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TRENDS IN EUROPEAN ENVIRONMENTAL POLICY: IMPLICATIONS FOR THE ACTIVITIES OF THE UNITED STATES ARMY IN EUROPE

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1.0 Introduction

The National Environmental Policy Act (NEPA), passed in 1969 by the United States of America, has been applied to the United States Army and other federal agencies to assess potential environmental impacts which may arise from their various activities. Other nations have followed suit in developing environmental assessment policies, frameworks and legislation. In 1985, the Council of Ministers of the European Economic Community (EEC) approved Council Directive 85/337/EEC on "The assessment of the effects of certain public and private projects on the environment". The Directive, which became law in July 1988, has been legally implemented in the majority of member states through national legislation.

Public awareness of the environment has increased world-wide over the last decade, no more so than in Europe. This increase in awareness has been accompanied by an increase in commitments to protect, conserve and improve the environment, by governments, industry, non-government organizations, interest groups and private individuals. It has also been accompanied by an increasing scrutiny of the environmental performance of organizations whose activities affect the quality of the environment, be they industrial, commercial, government or non-government groups.

Given these developments in the regulatory and political environment, the US Army is now turning its attention to the effects that these changes may exert on its activities in Europe.

This document reports the findings of a study undertaken by the Centre for Environmental Management and Planning (CEMP), at the University of Aberdeen on behalf of the US Army. The purpose of the study was to examine current and future trends in European environmental legislation and policy and the implications these may have for the activities of the US Army Europe (USAREUR). Emphasis has been placed on the role that environmental impact assessment plays or will play within that framework. Chapter 2 outlines the background to the study. Environmental policy and legislation at the European level is discussed in Chapter 3, whilst that of Germany is summarised in Chapter 4. Chapter 5 examines current public attitudes to and perceptions of the environment and US military presence in Germany. Chapter 6 looks at the future, in light of the discussions of previous chapters, and makes recommendations for action. Supporting appendices are included at the end of the report.

This study was supported by the European Research Office of the US Army and the US Army Construction Engineering Research Laboratory.

Since this report was commissioned, great changes have taken place in Europe in a very short period of time. These changes - the so-called "fall of communism", the dismantling of the Berlin Wall, the unification of the Germanies - will have significant implications for traditional alliances and enmities and for the allocation of resources (both financial and human), and have the potential to exert important changes in the way the US Army operates in the defence strategy of Europe.

2.0 Background

As previously discussed, the US Army is turning its attention to the effects that regulatory changes pertaining to the environment may exert on its activities in Europe. One of the resulting initiatives was the holding of a meeting attended by representatives of CEMP and of the US Army, whose purpose was to address key environmental policy issues confronting the US Army in its European activities in the context of recent changes in regulatory requirements in Europe and growing political and public concern about environmental issues generally.

This chapter summarises the discussions held at the meeting, since they form an important background to the rest of this study.

The meeting was held from 18-21 September 1989 at the University of Aberdeen. Those present included:

- Brian Clark, CEMP (chair);
- Ray Clark, Office of the Assistant Secretary to the US Army for Installations, Logistics and Environment;
- Jerry Comati, Environmental Sciences Branch, United States Army Research, Development and Standardization Group (UK);
- John Fittipaldi, Environmental Division, United States Army Construction Engineering Research Laboratory (USACERL);
- Phil Huber, USAREUR; and
- Amanda Chisholm, CEMP.

The meeting comprised discussions between CEMP and US Army representatives on :

- NEPA and proposed amendment HR1113;
- EEC environmental policy and Directive 85/337/EEC;
- implementation of Directive 85/337/EEC by member states;
- environmental trends in Europe;
- activities and responsibilities of the US Army in Europe; and
- research and training needs of the US Army in Europe.

The meeting also considered training requirements for both US Army and local personnel in key European countries to help the US Army implement sound environmental assessment specifically and environmental management generally. The US Army Construction Engineering Research Laboratory, sponsored by USAREUR, is developing a database of environmental sources to assist USAREUR environmental coordinators in performing environmental analysis, and this was also the subject of discussion.

One of the conclusions of this meeting was that awareness of the kinds of problems the US Army faces both now and in the future is required, to achieve improved environmental performance. Accordingly, CEMP recommended the development of a policy paper to outline these issues, to achieve the following:

- a general awareness of problems the US Army is facing with respect to the environment;
- a general awareness of the series of events leading to this situation;
- a specific knowledge of environmental trends in Europe; and
- an awareness of how environmental trends and policy will change after 1992 and after the year 2000.

The document contained herein is the result of that recommendation.

Summarised below are the discussions concerning the external forces driving environmental awareness in the US Army. These include public awareness of the environment, and attitudes to the US military presence in Germany. This summary has been taken from CEMP (1990) and is further discussed in Chapter 5.

A detailed discussion of the internal forces working on the US Army, particularly the proposed amendments to NEPA, is contained in Chapter 6.

Environmental Trends in Europe

Public awareness of the environment has increased world-wide over the last decade, no more so than in Europe. This increase in awareness has been accompanied by an increase in commitments to protect, conserve and improve the environment, by governments, industry, non-government organizations, interest groups, and private individuals.

This has been exemplified by the rise of the Green Party in Europe, which was originally confined to West Germany but has now spread to include the European Parliament. The increased profile of environmental issues within the European community means that political pressure is being exerted, both *on* governments (e.g. by the voting public) and *by* governments.

In the European Community increased attention is being paid to the environment, resulting in an increase in legislation (mainly Directives) and a promise of more to come. In the member states, governments are, to varying degrees, being forced to consider environmental issues, led in the main by Germany and the Netherlands.

In the last year the demands of the individual consumer have become a major influence as the "green consumer" movement has grown. Individuals are now more able to choose more environmentally friendly products because of their increased availability. Although the green consumer movement has been fuelled by environmental awareness, it in turn promotes environmental awareness, and thus its effects have been both economic and political.

The pending Single European Market of 1992, although focused on fairness in trading, will undoubtedly have its effects on approaches to environmental management. A process is already underway to establish a European environmental monitoring system, for example. Calls have been made for a European Environmental Protection Agency. The Single Market could well result in improved flows of environmental information, with increased government intervention in environmental affairs. The latter will probably be in the form of regulations, although there are indications that economic measures such as effluent charges may also be utilised. These may be accompanied by moves to introduce corporate and/or individual liability for environmental damage.

Overall, the European Commission is encouraging the integration of environmental policy into other policies, thereby making environment one of a set of decision-making criteria.

US Army Experience in Germany

Apart from American forces, troops stationed in West Germany include Canadian, French, British, Belgian and Dutch forces. Some 90% of the American troops stationed in Europe are situated in West Germany. Other units are deployed in northern Italy, with support units in the Benelux countries.

Since the devastation of World War II, West Germany has experienced economic prosperity. Quality-of-life issues have become important to its citizens, which includes an increase in awareness of environmental issues. Green issues are no longer the remit solely of the Green Party, but have been incorporated into all political party platforms.

The US Army has found that its activities in Europe are being subjected to scrutiny, due to increased environmental awareness on the part of the public and of governments, and to changing attitudes to the presence of NATO forces in Europe. An example of the former comes from problems of groundwater. Some 85-90% of West Germany's drinking water comes from groundwater sources. Groundwater is now threatened with contamination, which has resulted in a backlash against any development which appears to threaten the environment. As to the latter, Eastern bloc countries are no longer seen to represent the military threat that they once did. Accordingly, questions are being raised about the necessity of keeping permanent troops stationed in West Germany.

The German public is also concerned about the effects of armed forces' actions on the environment. The activities of the US Army do cause physical damage to the environment, for example through the undertaking of maneuvers. Some 80% of this damage is to roads, sidewalks, facilities, etc, for which the US Army pays compensation. The remaining 20% of damage is to natural and farming areas, particularly field sites used for tank training. These sites have been

set aside specifically for this use, and so compensation is not paid. The public has protested about these sites, both in terms of noise and the visual impact of damage. Other activities are more difficult to compensate for, such as the low level flights taking place throughout Germany, and training of troops at night.

The design and construction of the US Army's buildings, facilities etc, are largely carried out by the host country (to US Army specifications) and thus, as a guest force, the US Army is subject to the very detailed land use planning process and must comply with its regulations. These regulations, concerning forestry for example, may differ from state to state, rendering compliance more difficult than it otherwise would be.

German forces are also subject to planning regulations. Although the German forces are officially exempt from Directive 85/337/EEC, they have voluntarily chosen to adopt an environmental impact assessment process. They have addressed this by developing methods for environmental assessment which are oriented to the impacts of construction and technological solutions. The former is unfortunate, since it is the public's perception of *operational* impacts which is more critical at this stage. In addition, Germany has in place civil and criminal charges for environmental damage; members of the West German armed forces have been prosecuted and convicted.

In addition to planning regulations, the German armed forces are being pressured by the public. The response has been to use technological solutions, such as tank firing in sheds to reduce noise, or to cease activities, such as training at night. These solutions have increased the pressure on the US Army to adopt similar responses, which may not always be appropriate. As a result of public action, military projects are being delayed or cancelled, through the Courts for example, by suing the Minister of Defence, or through objections lodged during the planning process.

