compounded by the fact that – as is true for many or most laws introduced by the EU environmental law is the result of a lengthy bargaining process between the Council of Ministers and to some degree the European Parliament (EP). The consequence is that EU policy is likely to meet the interests of all or most states concerned, and to require compensation from sources like the EU's Structural and Cohesion Funds where the costs of EU environmental policy are too great for individual countries and their firms. The legislative bargaining process in effect ensures that all participants can either stop legislation that is significantly unfavourable to them, or threaten to slow the decision-making process in cases where some form of financial compensation or quid pro quo is not forthcoming. While qualified majority voting (QMV) may reduce the veto power of minority states, the final product of the legislative process is likely to at least consider the lowest common denominator interests of a number of the less environmentally advanced states.

However, the transplanting of EU environmental law from the current EU member states to Central and Eastern Europe fails to consider the gap between the status quo in Western Europe and Central and Eastern Europe. Thus the impact – both
environmental and financial – of EU environmental legislation may, in general, be expected to be much greater. Moreover, the EU has typically been either resistant or insensitive to local, regional or state-level concerns and has frequently refused to negotiate possible amendments to the acquis with more locally defined Central and East European interests in mind. Part of the problem here is the question of bargaining power. As noted above, from within the EU framework individual states frequently succeed in having an impact on EU-level regulations that are possible impediments to local, regional or state-level concerns. While qualified majority voting raises the threshold for regions or states with minority interests, making it more difficult for them to have a decisive impact on policy, candidate states have no ability whatsoever to influence the makeup of pre-existing policies. Almost no concessions are made on existing EU policy, despite the frequent variable geometry of EU regulations as they are applied in the EU member states. Thus, the strong interest of these states in EU membership has compelled them to accept an agreement that is not always in their interest on all counts. As such, there was a fundamental asymmetry in bargaining power between the EU member states and Central and Eastern European states.

If these countries had already managed to develop strong traditions of nationally controlled environmental policy-making, as well as well-organized civil society organizations, such an evolution might not be as threatening. But the reverse is the case. While to some extent national-level traditions of environmental policy-making were born prior to 1989, they have since been greatly weakened and dissipated by multiple factors discussed at great length below. The long-run consequence is presumably that for the next decade or so, perhaps longer, the Central and East European countries are more likely to neglect an entire array of higher priority problems that are likely to arise as a result of the social, political and economic systems that are emerging in these countries, and because of the lack of familiarity with and understanding of the problems that these social, political and economic systems entail. The problem is not that the Central and East European countries are

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5 On a considerable number of EU regulations, for example Economic and Monetary Union, the Schengen Agreement and others, individual states have insisted upon various concessions. However, the willingness of EU member states to accept such arrangements has typically not included matters related to competition and the smooth functioning of the Single Market. The concept of resource diversion extends all the way to administrative level in Central and Eastern Europe. For example, even ministries (of the environment or other ministries) they have seen substantial amounts of resources diverted to the EU membership drive and away from other ministerial responsibilities.
not themselves beginning to develop sensitivities to such issues – the reverse in fact is true. The problem is rather that both the resources and attention necessary to successfully combat such problems have been diverted for at least the next decade to ‘centrally determined’ policy goals that are at best only partially adequate to dealing with long-term objectives.

Individually, each of the Central and East European countries exhibits significant variation in the composition of the pollution burden across air, water and soil types. Hungary, for example, has remained comparatively less burdened with air pollution. Although lignite or brown coal was frequently used for heating in winter, approximately 1/3rd of energy production was from oil and natural gas, almost 40% from nuclear power, and only the remaining 1/3rd from burning of coal (Pavlinek and Pickles, 2001: 47). Czechoslovakia, on the other hand, used coal to produce 55% of its energy requirements and 78% of its electricity needs. Moreover, some 2/3rds of the coal used was brown coal (ibid: 45). The outcome for the Czech Republic has been far more serious air pollution concerns than those found in Hungary, in particular in the so-called “Black Triangle” region of Northern Bohemia. Hungary on the other hand has had far more serious problems with its water supply. A significant share – though not all – of Hungary’s water supply problem is foreign-born (much of the pollution problem in the Danube and Tisza rivers comes from upstream sources in the neighbouring countries of Austria, the Czech Republic, Slovakia and Romania). However, Hungarian untreated industrial and human sewage waste still presents a substantial threat to Hungary’s water supply. A number of factors have conspired to bring about quite significant reductions in pollution levels in Central and Eastern Europe. The substantial drop in emissions, in the production of industrial waste, and in the use of fertilizers is primarily due to the fact that much of the heavy industry endemic to Central and Eastern Europe disappeared in the wake of the economic crisis between 1990 and 1995. Large combustion plants were shut down, large portions of Central and Eastern Europe’s heavy industry have disappeared, and much of the agricultural sector in Central and Eastern Europe has also suffered dramatic decline due to the transition to market economies and the general decline of Soviet era markets.