The US Army has been making attempts to apply environmental impact assessment to its activities through its USAREUR Environmental Impact Assessment Program (UEIAP). The purpose of this program is to assess and minimize USAREUR's environmental impacts, through five major components:

- an Environmental Review Guide (ERG);
- Environmental Impact Quantification;
- Environmental Mitigation and Monitoring;
- Environmental Database; and
- Workshops.

The Environmental Review Guide has been developed by USACERL, sponsored by USAREUR. The Guide is intended to act as an early warning system to flag environmentally sensitive projects early in their planning phase, and has been found to be adequate in meeting its users' expectations. Environmental impact quantification procedures are being developed which will complement the Environmental Review Guide and provide a significant increase in the resolution of environmental analysis.

The US Army in the past has encountered difficulties in collecting the baseline data it needs to assess the impacts of its activities. Some data is available, but is not coordinated. In consequence, a project is now being undertaken by USACERL to develop an environmental database that will identify and describe sources of baseline data needed to conduct environmental analysis. The database will consist of three primary sources of environmental baseline data:

- German federal, state, and local data;
- USAREUR environmental data sources; and
- agencies that can collect first generation environmental data.

This database will be an integral tool for all environmental analysis.

The US Army has also developed environmental design criteria, but these are used only on a project-to-project basis, if at all. As another part of its environmental activities, the US Army has also developed a process for environmental auditing which was tested in 1990 at two USAREUR military communities. Refinement of the protocols is expected to permit implementation in 1991.

Procedural and Cultural Conflicts

There are several cultural differences between the US and Germany which may result in procedural and cultural conflicts arising from the activities of the US Army, particularly with respect to the implementation of environmental impact assessment. These are summarised below:

- the German system of environmental management is oriented primarily to the use of regulations;
- German solutions to environmental problems tend to be sought in the form of technological "fixes";
- there is a distinct lack of interdisciplinarity in Germany and the disciplines tend to restrict their viewpoints to their own subjects;
- many of the US Army's German employees are engineers by training who are not experienced with the principles or application of environmental impact assessment, whether this is as required under NEPA, the EEC Directive or national environmental legislation;
- individual rights are of prime importance in Germany;
- Germany is a fragmented society, abounding in different values and ideas;
- there is a tendency in German society to accept and rely absolutely on the statements of experts, which can lead to problems.

Summary of Issues

As the preceding section makes clear, discussion of the US Army's activities in Europe, from the point of view of environmental impact assessment, covered a wide range of topics. In summary, these were:

- the proposed amendments to NEPA;
- implementation of the the environmental assessment Directive 85/337/EEC in Germany;
- environmental trends in Europe; and
- activities and responsibilities of the US Army in Germany.

The US Army is currently being confronted by a changing political climate in Europe, in which the environment is playing an ever-important role, and by a public critical of its presence and activities in Germany, particularly from an environmental viewpoint. In order to continue to maintain required training and readiness states, the US Army must improve its environmental performance. To achieve this, it:

- may be required to bring environmental assessment methods and tools to Europe;
- needs to establish a system to identify potential environmental problems and issues; and
- needs to improve design instructions.

At the same time, it must be seen to retain its status of sovereign immunity and to keep its environmental assessment activities on a voluntary basis. (This issue was important but may have changed with the events outlined in Chapter 5.)

Several issues which may impede the effective application of environmental impact assessment by the US Army include cultural and procedural differences between the US and Germany, such as:

- need for a proactive approach;
- requirement of interdisciplinary teams and flexible attitudes; and
- lack of environmental staff in Germany, in terms of both numbers and experience.

3.0 European Environmental Policy

3.1 Introduction

The Conference on the Human Environment, hosted by the Swedish government in Stockholm in 1972, was a major event in the development of environmental awareness on the part of governments and industry internationally. It was this conference which was responsible for the establishment of the United Nations Environment Programme (UNEP), and it was followed by many meetings and conferences which made resolutions and developed programs for action, at both international and regional levels. It thus played an important part as an initiator of environmental protection measures in Europe and elsewhere.

Various actors have been and currently are involved in developing environmental policy in Europe. These include the United Nations Economic Commission for Europe and the European Economic Community. Each has a different role to play, and these are described in the chapter below in terms of their structure and function, and the influence each organization is able to exert with respect to environmental policy.

3.2 United Nations Economic Commission for Europe (UN ECE)

The United Nations Economic Commission for Europe (UN ECE) is the only permanent intergovernmental organization which fosters economic cooperation among the countries of Europe. It has 34 members[1], comprising most of the European countries as well as the United States of America and Canada.

The UN ECE was founded in 1947, initially to deal with post-war reconstruction. As this was achieved, the ECE's priorities changed to the promotion of trade and transport, and the fostering of scientific and technological cooperation. Its activities now encompass a wide area, from general economic analysis and economic policy issues to specific sectors such as trade, transport, statistics, environment, energy, industry, agriculture and forestry (UN ECE, 1990).

The ECE has been aware of environmental problems in Europe since the 1950s, when it initiated studies on water pollution from shipping, industrial and communal discharges into rivers. The environment was recognised as a priority issue in 1967 by the ECE and in 1971 an "ECE Symposium on Problems Related to the Environment" was held in Prague to discuss international cooperation, economic strategies and effective information systems.

The Stockholm Conference was followed in 1975 by the Conference on Security and Cooperation in Europe (CSCE), which produced the Helsinki Final Act. Included in this act was a section on "Cooperation in the Field of Economics, of Science and Technology, and of the Environment". The recommendations for environmental protection measures were directed to the ECE and its member countries, and have been a major influence on ECE activities since.

The main role of the ECE in terms of the environment is in the gathering and exchange of information, the commissioning of studies into specific environmental problems, and the development and implementation of policy initiatives which take the form of international protocols, conventions and agreements. These include, for example, the Agreement Concerning the International Commission for the Protection of the Rhine against Pollution (1963) and the Convention on Long-range Transboundary Air Pollution (1979).

At present the ECE is in the process of preparing a Convention on Environmental Impact Assessment in a Transboundary Context, under the auspices of the Senior Advisers on Environmental and Water Problems, to be finalised at the end of 1990. The Convention will stipulate commonly agreed provisions to carry out jointly or to coordinate national procedures for assessing environmental impacts and to arrange for the application of environmental impact assessment at an early stage of planning for certain activities likely to cause transboundary impacts.

1 Albania, Austria, Belgium, Bulgaria, Byelorussian SSR, Canada, Cyprus, Czechoslovakia, Denmark, Finland, France, German Democratic Republic, Federal Republic of Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Spain, Sweden, Switzerland, Turkey, Ukrainian SSR, USSR, United Kingdom, United States of America, Yugoslavia.

The ability of the ECE to achieve direct influence on national policies is limited, partly for financial reasons, but mainly because of its need to reconcile two very different political systems[2]. However, the ECE does play an important role in developing overall policy which is binding for both sides (Rhode, 1987).

3.3 European Economic Community

3.3.1 Structure and Function of the Community

Environmental policy in the European Community is a combination of a broad conceptual framework and a set of legislative instruments which work within it. There are various institutions involved in the development of policy and legislation in the European Community. These are:

- the European Parliament;
- the Commission;
- the Council;
- the Court of Justice; and
- the Economic and Social Committee.

The Commission, composed of individuals appointed by national governments, proposes legislation. However, legislation can only be adopted by the Council, which consists of one Minister from each member state. The role of Parliament is to give its opinion on any proposed legislation before it is adopted (as well as approving the annual budget), and the Court of Justice has its role in interpreting legislation through the hearing of cases. The Economic and Social Committee also expresses its opinion on proposed legislation.

The Treaty of Rome was amended in 1987 to include the environment (see below), thus providing a firm legal base for any environmental action taken by the Community. The Community's legislative instruments for environmental policy comprise Regulations, Directives and Decisions (see Table 3.1 for definitions). There has been an increase in legislation directed to the environment; on the whole, this has tended to be in the form of Directives (Table 3.2).

Table 3.1 European Policy Instruments

A Regulation is directly applicable law in the Member States and is mostly used for rather precise purposes such as financial matters and the day to day management of the Common Agricultural Policy. It has so far been used only rarely for environmental matters.

A Directive is binding as to the results to be achieved, but leaves to the Member States the choice of form and methods. It is therefore the most appropriate instrument for more general purposes particularly where some flexibility is required to accommodate existing national procedures and, for this reason, is the instrument most commonly used for environmental matters.

A Decision is binding in its entirety upon those to whom it is addressed. It has been used in the environmental field in connection with international conventions and with certain procedural matters.

Source: Haigh 1987

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[2]This may change in the future as political systems within Europe change; see Chapter 5.

Table 3.2 Trends in European Environmental Legislation

Date	Number of laws passed
1967-69	2
1970-74	16
1975-79	44
1980-84	84
1985-87	61

Source: Haigh 1987

3.3.2 History of EEC Environmental Policy

Following the Stockholm conference, Heads of State and government held a conference in Paris in October 1972, the result of which was a declaration on the environment. The declaration called for the first action program on the environment which established the objectives and principles of Community environmental policy and discussed actions which could be taken to achieve these. The eleven principles of Community Environmental Policy are summarised in Table 3.3. Some legislation had already been passed prior to the Paris summit, but outside the context of a policy framework.