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6 Hungary’s Paks nuclear power plant was built in 1976 (www.npp.hu).
The introduction of market prices likewise had a serious impact on the production of pollution. Many previously subsidized inputs such as electricity and environmentally hazardous chemicals such as pesticides and fertilizers suddenly became much less affordable. Far fewer pesticides are now used in agriculture, due both to the introduction of market prices and the general decline in agriculture throughout Central Europe. While brown coal was commonly used for heating purposes on a very widespread basis, this is no longer the case. A majority of residences – in particular in more urban settings – have shifted over to oil or natural gas heating. Finally, while the number of cars per person has risen dramatically in all of the Central and East European countries, much of existing stock of passenger vehicles has been replaced with new or used vehicles that meet Western emissions standards.7

On the surface of things, the record of environmental clean-up in the Central and East European countries appears immensely positive. Though such statistics disguise the means by which these gains have been achieved, they still represent remarkably significant change from the early days of transition. Significant differences between Western and Central and Eastern Europe lie in the “efficient” production of pollution (or the pollution “intensity”) and in higher concentrations of point source forms of pollution. Generally speaking, the Central and East European countries produce greater amounts of pollution per unit of GDP than Western countries. This has two important implications. First, many production processes in Central and Eastern Europe are more pollution intensive than in the West. Second, the pollution generated by power plants or industrial firms is likely to have a greater impact, the more it is geographically concentrated, and the closer it is located to more densely populated areas. Thus “point source” forms of pollution concentrated in one specific geographic location (or firm) – are much more excessive in the Central and East European countries than in Western Europe. One example of this type of pollution is that created by sulfur dioxide (SO2), nitrogen oxide (NOx) and carbon dioxide (CO2) emissions of large combustion plants – most of which are power plants (World Bank, 1999: 84).

7 While the introduction of both new and used vehicles that meet Western emissions standards represents an obvious improvement over the emissions standards of vehicles produced during the Communist era, the tremendous increase in the number of vehicles per person still creates a significantly increased impact upon the surrounding environment. However, if the increased demand for passenger and other vehicles had been met with Communist era type vehicles, the resulting increase in urban pollution levels would have been far more dramatic.
With such point source emissions, EU directives are likely to have a strong impact. On average, some 74% of SO2 emissions are produced by these large point sources. (Barrett, 2000: 5) In particular, the EU directive dealing with the emissions of large combustion plants (of which there are approximately 29 in Hungary), requires that such plants reduce their emissions below certain “limit values”. Given that the largest emitters among these plants are – for the most part – in Central and Eastern Europe, this directive is likely to have a considerable impact on pollution reduction in the region. On the other hand, the burden of adjustment with regard to this directive is considerably imbalanced. While many of the large combustion plants in Western Europe are already compliant with this regulation and have not had to undertake significant investments in order to improve their emissions, the opposite is true in Central and Eastern Europe. Thus, although the Central and East European countries did not participate in the making of this directive and did not participate in setting the target date, they will nonetheless be required to meet the same deadline. This example raises the important and larger question of countries being required to comply with regulations in which they played no part.

In per capita terms, however, pollution levels in Central Europe are now either similar to those in Western Europe, lower or somewhat higher but still lower than some other advanced industrialized countries (e.g. the US). However, the frequent calculation of pollution intensities as a share of GDP harbours a specific bias in favour of EU member states and suggests a sense of urgency with regard to the Central and East European countries that may well be exaggerated. While the observation that EU member states are able to produce more GDP per unit of pollution than less advanced

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8 From the Western countries, Spain, the UK, the former East Germany, Italy, Belgium and the Netherlands (in that order) have some plants with very high emissions levels, and a larger number of West European countries have plants with emissions levels among the top 600 emitters. However the intensity of emissions and the share of firms among the top 100 emitters is much higher in Central and Eastern Europe (Barrett, 2000).

9 Although for Hungary, the deadline of compliance with the EU Directive on Large Combustion Plants is listed as a “transitional period”, the deadline for compliance is in fact the same for all EU countries. According to the Directive, all countries must achieve significant reductions by January 1st, 2008. Hungary has a transition period until 2004. Only Estonia (2015), Lithuania (20015) and Poland (2017) obtained transitional periods beyond 2008. From the perspective of EU member states, the limit values set by this directive are quite liberal and many plants already in operation in the EU as of 1995 successfully complied with the limit values set for new plants built after 2003. However, this is not the case from the perspective of Central and East European states (see data in Barrett, 2000).

10 Karoly Kiss of the Budapest University of Economic Sciences has given some of his calculations that employ similar per capita measures of various emissions.
states is an important and indicative calculation (e.g. in the above case of power production, EU power plants produce far lower levels of pollution per unit of energy), it likewise conceals a number of important points. For one, the service sector is much larger in the EU member states than it is in Central and Eastern Europe and its contribution to overall GDP is significant (in particular that of the financial, insurance and banking services sector) (see Table 3.1). Secondly, the mix of goods produced in the EU member states is far less dependent upon goods that are likely to contribute much higher levels of pollution. In addition, where fertilizers and pesticides are concerned, only a very small share of the EU’s production is related to agricultural goods and the relative terms of trade of agricultural products is typically well below those of more advanced goods (despite the high costs of CAP supported agricultural production). [Table 3.1 Economic structure in 1990, 1995 and 2000]

Pollution levels expressed as a share of GDP suggest that absolute amounts of pollution are much smaller in Western Europe. The reverse however is true. Moreover, such figures provide no sense of the total amount of pollution relative to its potential impact on individuals or the surrounding environment. As a consequence, and in order to be able to consider the Central and East European countries on more equal footing with the EU member states, most of the calculations below emphasize first per capita levels of different emissions.\(^{11}\)

To begin with the least successful case, reductions in the level of sulfur oxides (SO\(_x\))\(^{12}\) have nonetheless been dramatic over the period 1989-2000.\(^{13}\) For the Central and East European countries as a whole, SO\(_x\) emissions expressed in per capita units have dropped by 62% over the period 1989-2000. More notably perhaps, excluding the case of Bulgaria, where SO\(_x\) levels are approximately twice as high as in the next closest CEE country, current SO\(_x\) levels in Central and Eastern Europe are equal or below those in EU member states between 1989-1993. Note that the 1990-1992 EU

\(^{11}\) In fact, an even more appropriate way to standardize measures of pollution levels might be by square miles.

\(^{12}\) SO\(_x\) emissions are made up predominantly of sulphur dioxide (SO2) emissions.

\(^{13}\) Reliable statistics are notoriously difficult to come by. This is no less true with environmental statistics for the region of Central and Eastern Europe. As Pavlinek and Pickles point out, figures for some countries have varied as widely as from 200 to 1647 thousand tons of sulfur dioxide emissions in Romania in 1989, and from 390 to 1753 thousand tons in the case of nitrogen oxide (2000: 41). Such complicate analyses of the type engaged in here.
levels exceed the 2000 CEE level (again excluding Bulgaria), a period during which EU levels – contrary to CEE levels – are still rising rather than beginning to fall. Even when Bulgaria is included, 2000 CEE SO$_x$ levels are just below those of the EU member states in 1990 (though not in 1989). Finally, while the United States (US) should clearly not be used as the most appropriate benchmark, it is worth noting that US levels clearly exceed those in Central and Eastern Europe as of 1992. Expressed in units of GDP, however, the CEEC’s lag significantly behind both the EU member states and the US (see Table 3.1). However, it is likewise important to draw attention to the consistent reductions in SO$_x$ levels over the entire period, suggesting that continued progress is being made on the reduction of SO$_x$ levels. More significant differences do exist between the EU member states and the countries of Central and Eastern Europe where the treatment of sewage and industrial waste sewage is concerned. However, even here there is considerable variation across the Central and East European countries and EU member states. Even as of 1999 (or the most recent year available for select countries), the percent of the population in some Central and East European states that is connected to public wastewater treatment plants is quite small. In Hungary, for example, this percentage is quite small, about 26% in 1999. Given Hungary’s general degree of concern with water issues noted above, this represents an area of significant concern. Moreover, Hungary has not improved in this regard but has rather slipped back compared to 1990 (31%). The Czech Republic and Poland, on the other hand, compare quite favorably to some of the EU member states in the share of the population connected to waste water treatment plants. For the Czech Republic, this number was 62.4%, up from 50.3% in 1990. And Poland stood at 51.5% in 1999, up dramatically from 35.4% in 1990. These figures compare quite favourably to countries such as Belgium, with only 38.6% of the population connected to waste water treatment plants in 1999, Spain (48.3%), Portugal (55%) and Greece (56.2%). Measured on the basis of population however, the degree of environmental crisis in Central and Eastern Europe appears greatly overstated. In several of the above instances, the EU would be happy to be able to achieve per capita pollution levels similar to those in Central and Eastern Europe. Moreover, while no detailed figures from the earlier years in Central and Eastern Europe have been provided, as noted above, some of Europe’s previous history was comparable. More importantly perhaps, this approach suggests that the focus on a strategy of emission
limit values – as is currently the practice in EU environmental regulation – may not be the most meaningful strategy for Central and Eastern Europe. At least two alternatives appear preferable. In view of the urgency of some point source forms of pollution,\textsuperscript{14} one alternative would be to focus only on so-called “hot spots”, areas of high pollution intensity that have a serious impact on either human health or the environment (or both). A second alternative is to focus not on “end-of-pipe” solutions (the introduction of scrubbers or other devices that remove pollution from the air or water), but rather on strategies of technological updating that either impact the relative pollution efficiency of production, reduce overall energy requirements, or result in the removal or discontinuation of certain harmful chemicals and other pollutants in the production process. While in particular the end-of-pipe vs. technological change strategy has received some discussion in the literature, neither of these strategies have typically impacted the EU’s approach toward Central and Eastern Europe, nor have they greatly influenced the choice of options in the various CEE countries. Moreover, as has repeatedly been noted in the literature, as the pressure to comply with EU environmental regulations mounts, an emphasis on longer-term strategies technological updating and increased efficiency declines in favor of short-term end-of-pipe solutions.