These objectives and principles have now been formally included in the Treaty of Rome by the Single European Act 1986. For the purposes of this report the amendments of major interest consequent to the Act were:

- a statement of European environmental policy (Article 130R), and
- a commitment that environmentally-related standards established to achieve the internal market (Article 100A) will take a high level of environmental protection as their base.

The full text of Article 130R is contained in Appendix I.

In brief, the objectives of the policy are three-fold:

- to preserve, protect and improve the quality of the environment;
- to contribute towards protecting human health; and
- to ensure a prudent and rational utilization of natural resources.

In pursuit of these objectives, the Single European Act states that several principles shall be followed:

- preventative action;
- prevention of environmental damage at *source*; and
- the polluter-pays principle.

Table 3.3 The Eleven Principles of European Environmental Policy

1. The principle of prevention: it is better than cure.

2. Environmental effects should be taken into account at the earliest possible stage in decision making.

3. Exploitation of nature or natural resources which causes significant damage to the ecological balance must be avoided. The natural environment can only absorb pollution to a limited extent. It is an asset which may be used, but not abused.

4. Scientific knowledge should be improved to enable action to be taken.

5. The polluter pays principle: the cost of preventing and eliminating nuisances must be borne by the polluter, although some exceptions are allowed.

6. Activities carried out in one Member State should not cause deterioration of the environment in another.

7. The effects of environmental policy in the Member States must take account of the interests of the developing countries.

8. The Community and Member States should act together in international organisations and in promoting international and worldwide environmental policy.

9. The protection of the environment is a matter for everyone. Education is therefore necessary.

10. The principle of the appropriate level. In each category of pollution, it is necessary to establish the level of action (local, regional, national, Community, international) best suited to the type of pollution and to the geographical zone to be protected.

11. National environmental policies must be coordinated within the Community, without hampering progress at the national level. This is to be achieved by the implementation of the action programme and of the 'environment information agreement'.

Source: Haigh 1987

The Environmental Action Programs

The detailed policy framework for environmental affairs is provided by the Community's environmental action programs. These outline intended legislation and future activities, and discuss broader issues and possible future directions for policy and action in the Community. The first action program commenced in 1973, and the fourth is now underway.

The first two action programs concentrated on a reactive, curative approach, particularly with regard to acute pollution problems, although they did contain the principle of prevention. This prevention principle was further enunciated in the third and fourth programs, representing a shift in emphasis from the reactive to the preventative.

The EEC's Fourth Environmental Action Program is the one currently in effect, being valid for the period 1987-1992. It establishes the following four priority areas:

- pollution prevention;
- improvement in management of resources;
- international activities; and
- development of appropriate instruments.

The Program focuses on the need for the integration of environment with other Community policies, as well as the need for implementation of existing environmental Directives. In addition the Fourth Environmental Action Program designated 1987 as the European Year of the Environment (see Chapter 5).

3.3.3 Directive 85/337/EEC

The EEC Directive on the assessment of the effects of certain public and private projects on the environment (85/337/EEC) was passed on 3 July 1985 (Appendix II). Formal compliance by member states was expected by 3 July 1988. National defence projects are officially exempted in Article 1 of the Directive (although the original draft Directive published in 1980 did include military projects under its auspices).

The Directive is characterised by its "precautionary function" (Storm, 1990), by establishing that "development consent for public and private projects which are likely to have significant effects on the environment should be granted only after prior assessment of the likely significant environmental effects of these projects has been carried out" (85/337/EEC). It requires that the developer shall provide information to the consenting authority which includes at the least:

- a description of the project comprising information on the site, design and size of the project;
- a description of the measures envisaged in order to avoid, reduce and, if possible, remedy significant adverse effects;
- the data required to identify and assess the main effects which the project is likely to have on the environment; and
- a non-technical summary of the information mentioned above.

Details of the information to be included are provided in Annex III of the Directive.

Authorities who have information relevant to the proposed development should make it available to the developer. The Directive also requires that authorities likely to have concerns about the project "by reason of their specific environmental responsibilities" should be consulted before development consent is granted, as should the public.

The requirement for assessment is based on project type. Projects have been assigned to two classes, Annexes I and II of the Directive. Annex I comprises those projects which will always be assessed by reason of their nature and/or size (e.g. crude oil refineries, nuclear power stations, integrated chemical installations, etc). Annex II, the larger of the two, requires that projects in this category be assessed where "member states consider that their characteristics so require" (Article 4.2). These include the energy industry, the processing of metals, the chemical industry, and infrastructure projects, amongst others.

The emphasis of the Directive is on the provision of information to the consenting authority by the developer and other parties. It differs here from NEPA, which focuses on the production of an environmental impact statement.

3.4 The Future

Fifth Environmental Action Program

This Program is in the process of being drafted and little information is available. However, it could contain the following points:

- pressure currently being exerted on industry to improve its environmental performance could be expanded to include government;
- the existing commitment to economic and environmental integration could be extended to explicitly include the concept of sustainable development;
- the Commission may make a commitment to establishing a cross-media approach to pollution control.

The future will definitely hold:

- stricter environmental standards: sector, source and substance oriented;

- development of product standards to ensure harmonisation as part of the completion of the internal market.

Directive 85/337/EEC

The environmental assessment Directive will be revised in the near future. Two internal Directives are currently being circulated in the Commission for expert opinion prior to their publication as draft Directives. One concerns the inclusion in Annex I of certain agricultural developments previously classified as Annex II projects. The other involves broadening the scope of the Directive such that not only projects but plans, programs, and policies are made subject to environmental assessment.

Others

The Commission is expressing an interest in corporate environmental auditing. The full extent of this interest is not yet known, but research on the subject is underway and it is expected that environmental audits will be included in the next budget by Parliament.

4.0 German Environmental Policy[1]

The purpose of this chapter is to discuss environmental policy in Germany. The chapter begins with a general discussion of institutional frameworks and outlines the division of environmental responsibilities between different levels and departments of government. This is followed by an examination of environmental impact assessment prior to 1990, and an outline of the new environmental impact assessment law passed in 1990. The chapter finishes with a discussion of future directions for environmental impact assessment.

4.1 Introduction

Government in Germany is characterised by its decentralised nature. There are three major levels of government: federal (Bund), state (Länder) and local community or municipality. Each has its own powers and responsibilities. Responsibility for legislation is divided between the federal government and the Länder. Generally speaking, the federal government has the main responsibility for devising legislation, but implementation is primarily the task of the Länder (ECE, 1989; Kennedy, 1981). The federal government may pass three types of legislation: exclusive, concurrent and framework (Section 4.1.1).

There are eleven Länder: Baden-Württemberg, Bavaria, Berlin, Bremen, Hamburg, Hesse, Lower Saxony, North Rhine-Westphalia, Rheinland Palatinate, Saarland, and Schleswig-Holstein. The constitution and structure of each of the Länder differs from state to state. The Länder participate in federal legislation through their representative body, the Federal Council (Bundesrat), and also pass their own laws at the state level.

There are two tiers of community authorities, the Kreis or district authority, and the Gemeinden, or municipality. The Kreis is a public body with legal status, responsible for activities that go beyond the areas of the individual Gemeinden or exceed their financial or organizational capacity. The Gemeinden are guaranteed a certain autonomy by the Constitution and are responsible for most local matters as well as for matters delegated to them by the Länder or federal governments.

4.1.1 Environmental Protection

In Germany environmental concerns are often dealt with through various planning procedures. Responsibility for the environment is shared out between the different levels of government. Thus, overall regional planning, regarded as an important policy instrument for integrating environmental factors into planning, takes place at three levels: national planning (Federal Planning Act); state and district planning (individual Länder laws); and town and country planning (Federal Building Act) (ECE, 1989).

The Federal government has several areas of responsibility in environmental protection:

- **exclusive** legislative power, applying to air traffic and railways, foreign trade and international shipping agreements;

- **concurrent** legislative power, in the sectors of: waste discharge and disposal; air quality control; noise restriction; exploitation of nuclear energy and radiation protective measures; road and rail traffic; coastal, maritime and river shipping; energy; fisheries; the promotion of agricultural and forestry production; foodstuffs; and the protection of fauna and flora (DOCTER, 1987).

The Federal government can also issue **framework** laws on water management, hunting and nature and landscape protection, and sectoral planning.

Responsibility for different areas of the environment is allocated to a variety of federal government agencies. These comprise:

- the Ministry of the Economy, responsible for energy and raw materials policy;
- the Ministry for Food, Agriculture and Forestry, responsible for food policy, the development of rural areas, and forests and hunting;

[1] This section discusses the institutional framework of the Federal Republic of Germany prior to its unification with the German Democratic Republic, which took place on 3 October 1990.

- the Ministry of Transport, responsible for road and river traffic, road construction and construction of navigable waterways;
- the Federal Ministry of Town-planning and land management, responsible for land planning and building control; and
- the Ministry for the Environment, Nature Conservation and Nuclear Safety, responsible for:
  - clean air
  - combating noise
  - protecting ground and surface waters
  - water supply
  - protection of soil
  - waste disposal
  - ecological protection
  - protection of flora and fauna
  - protection of specific areas and biotopes
  - environmental health
  - law on chemicals
  - food additives
  - safety of nuclear installations, operation of nuclear reactors, law on radiation, radiation hazards
  - supervising the issue of licences
  - cooperating with environmental groups
  - international cooperation in all aspects of environmental protection and nuclear safety.