To take the case of energy noted above and its relationship to the production of large shares of concentrated point-source SO\textsubscript{2}, NO\textsubscript{x} and CO\textsubscript{2} emissions, it has been argued that significant progress could have been achieved with a combined energy and pollution reduction strategy that focused instead on energy efficiency. Ürge-Vorsatz, Paizs and Pesic (2003), for example, point out that far more energy is used per unit of GDP in Central and Eastern Europe than in Western Europe. Encouraging more

\textsuperscript{14} In fact, the per capita approach seriously fails to pinpoint a number of the more egregious cases of very high concentrations of pollution, frequently in proximity to significant urban population settings. The implications of high pollution intensity in the production process, the regional concentration of economic activity (in particular of the more dangerous mix of brown coal, metallurgy, power and chemical production), and the combination of these two factors in areas of high population density has had quite serious effects on both the health of individuals and the surrounding environment. Such hot spots can be found in many locations in Central and Eastern Europe, for example in the Copsa Mica region in Romania, in Katowice, Poland, or Borsod and the Sio River area in Hungary. Pavlincek and Pickles, for example, detail the history of the Most district in the northern part of the Czech Republic, an area that forms part of the infamous “Black Triangle” spanning the northern part of the Czech Republic, the south eastern part of East Germany, and the south western part of Poland. As these authors note, average life expectancy at birth in Northern Bohemia was 10 years below the average in the more developed countries of Europe (2000: 135). Similar statistics are cited for cancer rates, other illnesses and infant mortality (ibid: chapter 6).
energy efficiency in the production process (or even residential use) could result in considerable achievements in the reduction of pollution.\textsuperscript{15} These authors estimate that as of 1997, Hungary’s energy intensity was 3.5 times higher than the average in the European Union, while that of the Czech Republic and Poland was two times that again of Hungary’s (ibid: 265).\textsuperscript{16}

In the long run, the focus on “end-of-pipe” strategies of emissions reductions has a doubly undesirable impact: it makes industry less competitive by leading to price increases, and it diverts resources from strategies that might have comparable effects but that could potentially make industry more competitive while simultaneously reducing energy demand and intensity. Similar observations have been made with regard to excessive water use and expenditures on wastewater treatment plants. (DANCEE, 2001: 15) Finally, it could likewise be argued that the excessive production of waste is likewise favoured by EU policies that focus less on recycling and more on the creation of landfill capacity.\textsuperscript{17} The pursuit of EU membership has resulted however in an accession agreement for the Central and East European countries that obliges them to adopt the entirety of environmental regulations contained in Chapter 22 of the EU’s *Acquis Communautaires*. As noted repeatedly in many of the documents from the European Commission’s Enlargement Directorate dealing with the negotiation of the so-called environmental chapter, “requests for transitional measures … must not involve amendments of the rules or policies of the Union”.\textsuperscript{18} The only element of flexibility that has entered into negotiations concerned requests for transitional periods. Where such requests were “limited in time and scope

\textsuperscript{15} A previous study published by the Energy Club, a Hungarian NGO, likewise points to the potential advantages to be gained from greater investments in energy efficiency (Takacs, 2002). A previous study by the Danish Cooperation for Environment in Eastern Europe (DANCEE) likewise emphasized that “scarce financial resources may be wasted in unnecessary over-investment in air emissions controls, waste water treatment plants and solid waste management capacity”. The study recommended greater improvements in the efficiency of resource use (both energy and water), primarily through the introduction of market prices (DANCEE, 2001: 15).