In addition there exists a Cabinet Committee on Environmental Affairs, as well as a Standing Committee of Directors of National Environmental Affairs which coordinates the work of federal ministries concerned with environmental questions (ECE, 1989).

The Federal Agency for the Environment (Umweltbundesamt) was created in 1974 and is part of the Ministry of the Environment, Nature Conservation and Nuclear Safety. The Agency does not have executive powers (for example, cannot enforce legislation) but acts in a consulting capacity, providing information, initiating, coordinating and supervising research, and advising other *government departments*. In 1983 a section was created specifically for EIA.

The government departments in the Länder responsible for environmental protection vary from state to state. Some have a separate Ministry of the Environment, while others have environmental protection responsibilities subsumed within existing departments such as Agriculture, Economy, Health, etc.

At the joint Federal and Länder level are two bodies, the Conference of Environment Ministers and the Standing Committee of Directors for Federal and Länder Environmental Affairs (ECE, 1989).

The municipalities are responsible for environmental protection inasmuch as they are responsible for the environmental effects of local spatial development plans (Lee et al, 1985). This includes, for example:

- drawing up local land-use and construction plans;
- planning public transport;
- improving residential areas;
- planning green areas;
- disposing of waste and effluents; and
- supplying electrical energy.

In general, each area of environmental protection policy is dealt with by a separate agency, although attempts are being made by local authorities to concentrate environmental protection responsibilities under the aegis of one organization (ECE, 1989).

4.2 Existing Institutional Framework

4.2.1 Environmental impact assessment prior to 1990

The issue of environmental impact assessment has been the subject of much controversy in Germany. Essentially there are two views. One is that EIA is adequately provided for in existing federal legislation; thus national law already conforms with the EEC Directive (Storm, 1990) and

a separate explicit piece of EIA legislation is unnecessary. The opposing view is that these provisions do not make EIA mandatory and that EIA-specific legislation is necessary to implement the EEC Directive. This is one of the reasons that there has been such a delay between the passing of the Directive and its translation into German law.

Until recently, there has been no legislation at the federal or Länder level concerning environmental impact assessment. This is not to say that environmental impact assessment was ignored; it was included in the Federal Environmental Programme of 1971 and in 1975 was the subject of a Cabinet resolution.

The 1971 Federal Environmental Programme stated that the effects of public actions on the environment should be considered, and therefore that environmental factors should be included in the planning of public measures at an early stage so as to avoid or reduce negative environmental impacts (Kennedy, 1981). [Public measures include regulations (legal and administrative), plans, and projects such as highways, airports, canals, power plants, etc.] No details were given as to how environmental impacts should be assessed, nor was there development of an EIA process.

In 1972 the Interdepartmental Rules of Procedure changed such that the Federal Minister of the Interior (then responsible for environmental problems) should participate in the development of any legal or administrative regulations which may have an impact on the environment, "to guarantee the assessment of environmental impact".

The "Principles for the Environmental Impact Assessment of Federal Actions" (Grundsätze für die Prüfung der Umweltverträglichkeit öffentlicher Maßnahmen des Bundes) were adopted by a federal cabinet resolution in 1975 as an alternative to legislation proposed by the Ministry of the Interior. The Principles make recommendations regarding both EIA and the production of an EIS in terms of content and procedure. They apply only to federal public sector actions; the activities of the private sector and state or local government are not included. Although the Principles formally oblige federal bodies to carry out environmental assessment, in practice they can only act as guidelines, since they are not supported by legal instruments and therefore cannot be enforced by the courts. They recommend the administrative process outlined in Table 4.1. The Principles rarely have been implemented (Storm, 1990).

Although there was no specific legislation directed to EIA prior to 1988, some kind of environmental evaluation has been included as a provision in several federal laws. These can be summarised as requirements attached to formal licensing procedures for nuclear power stations, water uses and certain types of industrial plants, and requirements attached to planning approval procedures for such infrastructure as motorways, railway lines, harbours, airports and waste processing plants (Lee et al, 1985). The legislation of interest includes (DOCTER, 1987):

- Federal Railway Act (Bundesbahngesetz, 1951) article 36;
- Act on refuse disposal (Abfall beseitigungsgesetz), article 14;
- Air Traffic Act (Luftverkehrsgesetz, 1922), article 8;
- Atomic Act (Atomgesetz, 1959), article 9b;
- Act on trunk roads (Bundesfernstrassengesetz), article 17;
- Federal Waterway Act (Bundeswassersstrassengesetz,1968), article 14;
- Water Supply Act (Wasserhaushaltsgesetz, 1957), article 31;
- Land Re-organization Act (Flurbereinigungsgesetz), article 41;
- procedures for spatial planning and development;
- permit procedures;
- regulations covering actions related to the law on nature protection.

By 1985, some of the Länder had adopted EIA regulations, including Saarland (1976), Berlin (1978) and Bavaria (1978), and others (Hamburg and Hesse) were in the process of developing them (Lee et al, 1985). However, little appears to have been done to implement these regulations. Bremen developed an Environmental Protection Programme in 1975 and other states have to varying degrees included EIA in planning procedures, though without any legal foundation.

By 1990, 120 municipalities had incorporated EIA into local spatial development plans (Bunge, 1990). These have included Saarbrücken City (1973) and Berlin City (1978). Each community has however developed its own approach to EIA, so that there is no procedure common to them all. Again, EIA is carried out at this level without any legal basis.

Table 4.1 System of Environmental Evaluation in Germany (Lee et al, 1985)

I. Preliminary evaluation

1. Presentation of sectoral development proposals

- statement of sectoral development goals
- definition of fundamental preconditions
- identification of the expertise employed in the preparation of the proposals

2. Presentation of the sectoral measures

- alternative solutions to the problem
- choice of measures

II. Consideration of the environmental relevance of the proposals

3. Testing whether detrimental environmental impacts are likely to be avoided

III. Examination of the environmental impacts

4. Identification of the environmental impacts

- baseline analysis (analysis of the environmental setting)
- prediction of future environmental conditions without measures
- prediction of the impacts of the measures
- comparison of the predicted impacts of the measures

5. Evaluation of the environmental impacts

6. Examination of the remedial measures and alternatives in case of detrimental impacts on the environment

IV. Weighting the environmental relevance in comparison with the other interests involved

4.2.2 Act Implementing the Council Directive of 27 June 1985 on the Assessment of the Effects of Certain Public and Private Projects on the Environment (85/337/EEC)

The above Act was published on 12 February 1990 and took effect on 1 August 1990. Its purpose, as its title states, is to implement EEC Directive 85/337/EEC on environmental assessment in Germany. For clarity and brevity, the Act will be referred to from now on as the EIA Act. This section discusses the EIA Act in detail, in particular its scope and the procedures following from it. The EIA Act may be found in the original German in Appendix III.

The EIA Act uses Directive 85/337/EEC as its basis. In implementing the Directive, the following stance has been adopted:

- already-existing EIA provisions in other regulations must not be weakened;
- the latitude within the Directive should be interpreted in favour of developing an effective EIA process, rather than as an excuse for ignoring it;
- a step-wise approach has been used in which the first step (the EIA Act) conforms with the Directive and may be further developed in future;
- EIA has been integrated into already-existing procedures;
- EIA is to be initiated as early as possible in the planning process.

The EIA Act is structured in three parts:

- the Environmental Impact Assessment Act;
- amendments to 11 Federal Acts; and
- final provisions.

The purpose of the EIA Act is to

> *... ensure that the environmental impact of projects subject to EIA are determined, described and evaluated comprehensively at an early stage in accordance with uniform principles and that the results of the EIA are taken into consideration by the authorities as early as possible in all their decisions on the permissibility of the project, in order to assure an effective anticipatory environmental policy.* (Storm, 1990)

The EIA Act is directed to the assessment of projects, both public and private. The projects are listed in an annex (Appendix III), and comprise almost all projects subject to planning approval under federal law as well as 25 types of installation which are subject to licensing procedures under the emission control and atomic energy laws. Although the military is deemed to be exempt from the EEC Directive, the EIA Act in principle includes the actions of the military in its provisions. It states that exemptions may be granted. If more stringent requirements for EIA are contained in federal or Länder regulations, these will take precedence over those of the EIA Act.

Rather than establishing a separate procedure for EIA, the EIA Act takes an approach which integrates EIA requirements into the already-existing licensing procedures for projects. Existing authority jurisdiction has not been changed, nor have new authorities been created. Provisions have been made for parallel licensing procedures and multi-tier procedures.

In general the EIA procedure involves the following steps:

- informing the developer of the scope of the investigation;
- assistance by the authorities in gathering information;
- obligation of the developer to submit information;
- consultation with other authorities who may be affected;
- public participation; and
- assessment of the environmental impact.

4.3 The Future

Once experience has been gained in implementing the EIA Act, the federal authorities will decide on whether or not changes need to be made, for example, whether the licensing requirements laid down in the various Acts need to be revised or harmonised, whether an autonomous EIA procedure needs to be formulated, or whether approvals should become the responsibility of one authority (Storm, 1990). At this stage, attention may also be paid to issues not addressed by the EEC Directive, such as post-project management, monitoring and auditing. The passing of this Act therefore should not be regarded as the end of EIA development, but rather as a step in its evolution.

Ultimately, the Germans intend to draw up a Federal Environmental Code which will cover the environmental impact of human activities. The Code is seen as a long-term goal, the initial steps having been taken in 1980 with the passing of the Chemicals Act, which was directed to substances, and a further step being achieved through the project-oriented EIA Act. Clearly, then, it can be expected that additional legislation, regulations, etc. will be passed in the future to further the achievement of this goal.

Regulations will be issued concerning the criteria and methods used to identify, describe and assess environmental impacts. These regulations are currently in the process of being developed.

5.0 Events and Attitudes

The purpose of this chapter is to explain the factors external to the US Army which, in conjunction with the internal forces discussed in Chapter 6, are increasing its awareness of the need to include environmental protection strategies within its overall operational framework in Europe. The chapter builds on the issues discussed in Chapter 2, beginning with a history of environmental awareness in Europe and some of the events important in that history. It then goes on to discuss current environmental awareness in Europe, from the point of view of the public, industry and government.

Since this report was commissioned, major events have taken place in Europe which will increase some of these external pressures, particularly those which question a US military presence in Europe of any kind. Accordingly, a brief discussion of these events is included at the end of the chapter.

5.1 History of environmental awareness in Europe

The increase in environmental awareness on the part of the general public in Europe has been a gradual process, commencing in the 1960s with greater environmental knowledge on the part of specialists and continuing into the 1970s with increased action by interest groups on behalf of the environment. Environmental issues are now a major political issue in Europe, and have been particularly so since the mid-1980s (Simonis, 1984). Part of this spread of awareness is to do with the flow of knowledge as it becomes available, but it has been assisted by a series of catastrophic events over the last two decades which have been the subject of wide media coverage and public protest. These have comprised major pollution incidents which have arisen in the normal everyday pursuit of economic goals and have had serious ramifications for human beings and/or wildlife. They include oil spills, escapes of gaseous chemicals, and chemical spills (see Table 5.1 for examples).

An additional factor has been the increasing awareness of cumulative damage to the environment at both global and local levels, such as:

- acid rain (e.g. Black Forest in West Germany, etc);
- global warming/greenhouse effect;
- desertification;
- habitat destruction and disappearance of wildlife (e.g. the panda); and
- destruction of tropical rainforests.

The general public's environmental awareness increased considerably through the 1980s. In 1984, for example, there were 1500 environmental interest groups and/or organizations, with more than 5 million members in West Germany. The United Kingdom has seen a similar increase in the number of environmental interest groups and members. Add to this an increased and extensive media coverage of environmental issues, and the result is an increased educating of the general public.

An additional factor was the designation of 1987 as the European Year of the Environment by the European Council. Its goal was to educate the public about the importance of the environment and thereby change both individual and societal attitudes about the need for environmental protection. The program was action-oriented, involving specific projects for environmental improvement as well as the dissemination of information.

The rise of the Green Party in Europe gives indicates the rising level of environmental awareness and willingness to act in a political context. The Green Party was first formed in West Germany in 1979, built on a combined foundation of the environmental movement of the 1970s and the Peace Movement of the 1980s opposing the deployment of new nuclear missiles (Szabo, 1990). By the end of 1982 the Green Party was represented in six Länder parliaments, and by 1983 had reached Federal parliament (Bundestag). The second direct elections to the European Parliament saw the fielding of Green Party and related candidates from France, West Germany, Belgium, Luxembourg and the Netherlands. Candidates sympathetic to Green concerns also ran in Denmark, Italy, Britain and Ireland (Watts, 1984).

This new political "postmaterialist" style has been epitomised by the demands of the so-called "green consumer", a challenge industry has been quick to take up. The rapid growth in green

Table 5.1

Torrey Canyon
In July 1967 the Torrey Canyon foundered on the Seven Stones reef off Land's End, Cornwall. 120,000 tonnes of crude oil were spilled, affecting nearly 400 km of shoreline used for recreational and commercial fishing purposes. The incident was covered in the media for several weeks, partly due to the technical difficulties of the oil clean-up.

Seveso
A chemical plant located in Seveso, Italy suffered an incident on 10 July, 1976 whereby a cloud of vapour, liquids and particulate materials was released from the facility and settled over some nearby houses and fields. An important component of this cloud was TCDD (dioxin). Many animals died, and several children suffered chemical burns and chloracne, the latter a classic symptom of TCDD poisoning.

Amoco Cadiz
The incident of the supertanker, the Amoco Cadiz, occurred on 16 March 1978 with the spillage of 230,000 tonnes of light crude oil. 80,000 tonnes of this oil came ashore on the beaches and estuaries of the north coast of Brittany, resulting in a massive level of ecosystem destruction and the collapse of the local oyster industry. Industries such as fishing, tourism, and seaweed harvesting suffered from the oil spill, and the cost of the spill has been estimated as being between $150 and $180 million.

Bhopal
In 1984 methyl isocyanate gas from the Union Carbide plant in Bhopal, India escaped into a nearby slum area with a population of 200,000, killing over 2000 people and blinding and disabling many more. A $15 billion suit was filed against Union Carbide.

Chernobyl
On 25 April, 1986 the worst accident recorded at a nuclear power station occurred at Chernobyl in the northern Ukraine. In the course of a safety experiment designed to ensure a constant electricity supply to pumps circulating cooling water round the uranium fuel rods, and as a result of a series of safety violations, one of the reactors exploded. The explosion and resulting fire emitted 396 MCi of radioactivity into the atmosphere, including the elements caesium, strontium and plutonium, which was dispersed over 20 countries, most of them in Europe.

Sandoz
In November 1986 a fire broke out in a chemical warehouse owned by Sandoz in Switzerland. The water used to extinguish the fire resulted in thousands of tonnes of toxic organic compounds and mercury being washed into the Rhine. At first it was anticipated that the spill would result in a "dead river"; however, it appears that the major effects were suffered primarily by adult organisms and that eggs and larvae had a better survival rate. Sandoz paid compensation to France, West Germany and the Netherlands for damage.

Exxon Valdez
In April 1989 the Exxon Valdez ran aground in Alaska. 35,000 tonnes of crude oil spilled in Prince William Sound, contaminating a previously pristine landscape and injuring wildlife. The captain was later charged with being drunk.

consumerism in recent years has resulted in the increased availability and purchase of so-called environmentally friendly products, including for example:

- non-phosphate detergents;
- unleaded petrol and catalytic converters;
- paper products made from unbleached and/or recycled paper: toilet roll, paper towels, coffee filters, disposable diapers, etc; and
- other "environmentally friendly" products: aerosols (non-CFC), refrigerators (reduced CFC), washing machines (less energy, less water), packaging (McDonalds using recycled materials), replacement of cadmium in plastics (Curver), recycling schemes for "green" batteries, energy-efficient lightbulbs.

This has been accompanied by an increased interest in recycling, to the point where the market in recycled paper has been swamped with material.

The increase in environmental awareness has also increased the profile and credibility of international activist groups such as Greenpeace (heightened in any case by the sinking of the *Rainbow Warrior* by the French government in 1987) and pressure groups like Friends of the Earth and the European Environmental Bureau.

5.2 Recent events within and outside Europe

A series of events and initiatives have resulted in a significant shift in political attitudes and relationships between East and West, particularly exemplified by an improvement in relations between the superpowers, the United States and the Soviet Union.

This is partly due to changes in and on the part of the Soviet Union, including:

- the policies of *glasnost* and *perestroika*;
- the withdrawal of troops from Afghanistan;
- the disarray of the Soviet economy;
- the unilateral reduction of Soviet and Warsaw Pact troop levels in Eastern Europe;
- the signing of an INF treaty;
- the permitting of elections in Communist bloc countries, e.g. Poland, Romania, Bulgaria and Hungary (Szabo, 1990).

This has been accompanied by the so-called "fall of communism" across Europe, the move to market style economies and the opening of Communist Bloc country borders. In addition, the Soviet Union and the United States have recently signed the Conventional Armed Forces Europe agreement.

All the above have meant a re-structuring of attitude: East and West no longer need to be enemies. The two are forging economic and political bonds. Nowhere is this more obvious than in the dismantling of the Berlin Wall in November 1989 and the unification of the Federal Republic of Germany and the German Democratic Republic.

An important event in the shifting of old alliances and enmities came with the signing of the Treaty on the Final Settlement of Germany on 12 September 1990, the terms of which include:

- Unification of the Germanies to occur on 3 October 1990.
- A united Germany will remain in NATO. Foreign troops in Germany will from now on be there only at the invitation of the government.
- Soviet troops will withdraw gradually from East Germany, until 31 December 1994; Britain, France and the US will keep a "number of troops in Berlin until 1994, to balance the continuing Soviet presence" (Independent, 12-9-90).
- Germany has pledged to renounce nuclear, chemical and biological weapons.