\textsuperscript{16} While Vorsatz, Paizs and Pesic note that the partial introduction of market prices has led to overall improvements in energy intensity (of 41% for Poland, 19% for the Czech Republic and 22% for Hungary over the period from 1989-2000), they insist that further improvements will require active government intervention and alternative strategies (2003: 263-6).

\textsuperscript{17} Gille argues persuasively that the adoption of EU directives on waste management in Hungary led to the indiscriminate elimination of Hungarian policies of waste reuse and recycling (Gille, 2000).

\textsuperscript{18} The same passage is included in all of the various iterations of the European Union’s Common Position vis-à-vis each individual candidate country. In the case of Hungary, for example, the relevant documents are CONF-H 56-99, CONF-H 60-00, and CONF-H 25-01.
and accompanied by a plan with clearly defined stages for application”, the Commission was willing to consider delays. This emphasis on transitional periods and absolute compliance with EU environmental regulations has ultimately pushed a strategy that emphasizes “end-of-pipe” solutions over the potentially more cost efficient strategy of technological updating and renewal.

Moreover, the Commission’s strategy towards the Central and East European countries exhibits an inability to resolve a tension between prioritizing environmental issues on the one hand, and resolving transboundary and competition-related issues on the other. Documents dealing with the negotiation of the environmental chapter repeatedly emphasize the importance of addressing both “transboundary” issues and environmental issues that are likely to affect or “distort” economic competition in the EU. Moreover, it is repeatedly emphasized that all new plants must comply with EU regulations from the first day of production. (CONF-H 56/99, CONF-H 60/00, and CONF-H 25/01) On the other hand, the European Commission suggests developing clear and systematic priorities and the identification of projects that are “financially viable” or “conform realistically to national affordability/borrowing” (European Commission, 2001a: 7-8).

The following, in fact suggests that transitional periods have not been easily negotiated where potential competition issues are concerned. For one, the most derogation-heavy directives (see Table-3.4) appear to be those related to the public sector, i.e. the treatment of urban wastewater (largely a public sector issue), and to the emissions of large combustion plants (of which plants with the highest emissions levels remain largely in public hands). The packaging and package waste directive – with significant private and public sector spending components (European Commission, 2001b: iii) – comes in a close third. For another, the total number of transitional periods requested often differs quite radically from the total number approved in the Accession Treaty. According to some government representatives, there were in fact significant pressures to reduce the overall number of requests. The consequence however is that many costs must be met – in particular by the private

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19 Though of course the following depends in part on local or state-level arrangements, the public sector will be responsible for the collection and sorting of municipal packaging waste, while the private sector will be responsible for the collection of industrial packaging waste. Municipal and industrial packaging waste is typically recovered and recycled by the private sector (European Commission, 2001b: iii).
sector—prior to the final date of membership (Table-3.2 Transitional Periods). The estimated costs of compliance with EU regulations are significant. While estimates have come down in recent years, the total cost of compliance for all the countries of Central and Eastern Europe is still estimated at some 78 to 108 billion Euros (see Table-3.4). Previous estimates have been as high as 230 billion Euros. Of this sum, the EU is likely to fund only a very small amount. The total Cohesion Fund allocation, for example, for the Central and East European countries for the period 2004-2006 amounts to 7.59 billion Euros. Only a portion of this amount, however, will be available for funding environmental expenditures. Previous estimates have been as high as 230 billion Euros. Of this sum, the EU is likely to fund only a very small amount. The total Cohesion Fund allocation, for example, for the Central and East European countries for the period 2004-2006 amounts to 7.59 billion Euros. Only a portion of this amount, however, will be available for funding environmental expenditures. Previously the EU has granted some 3.1 billion Euros of support annually through other mechanisms such as the Phare Program, ISPA, and SAPARD. However, these sums pale in comparison to the amounts, the EU has granted the previous Cohesion countries (Greece, Ireland, Portugal and Spain) (DANCEE, 2001: 43-8). (Table-3.4 Estimated Costs of Compliance) The total cost of compliance with EU environmental policy seen as a share of GDP varies tremendously across individual Central and East European countries (see Table 3.4). The most serious case is that of Estonia, where cost estimates attain some 70.4% of Estonia's GDP in 2001. This estimate is followed by Bulgaria with 56.5%, and Romania with 49% of GDP in 2001. Figures for a number of countries, in particular Slovenia, Lithuania and the Czech Republic, are far less daunting. However, based on an estimate of yearly government expenditure of 1% of GDP and on an average annual rate of economic growth of 3%, it would still take the Czech Republic some 9-12 years to completely cover the costs of compliance with EU environmental regulations. As for Estonia, Bulgaria and Romania, on the other hand, it will obviously take much longer for these countries to fully cover the costs of compliance. (Table-3.4 Estimated Costs of Compliance as % GDP)

A word of caution is necessary with these estimates. For one, the current average government expenditure on the environment is less than 1% across all of the Central and East European countries. For another, the likely rate of economic growth is

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20 It should be noted that at least some of the Western assistance that has been offered serves Western interests as well as Central and East European interests. Slocock mentions, for example, that concerns about transboundary pollution have driven at least some assistance (1999: 154). While concerns about potential catastrophes have presumably driven programs dealing with nuclear power problems in Central and Eastern Europe.

21 Note that even estimating actual country environmental expenditures appears to be quite problematic. In one case, one and the same report published only 5 months apart by the EAP Task Force cites wildly...
quite difficult to predict. While across all of the Central and East European countries, the average rate of economic growth from 1994-200 was approximately 3.5%, rates of economic growth have slowed somewhat in more recent years. Third, the nominal cost of environmental investments will increase over time. Thus the cost of machinery related to environmental investments that are postponed until later years will require greater investment expenditures than currently predicted. In addition, as has quite frequently been the case, the Commission’s recent estimates may either over or under estimate the actual costs of compliance. Moreover, a share of the environmental problems may still be uncovered. The overall tendency, however, has been for compliance estimates to decline over time rather than to increase. Finally, a large share of environmental investment expenditure is being undertaken by the private sector, in particular for expenditures related to the Directives on Large Combustion Plants, IPPC (Integrated Pollution Prevention and Control), packaging and packaging waste, and VOC (Volatile Organic Compounds) emissions.

Thus for countries such as Bulgaria, it is estimated that as much as 46% of required environmental investment expenditures will be undertaken by the private sector. Slovakia and Romania have estimated that as much as 70% of environmental expenditure will be undertaken by the private sector (European Commission, 2001a: 14). Assuming that foreign investors are more likely to invest in firms or plants that involve limited environmental expenditures, the partial reliance on private sector investments may inadvertently place less emphasis on a strategy based on identifying “hot spots”, as noted above, and more emphasis on small-scale environmental investments.

While Central and East European governments may pick up the slack by investing in certain priority “hot spots”, such a policy approach would more likely be successful if these countries faced no other costs, or if EU funding levels made such large expenditures less problematic. However, there are tremendous pressures on the firms, economies and governments of Central and East European countries to be both economically competitive with Western firms and to fulfill all the financial and legal different environmental expenditures for a number of countries. For example, Romania is noted as spending 1.509 billion Euros in 1998 in the January document and 4.439 billion Euros in 1998 in the May document. Nor is this a problem of countries that are not accustomed to collecting and reporting such data. The figure for Germany for 1998 in the January document is 36.579 billion Euros, while it is 45.026 billion Euros in the May document (1/2003: 20; 5/2003: 20).
obligations of EU membership. Though many of the firms that will have to be compliant with EU environmental regulations are predominantly western-owned, there are still many Central and East European firms that will likewise be affected.\textsuperscript{22} More importantly perhaps, governments in Central and Eastern Europe currently face significant budgetary constraints. The average budget deficit between 1998 and 2002 was $-3.7\%$.\textsuperscript{23}

In sum, the pressures produced by the EU membership drive and the requirement of full compliance with the \textit{aquis communautaires} result in tremendous costs that – at least to some degree – seem out of line with actual needs, interests or preferences in Central and Eastern Europe. In some respects, the Central and East European countries have made remarkable if somewhat unintended progress. Moreover, while renewed economic growth may lead to increases in current pollution levels, there are a number of important factors that promise to keep this under some degree of control. For one, more recent industrial growth has typically been in industries that are far less pollution-intensive than Soviet era heavy industry. For another, Western firms with a stronger tradition of environmental protection and longer-term experience with up-to-date environmental technology have undertaken much of the investment in new industries.