The signatories were the Soviet Union, the US, France, the UK, West Germany, and East Germany (the treaty must be ratified by the parliaments of the signatory nations). The deployment of troops has been ratified through the Conventional Armed Forces Europe agreement which specifies limits to troop numbers and equipment.

In the meantime, the US has announced the closure of some 128 military facilities and the cutting

of operations at 23 more world-wide (UK, Italy, South Korea, Japan, Greece, Spain, Canada, Australia, Bermuda and West Germany). In Germany, 95 facilities are scheduled for closure. The closure is the subject of some controversy as to the nature of the facilities to be closed and their significance.

In addition, West Germany has announced a ban (19 September, 1990) on low-level flying, i.e. below 1000 feet.

5.3 Public attitudes in Germany towards the USA and the USSR

The last decade has seen a significant shift in perception by the West German public of both the US and the USSR. The US has always been a central figure in postwar German security. For years the US was the only power capable of effectively deterring the Soviet Union from attacking West Germany, of which strategy the deployment of nuclear weapons was an integral part (Szabo, 1990). West Germany, through its post-war constraints, was unable to include nuclear weapons in its arsenal but this did not preclude nuclear weapons from being maintained on West German soil in the "defence of Europe".

This situation led to a position in which two countries with essentially different countries were brought together in an uneven relationship:

Germans are the subjects of a foreign policy they can influence but not control and the life and death of the nation rest on decisions taken thousands of miles away by a country with global as well as European interests, a diverse country which is a continent in itself. Furthermore the American protector has a political system which is designed to maximize civil liberties at the cost of efficiency, one which pits ambition against ambition and treasures conflict.

The West German political culture is one which is more structured, less diverse and more predictable than the American. The German idea of freedom and government is one based on a culture which gives priority to the community over the individual and which prefers the 'positive freedom' of social obligations and security over the 'negative freedom' of American pluralistic democracy (Szabo, 1990).

Thus West Germans have found themselves in the position of being affected by policies which have been developed by politicians they did not elect and often cannot influence.

West Germans orignially saw the Americans as protectors. However, with the passage of time and events, such as the American involvement in Vietnam, this perception changed to "imperial America" in the 1970s and "dangerous America" in the 1980s (Szabo, 1990). Nuclear weapons, to many residents, are a symbol of both the American protector and of West Germany's national subordination (Szabo, 1990).

Different generations often have significantly different attitudes from one another. Thus, for example, people born after 1945 had a different experience from their parents of the Soviet Union and its immediate post-war activities such as the takeover of eastern Europe, the blockade of Berlin, and the invasions of Hungary (1956) and Czechoslovakia (1968). The West Germans have drastically changed their view of the Soviet Union since the beginning of the 1980s, and now regard the Soviets as much less of a military and political threat. Much of this has to do with Mikhail Gorbachev and his domestic and international policies (e.g. international detente, internal reform).

People have also experienced a change in values, placing more importance on quality of life, the environment, and civil liberties. Partly because of the Peace Movement in the early 1980s the public is now more sensitive to security issues and tends to link these issues with social spending and the environment (Szabo, 1990). West Germans are sensitive about several army activities, particularly low-level flying, training at night, noise from tank firing, and the damage to land from tank maneuvers. [Interestingly, East Germans are sensitive about the activities of the Soviet army, particularly requisition without compensation, low-level flying, late-night maneuvers, and wild shooting practice (The Economist, 8-9-90).] The combination of all these factors has led to increased demands for a change in military activities to accommodate civilian and environmental needs and/or the withdrawal of the US military presence from West Germany altogether.

6.0 What does the future hold?

The purpose of this chapter is to integrate the discussions of the previous chapters so as to obtain an indication of what the future holds in terms of environmental policy in Europe and what this may mean for the activities of the US Army.

6.1 Introduction

The integration of environmental factors into decision-making processes has been the theme of environmental management in Europe for the past few years and is now enshrined in legislation regarding environmental impact assessment. This legislation, at both the European and German levels, has established a foundation that will continue to be added to (Chapters 3 and 4).

Current interest in environmental auditing for both the corporate and public sectors is acting as an important building-block in this process. This move may be strengthened if the EEC decides to make corporate environmental auditing the subject of legislation.

6.2 NEPA and Environmental Impact Assessment[1]

Environmental impact assessment was first introduced into project planning in the US in 1969, through its inclusion in the National Environmental Policy Act (NEPA). The purpose of NEPA was:

- to declare a national policy which will encourage productive and enjoyable harmony between man and his environment;
- to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man;
- to enrich the understanding of the ecological systems and natural resources important to the Nation; and
- to establish a Council on Environmental Quality.

Thus NEPA declares national environmental policy, through which it establishes a set of environmental goals for the nation. The Act also sets out measures by which these may be achieved, of which the most important to date has been embodied in Section 102. Section 102 requires federal agencies to consider significant environmental effects when planning projects or proposing legislation, and to show that they have done so by including an environmental impact statement in their proposals. The Act establishes five elements which must be addressed in the statement:

- the environmental impact of the proposed action;
- any adverse environmental effects which cannot be avoided should the proposal be implemented;
- alternatives to the proposed action;
- the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity; and
- any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

The agency in question is also required to make the impact statement available for review by other federal agencies, state and local government, and members of the public.

NEPA applies to all actions where there is federal involvement and this includes the military. In consequence, the US Army, particularly the Corps of Engineers, has been involved in environmental impact assessment for the last two decades. Its activities fall into the spheres of both civil (e.g. dam construction) and military (e.g. engineering support) projects. Its activities in Europe are limited to support of the military.

There has been much debate over the years regarding the extent to which NEPA may be applied abroad. Executive Order 12114 of 1979 was intended to clarify this position, requiring that environmental impact statements, multilateral studies or reviews of environmental issues be

[1]This section draws on CEMP (1990).

taken into consideration when making decisions about actions which would have significant effects on:

- the environment of the global commons;
- the environment of a foreign nation not participating with the US and not otherwise involved in the action;
- the environment of a foreign nation, via the emission of substances regulated or prohibited by US law and/or radioactive substances; and
- natural or ecological resources of global importance designated for protection by the President or by international agreement.

Debate has continued, and there have been several calls for NEPA's mandate to explicitly include the action of federal agencies overseas. This pressure has recently been increased by the introduction to Congress of specific proposals (HR1113) to amend NEPA to include overseas activities. This amendment has been passed by the House of Representatives and awaits passage through the Senate.

The issue of extending NEPA's mandate arises from questioning what responsibility the US should take when its actions have environmental impacts on other nations. Several issues have been identified as being important.

Firstly, NEPA was developed for use in the American political system, using principles of Jeffersonian democracy. The adherence to the principle of open government, with the people controlling the government rather than the government controlling the people, is embodied in the requirement for public review in Section 102. Indeed, it is partially through public intervention that the NEPA process has been defined and has evolved to its present form. It is questionable, therefore, how appropriate it is to apply the NEPA process to foreign nations.

Secondly, the application of the NEPA process outside the US raises issues of jurisdiction and sovereignty. The difficulty in applying a process developed for use in the US to activities or projects in other countries is that it may clash with the host country's legal system. Public review, for example, is not acceptable in some countries.

Thirdly, the American political and legal system favours intervention by the courts. German environmental groups have used this route in the past (Watts, 1990) to attempt to block development. Assuming continued US involvement in Germany and the passing of HR1113 by the Senate, the use of the courts by those affected in Europe may become more common.

6.3 The EIA Act

Just as the amendment of NEPA will have ramifications for the US Army, so will the recent passage of the German EIA Act (Section 4.2.2). The EIA Act integrates existing German legislation with Directive 85/337/EEC to establish a list of projects which will be subject to environmental impact assessment.

The EIA Act will apply to any actions of the German armed forces which fall under its jurisdiction (e.g. the building of a wastewater treatment plant, construction of a runway, etc). It will therefore probably be applied (whether officially or unofficially) to the US Army's activities. This may come under the category of maintaining good relations with the host country. Alternatively, the US Army may have to conform to German legislation if the sovereign status currently enjoyed by the US military (Section 5.2), is revoked by the united Germany. The end result would be the same, but the means and impetus would be different.

The current situation is that the US Army, when constructing installations, does so both directly, i.e. using troop labour or direct contractors, and indirectly, through German agencies. Construction having a value of DM 500,000 or more is carried out by German agencies, who are required to comply with German law and acquire the necessary permits for construction and operation of a facility. When using the direct method, the German authorities must be notified of projects costing more than DM 150,000 and the US Army must comply with any requirements imposed after German review procedures have been completed, including permits and approvals

In the past the US Army has not had to apply directly for permits. The EIA Act does not change this, but it does make activities requiring permits subject to environmental impact assessment. Thus, the US Army will probably have to conduct environmental impact assessments for projects even when permits are not required.

6.4 Scenarios

The implications of changes in environmental policy in Europe for the US forces depend primarily on two factors:

- the direction such policy takes, and
- the continued presence of the US in a military capacity in Europe.