Thus a strategy focusing on “hot spots” and energy efficiency seems better suited to dealing with the specific problems of Central and Eastern Europe than one that is driven more strongly by a concern for potential market distortions. Transboundary concerns seem of greater relevance where they concern hot spot issues in such areas as the Black Triangle or the current Danube River Basin project, in particular where their significant effects on population and/or the environment.

\textsuperscript{22} The degree of foreign penetration of industry varies considerably from country to country in Central and Eastern Europe, with Hungary being the country that has perhaps seen the greatest amount of foreign penetration. In 1996, for example, the foreign share of manufacturing production in Hungary was approximately 61\%, while it was only 22.6\% for the Czech Republic and 21.6\% for Slovakia (Hunya, 2000: 119). However, since 1996, FDI rates have greatly increased in the Czech Republic and Poland, while they have declined in Hungary.

\textsuperscript{23} Calculated on the basis of data from the website of Eurostat. (www.europaworld.com)
EU Amenability and Missed Opportunities

While the adoption of EU environmental policy will have a positive impact in some areas, there are likely to be a number of casualties as well. Both the diversions of financial and administrative resources away from local, regional and state-level concerns, as well as the generally weak environmental organization of civil society, are likely to result in many opportunities being missed and environmental issues of potentially greater concern being neglected. This section attempts to identify a few of those areas.

One of the more important but less frequently asked questions for the Central and East European countries is to what extent the focus on the adoption of EU objectives and regulations has already distracted (or will distract) CEE governments from other important goals? Given the tremendous effort and attention that is being placed on EU compliance, what are the negative sides to the focus on EU environmental legislation? That tremendous resources are being diverted away from areas of potential interest should be self-evident from the preceding discussion and the suggestion that the identification of the environmental agenda for Central and Eastern Europe is potentially driven by a misguided sense of priorities. Some of the more common examples of resource diversion and missed opportunities involve the development of roads over rail, and the lack of attention that is paid to expanding public transportation. As noted by others, the so-called “positive legacy” of the communist era is the relative focus on the development of public infrastructure, in particular, railroads, and public bus and subway systems (see for example Urge-Vorsatz, Paizs and Pesic, 2003: 262; Horak, 2001: 322). Many have lamented that more effort could have been put into improving the railway networks instead of shifting most freight transport from the rail to the road. The environmental impact of road freight is of course much greater than rail freight. District heating is likewise seen as an area that could have a potentially very positive impact on the environment. Some 20% of the public, for example, is connected to district heating in Hungary and some 80% of apartments in urban areas in Poland are likewise connected to district heating. While district heating is typically thought to be an environmentally efficient alternative, little to no emphasis has been placed on this strategy by Central and East European governments. Urban sprawl and the rapidly rising number of vehicles is also a
considerable problem. Large tracts of land outside the previous urban peripheries are rapidly being devoured by the construction of new housing. Moreover, much of this new housing construction goes un-zoned and unplanned. This development raises several issues that are – for the most part – simply going unaddressed by governments absorbed with other agendas. Moreover, these areas typically lie outside of the existing public transportation networks. Thus, in order to commute into the cities, individuals use passenger cars instead of public transportation. This contributes significantly both to the rapid rise in the total number of passenger vehicles on the road, to traffic congestion in the cities, and to greatly increased levels of smog. Few attempts are being made to increase the availability of public transportation outside the existing networks and even less is being done to reduce the total burden on city traffic and congestion. For this reason, and also due to the greatly increased availability of passenger vehicles, the total number of vehicles per person has radically increased (see Table-3.3). Between 1990 and 1999, for example, the total number of vehicles per 1000 inhabitants has increased by 64% (against only 27% in Western Europe). Although the total number of vehicles per 1000 inhabitants is still significantly below that in Western Europe, this merely suggests that things are likely to get worse before they get better in Central and Eastern Europe. The lack of attention to public transportation and to urban congestion however, will only exacerbate these problems in the short and potentially also the long term. (Table 3.4: passenger vehicles per 1000 in inhabitants)

Many other issues, however, are not even raised in any public fora. While the above noted issues have at least been discussed by some NGO's, there are a range of issues that receive little to no public discussion. For example, EU environmental regulations are not well suited to helping many of the Central and East European countries deal with the problem of nitrates in the soil. As noted above, this is currently not a significant problem. However, as agriculture begins to revive in Central Europe, more and more fertilizers are again used, the amount of nitrate in the soil is likely to increase dramatically. However, the EU has no polluter-pays-principle for the agricultural sector.