The former point has been discussed in some detail in previous chapters. The latter is currently the subject of negotiation; the continued presence of US forces and the form and level this may take revolve around several issues:

- given Germany's re-gaining of its sovereign status, whether the US will be required to withdraw totally from German soil and, if so, over what time period; if not, what will troop and equipment levels be;
- Germany's non-nuclear status: will the US be asked to continue to play a role in maintaining Europe's nuclear defence;
- the perceived potential threat by other nations of a united Germany: will the US be asked to stay as part of a campaign of reassurance;
- continuing pressures from within the US, both to withdraw from Europe and to cut defence budgets;
- the maintenance of current alliances, particularly NATO; and
- the maintenance of a standing force to protect against potential threats from outside Europe, e.g. to the south.

These two elements, European environmental policy and a continuing US presence in Europe, will form the backbone of any scenario planning to be undertaken. It should be remembered here that scenario planning is not about *forecasting* the future but about *testing plans* against possible futures:

> *Scenarios are the bridge between facts and perceptions; their role is to enhance a decision maker's understanding of the future by providing perceptions of alternative future environments against which decisions can be tested. The goal is not to predict the future, but rather to learn to live with uncertainty, to factor it into the decision process, and to improve the quality of thinking among decision makers.* (Stigliani et al, 1989)

The two major elements may vary as follows:

European environmental policy	US military presence
• stricter	• withdrawn
• status quo	• continued
• specific reference to military	• phased withdrawal

Plotting these variables gives rise to the considerations outlined below.

In the case of complete US withdrawal and future non-involvement, European environmental policy becomes irrelevant except as it applies to the withdrawal process. Withdrawal from Germany of US forces will mean withdrawal of:

- troops and their dependants;
- equipment and hardware;
- weapons (conventional, nuclear, chemical, etc).

From an environmental standpoint, this will require the incorporation of requirements for determining the environmental status of an installation into decommissioning procedures since German authorities undoubtedly will require to know the condition of land, buildings, etc. once the US has departed. There are unique environmental issues related to decommissioning, particularly of

military installations. These include moving hazardous materials, the reassignment of military units, treatment of underground storage tanks, etc.

In the case of continued US presence, at whatever level, pressure will continue to be applied on all organizations having detrimental effects on the environment. At present, the military is exempt from such European environmental legislation as environmental impact assessment. However, as pointed out in Section 6.3, the military in the Germany has not been exempted from federal law implementing the EEC Directive. Although the US forces have so far dealt only with the political and thus informal pressures, they may in future face legislated requirements directed specifically to the military.

In any case, if the amendments to NEPA are passed by the Senate, US forces may be required to carry out environmental impact assessments to satisfy US law. It should also be remembered, as discussed in Section 6.2, that the use of NEPA could result in attempts by European or German environmental groups seeking to block development through intervention by American courts.

US Army procedures currently under development may need to be scrutinised and, if necessary, revised if they are to satisfy the requirements of both NEPA and the German EIA Act, since each is directed to somewhat different ends. Thus, the Army's environmental impact assessment procedures may need to recognize and accommodate the different procedures, processes and requirements of each. For example, at present, NEPA is directed to projects, programs, plans and policies. The EEC Directive and the German EIA Act are directed only to projects which satisfy certain pre-set criteria. As discussed in Chapter 3, this situation will change if the EEC Directive's scope is expanded to include programs, plans and policies but as yet the time scale is uncertain. Public participation procedures will also need to be harmonised, as another example.

A phased withdrawal, whether its endpoint is complete withdrawal or a decreased presence, will experience both types of pressures: satisfactory environmental performance of its remaining facilities, and concern over the environmental condition of those being closed.

6.5 Conclusions

The purpose of this study has been to examine current and future trends in European environmental legislation and policy and the implications these may have for the activities of the US Army in Europe. The major conclusions of the study are as follows:

- environmental awareness is becoming entrenched in legislation and decision-making processes in Europe;
- EEC environmental legislation will continue to be passed (there are at present 120 draft Directives in front of the Commission);
- the US will probably have to carry out EIA in Germany on projects that fall under the EIA Act, as well as fulfilling the requirements of land-use planning;
- there will need to be a reconciling of EIA procedures between NEPA and German requirements; and
- the US Army will need to establish procedures for decommissioning and environmental audits to cover present facilities and those which will be closed in the process of withdrawal.

CEMP recommends that:

- the US Army in Germany develops and maintains contacts with the Federal Environmental Agency in Bonn to keep abreast of new developments and requirements in EIA legislation;

- this network of contacts be extended to the state and local community levels, where possible and/or appropriate;

- the US Army in Germany establishes environmental procedures and guidance notes for decommissioning, taking account of the unique environmental issues associated with decommissioning of military installations; and

- the US Army in Germany regularly scans the Federal Gazette (published in German) for proposed new legislation.

One final factor remains to be considered, which depends on the content of treaties currently being negotiated. Do these treaties cover the US presence in Europe overall, or only in Germany? If the US is required to withdraw forces from West German territory will it be free to deploy troops elsewhere, for example in Britain or France? An answer to this question is important, since the pressures on US forces to act in an environmentally responsible way will differ from country to country, in both a regulatory and political context. For instance, although European legislation requires that its member states achieve particular ends, the means are left up to the individual states. The US thus would face different frameworks of laws, procedures and attitudes in other countries from that which it faces now.

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APPENDIX I

ENVIRONMENTAL AMENDMENTS TO THE TREATY OF ROME SINGLE EUROPEAN ACT 1986

Sub-section VI
ENVIRONMENT
Article 25

A Title VII shall be added to Part Three of the EEC Treaty reading as follows:

TITLE VII
Environment

Article 130R

1. Action by the Community relating to the environment shall have the following objectives:

- to preserve, protect and improve the quality of the environment;
- to contribute towards protecting human health;
- to ensure a prudent and rational utilization of natural resources.

2. Action by the Community relating to the environment shall be based on the principles that preventive action should be taken, that environmental damage should as a priority be rectified at source, and that the polluter should pay. Environmental protection requirements shall be a component of the Community's other policies.

3. In preparing its action relating to the environment, the Community shall take account of:

- available scientific and technical data;
- environmental conditions in the various regions of the Community;
- the potential benefits and costs of action or of lack of action;
- the economic and social development of the Community as a whole and the balanced development of its regions.

4. The Community shall take action relating to the environment to the extent to which the objectives referred to in paragraph 1 can be attained better at Community level than at the level of the individual Member States. Without prejudice to certain measures of a Community nature, the Member States shall finance and implement the other measures.

5. Within their respective spheres of competence, the Community and the Member States shall co-operate with third countries and with the relevant international organizations. The arrangements for Community co-operation may be the subject of agreements between the Community and the third parties concerned, which shall be negotiated and concluded in accordance with Article 228.

The previous paragraph shall be without prejudice to Member States' competence to negotiate in international bodies and to conclude international agreements.

APPENDIX II

THE ASSESSMENT OF THE EFFECTS OF CERTAIN PUBLIC AND PRIVATE PROJECTS ON THE ENVIRONMENT 85/337/EEC

COUNCIL DIRECTIVE

of 27 June 1985

on the assessment of the effects of certain public and private projects on the environment

(85/337/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Articles 100 and 235 thereof,

Having regard to the proposal from the Commission (1),

Having regard to the opinion of the European Parliament (2),

Having regard to the opinion of the Economic and Social Committee (3),

Whereas the 1973 (4) and 1977 (5) action programmes of the European Communities on the environment, as well as the 1983 (6) action programme, the main outlines of which have been approved by the Council of the European Communities and the representatives of the Governments of the Member States, stress that the best environmental policy consists in preventing the creation of pollution or nuisances at source, rather than subsequently trying to counteract their effects; whereas they affirm the need to take effects on the environment into account at the earliest possible stage in all the technical planning and decision-making processes; whereas to that end, they provide for the implementation of procedures to evaluate such effects;

Whereas the disparities between the laws in force in the various Member States with regard to the assessment of the environmental effects of public and private projects may create unfavourable competitive conditions and thereby directly affect the functioning of the common market; whereas, therefore, it is necessary to approximate national laws in this field pursuant to Article 100 of the Treaty;

Whereas, in addition, it is necessary to achieve one of the Community's objectives in the sphere of the protection of the environment and the quality of life;

Whereas, since the Treaty has not provided the powers required for this end, recourse should be had to Article 235 of the Treaty;

Whereas general principles for the assessment of environmental effects should be introduced with a view to supplementing and coordinating development consent procedures governing public and private projects likely to have a major effect on the environment;

Whereas development consent for public and private projects which are likely to have significant effects on the environment should be granted only after prior assessment of the likely significant environmental effects of these projects has been carried out; whereas this assessment must be conducted on the basis of the appropriate information supplied by the developer, which may be supplemented by the authorities and by the people who may be concerned by the project in question;

Whereas the principles of the assessment of environmental effects should be harmonized, in particular with reference to the projects which should be subject to assessment, the main obligations of the developers and the content of the assessment;

Whereas projects belonging to certain types have significant effects on the environment and these projects must as a rule be subject to systematic assessment;

Whereas projects of other types may not have significant effects on the environment in every case and whereas these projects should be assessed where the Member States consider that their characteristics so require;

Whereas, for projects which are subject to assessment, a certain minimal amount of information must be supplied, concerning the project and its effects;

Whereas the effects of a project on the environment must be assessed in order to take account of concerns to protect human health, to contribute by means of a better environment to the quality of life, to ensure maintenance of the diversity of species and to maintain the reproductive capacity of the ecosystem as a basic resource for life;

(1) OJ No C 169, 9. 7. 1980, p. 14.
(2) OJ No C 66, 15. 3. 1982, p. 89.
(3) OJ No C 185, 27. 7. 1981, p. 8.
(4) OJ No C 112, 20. 12. 1973, p. 1.
(5) OJ No C 139, 13. 6. 1977, p. 1.
(6) OJ No C 46, 17. 2. 1983, p. 1.

To this end Member States may *inter alia* specify certain types of projects as being subject to an assessment or may establish the criteria and/or thresholds necessary to determine which of the projects of the classes listed in Annex II are to be subject to an assessment in accordance with Articles 5 to 10.

Article 5

1. In the case of projects which, pursuant to Article 4, must be subjected to an environmental impact assessment in accordance with Articles 5 to 10, Member States shall adopt the necessary measures to ensure that the developer supplies in an appropriate form the information specified in Annex III inasmuch as :

(a) the Member States consider that the information is relevant to a given stage of the consent procedure and to the specific characteristics of a particular project or type of project and of the environmental features likely to be affected ;

(b) the Member States consider that a developer may reasonably be required to compile this information having regard *inter alia* to current knowledge and methods of assessment.

2. The information to be provided by the developer in accordance with paragraph 1 shall include at least :

— a description of the project comprising information on the site, design and size of the project,

— a description of the measures envisaged in order to avoid, reduce and, if possible, remedy significant adverse effects,

— the data required to identify and assess the main effects which the project is likely to have on the environment,

— a non-technical summary of the information mentioned in indents 1 to 3.

3. Where they consider it necessary, Member States shall ensure that any authorities with relevant information in their possession make this information available to the developer.

Article 6

1. Member States shall take the measures necessary to ensure that the authorities likely to be concerned by the project by reason of their specific environmental responsibilities are given an opportunity to express their opinion on the request for development consent. Member States shall designate the authorities to be consulted for this purpose in general terms or in each case when the request for consent is made. The information gathered pursuant to Article 5 shall be forwarded to these authorities. Detailed arrangements for consultation shall be laid down by the Member States.

2. Member States shall ensure that :

— any request for development consent and any information gathered pursuant to Article 5 are made available to the public,

— the public concerned is given the opportunity to express an opinion before the project is initiated.

3. The detailed arrangements for such information and consultation shall be determined by the Member States, which may in particular, depending on the particular characteristics of the projects or sites concerned :

— determine the public concerned,

— specify the places where the information can be consulted,

— specify the way in which the public may be informed, for example by bill-posting within a certain radius, publication in local newspapers, organization of exhibitions with plans, drawings, tables, graphs, models,

— determine the manner in which the public is to be consulted, for example, by written submissions, by public enquiry,

— fix appropriate time limits for the various stages of the procedure in order to ensure that a decision is taken within a reasonable period.

Article 7

Where a Member State is aware that a project is likely to have significant effects on the environment in another Member State or where a Member State likely to be significantly affected so requests, the Member State in whose territory the project is intended to be carried out shall forward the information gathered pursuant to Article 5 to the other Member State at the same time as it makes it available to its own nationals. Such information shall serve as a basis for any consultations necessary in the framework of the bilateral relations between two Member States on a reciprocal and equivalent basis.

Article 8

Information gathered pursuant to Articles 5, 6 and 7 must be taken into consideration in the development consent procedure.

Article 9

When a decision has been taken, the competent authority or authorities shall inform the public concerned of :

— the content of the decision and any conditions attached thereto,

— the reasons and considerations on which the decision is based where the Member States' legislation so provides.

ANNEX I

PROJECTS SUBJECT TO ARTICLE 4 (1)

1. Crude-oil refineries (excluding undertakings manufacturing only lubricants from crude oil) and installations for the gasification and liquefaction of 500 tonnes or more of coal or bituminous shale per day.

2. Thermal power stations and other combustion installations with a heat output of 300 megawatts or more and nuclear power stations and other nuclear reactors (except research installations for the production and conversion of fissionable and fertile materials, whose maximum power does not exceed 1 kilowatt continuous thermal load).

3. Installations solely designed for the permanent storage or final disposal of radioactive waste.

4. Integrated works for the initial melting of cast-iron and steel.

5. Installations for the extraction of asbestos and for the processing and transformation of asbestos and products containing asbestos : for asbestos-cement products, with an annual production of more than 20 000 tonnes of finished products, for friction material, with an annual production of more than 50 tonnes of finished products, and for other uses of asbestos, utilization of more than 200 tonnes per year.

6. Integrated chemical installations.

7. Construction of motorways, express roads (1) and lines for long-distance railway traffic and of airports (2) with a basic runway length of 2 100 m or more.

8. Trading ports and also inland waterways and ports for inland-waterway traffic which permit the passage of vessels of over 1 350 tonnes.

9. Waste-disposal installations for the incineration, chemical treatment or land fill of toxic and dangerous wastes.

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(1) For the purposes of the Directive, 'express road' means a road which complies with the definition in the European Agreement on main international traffic arteries of 15 November 1975.

(2) For the purposes of this Directive, 'airport' means airports which comply with the definition in the 1944 Chicago Convention setting up the International Civil Aviation Organization (Annex 14).

4. Processing of metals

(a) Iron and steelworks, including foundries, forges, drawing plants and rolling mills (unless included in Annex I).

(b) Installations for the production, including smelting, refining, drawing and rolling, of non-ferrous metals, excluding precious metals.

(c) Pressing, drawing and stamping of large castings.

(d) Surface treatment and coating of metals.

(e) Boilermaking, manufacture of reservoirs, tanks and other sheet-metal containers.

(f) Manufacture and assembly of motor vehicles and manufacture of motor-vehicle engines.

(g) Shipyards.

(h) Installations for the construction and repair of aircraft.

(i) Manufacture of railway equipment.

(j) Swaging by explosives.

(k) Installations for the roasting and sintering of metallic ores.

5. Manufacture of glass

6. Chemical industry

(a) Treatment of intermediate products and production of chemicals (unless included in Annex I).

(b) Production of pesticides and pharmaceutical products, paint and varnishes, elastomers and peroxides.

(c) Storage facilities for petroleum, petrochemical and chemical products.

7. Food industry

(a) Manufacture of vegetable and animal oils and fats.

(b) Packing and canning of animal and vegetable products.

(c) Manufacture of dairy products.

(d) Brewing and malting.

(e) Confectionery and syrup manufacture.

(f) Installations for the slaughter of animals.

(g) Industrial starch manufacturing installations.

(h) Fish-meal and fish-oil factories.

(i) Sugar factories.

8. Textile, leather, wood and paper industries

(a) Wool scouring, degreasing and bleaching factories.

(b) Manufacture of fibre board, particle board and plywood.

(c) Manufacture of pulp, paper and board.

(d) Fibre-dyeing factories.

(e) Cellulose-processing and production installations.

(f) Tannery and leather-dressing factories.

9. Rubber industry

Manufacture and treatment of elastomer-based products.

10 Infrastructure projects

(a) Industrial-estate development projects.

(b) Urban-development projects.

(c) Ski-lifts and cable-cars.

(d) Construction of roads, harbours, including fishing harbours, and airfields (projects not listed in Annex I).

(e) Canalization and flood-relief works.

(f) Dams and other installations designed to hold water or store it on a long-term basis.

(g) Tramways, elevated and underground railways, suspended lines or similar lines of a particular type, used exclusively or mainly for passenger transport.

(h) Oil and gas pipeline installations.

(i) Installation of long-distance aqueducts.

(j) Yacht marinas

ANNEX III

INFORMATION REFERRED TO IN ARTICLE 5 (1)

1. Description of the project, including in particular :

   — a description of the physical characteristics of the whole project and the land-use requirements during the construction and operational phases,

   — a description of the main characteristics of the production processes, for instance, nature and quantity of the materials used,

   — an estimate, by type and quantity, of expected residues and emissions (water, air and soil pollution, noise, vibration, light, heat, radiation, etc.) resulting from the operation of the proposed project.

2. Where appropriate, an outline of the main alternatives studied by the developer and an indication of the main reasons for his choice, taking into account the environmental effects.

3. A description of the aspects of the environment likely to be significantly affected by the proposed project, including, in particular, population, fauna, flora, soil, water, air, climatic factors, material assets, including the architectural and archaeological heritage, landscape and the inter-relationship between the above factors.

4. A description (1) of the likely significant effects of the proposed project on the environment resulting from :

   — the existence of the project,

   — the use of natural resources,

   — the emission of pollutants, the creation of nuisances and the elimination of waste ;

   and the description by the developer of the forecasting methods used to assess the effects on the environment.

5. A description of the measures envisaged to prevent, reduce and where possible offset any significant adverse effects on the environment.

6. A non-technical summary of the information provided under the above headings.

7. An indication of any difficulties (technical deficiencies or lack of know-how) encountered by the developer in compiling the required information.

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(1) This description should cover the direct effects and any indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative effects of the project.