A number of regulations present before the adoption of EU environmental policy have simply been eliminated, regardless of their viability or potential advantages. Perhaps
one of the most egregious of these is that reported by Gille. She notes that Hungary previously had a very extensive system of waste collection that catalogued all the types of waste produced by individual firms. Abandoned in 1992, this institutional system was additionally charged with the responsibility of trying to find alternative uses for industrial waste. Though inefficient and far from perfect in its degree of success, such a program represented a potentially valuable store of information and was a mechanism that potentially could have been used for developing further alternative uses for waste. Moreover, as Gille notes, Hungary was unusual relative to Western Europe in its degree of hazardous waste recycling. However, as Gille notes further, Hungary has completely shifted over to waste collection systems and has dispensed with all its previous waste recycling systems.

Others have likewise noted that many of the Central and East European countries previously had some environmental regulations that were even stricter than EU environmental regulation (Kerekes, 1993). Of course, this did not mean that these environmental regulations were actually enforced. But neither did this mean that the Central and East European countries had no previous environmental regulatory framework. However, once again, environmental regulations of this kind were simply dispensed with as EU environmental regulation was adopted. All in all, respondents note that they would prefer to be able to pursue more diversified solutions to local, regional and state-level problems. However, the imposition of EU environmental regulations and the diversion of resources have tended to make this either difficult or impossible.

A strong case can be made that the (premier) imposition of EU environmental regulation results in a significant diversion of resources from environmental objectives that would more clearly correspond to local, regional and state-level interests and preferences. More importantly, the choice of environmental priorities identified via the process of adopting EU legislation does not appear to do justice to some of the more pressing environmental needs (concerns) in Europe. Finally, the generally weak structure of civil society organizations suggests that the identification and advocacy of important environmental alternatives in Central and Eastern Europe will either not take place at all, or will be under-represented. While there will doubtless be some gains from the adoption of EU environmental legislation (in
particular with respect to the potential degree of monitoring and enforcement and to some extent in the area of wastewater management), there will likewise be many costs. Among the most important of these costs are the following: First, and potentially the most significant, is the quite substantial and long-term diversion of financial and administrative resources to projects that are of dubious importance for Central and East European needs. Second, this diversion of resources is likely to have a significant impact on the overall competitiveness of European economies. Third, alternative and potentially more pressing environmental issues are likely to go un-discussed or even unnoticed. In the long run it is questionable even to what degree success in environmental policy actually depends on EU pressure. A recent study from the EAP Taskforce actually noted that although the Central and East European countries had a bit of a lead on some of their Eastern neighbours in overall environmental expenditures, many of these countries have now caught up with their Western counterparts. Overall expenditure levels on environmental policy in these countries – measured as a share of GDP – now actually approximate levels spent in Central and Eastern Europe. At best, such a statistic questions the relative impact and importance of the EU membership drive on the push to improve the environment in Central and Eastern Europe. The decline of heavy industry and potentially the strong-minded character of a few select individuals who forcefully pushed the environmental agenda in the early years of the transition have been equally if not more significant in explaining Central and Eastern Europe’s degree of environmental success.

Clearly more work could be done in this area of research. For one, it is necessary to explore in more detail the range of environmental policies and practices that were in place prior to 1989. For another, more work could be done to provide a more systematic account of what factors actually drove environmental policy-making in Europe in the early years of transition. In addition, research could be carried out comprehensively to unearth other positive environmental practices that have since been abandoned in the pursuit of EU membership. Finally, the degree to which the adoption of EU environmental policy might have defused citizen participation in defining the domestic environmental agenda is also worth exploring. This, in fact, may be one of the more significant legacies of the drive for EU membership and potentially one of its greater losses.
After the survey of all these laws, it is important to take a particular issue of the environmental policy. This is one of the reasons that climate change has been taken as an issue of research and even the burning agenda of all the member state government. The laws have also tried to explore it more carefully after the Kyoto agreement adopted by the countries. The report of IPCC has given it more boost in further noticing the results of the global warming.
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Table-3.2: Structure of Gross Domestic Product, 1990-2000

Table 3.3: Transitional Periods for Compliance with EU Environmental Regulations.
Table 3.4: Total Estimated Compliance Costs for EU Environmental Regulation

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Table 3.5: Total Costs of Compliance as a Share of GDP and Total Number of Years Required to Achieve Compliance

Source: The GDP data are from Eurostat’s website, compliance costs estimates from DANCEE (2001).

* I have based the calculations of the number of years required for compliance on the following assumptions: annual environmental expenditures of 1% of GDP and an average annual growth rate of 3%.