

“THE PRECAUTIONARY PRINCIPLE”

1. INTRODUCTION:

The “**precautionary principle**” is a notion which supports taking protective action before there is complete scientific proof of a risk; that is, action should not be delayed simply because full scientific information is lacking. The “precautionary principle” or precautionary approach has been incorporated into several international environmental agreements, and some claim that it is now recognized as a general principle of international environmental law. In the fields of food safety, plant and animal health protection, the need for taking precautionary actions in the face of scientific uncertainty has long been widely accepted. There may be instances when a sudden outbreak of an animal disease, for example, is suspected of being linked to imports, and trade restrictions must be immediately imposed while further information about the source of the outbreak and its extent are gathered. The discipline of risk assessment, one of the basic obligations of the SPS Agreement, was developed to guide action in the face of incomplete knowledge about risks to health. It focuses on probabilities of hazards occurring, and the probable consequences, because complete knowledge is very rare. Furthermore, it is virtually impossible to scientifically prove the “safety” of a food or product, rather scientists seek evidence of any harm. Environmental law regularly operates in areas complicated by high levels of scientific uncertainty. In the case of many activities that entail some change to the environment, it is impossible to determine precisely what effects the activity will have on the quality of the environment or on human health. Often available scientific evidence provides us cause for concern but does not give conclusive information. In such scenarios risk assessment compels us to strike a balance between the need to protect health and environment on one hand, and the foregone advantages of strict restrictions that may turn out to be unwarranted. It is in this context the role for Precautionary Principle emerges. While deciding the need and timing of the application of the Precautionary Principle, it is important to clearly understand the principle and its consequences.

The Precautionary Principle is one of the most contentious principles in contemporary International legal developments. The very fact that is, a principle of international environmental law has been questioned by many legal scholars. However, this does not take away the fact that the Precautionary Principle continues to be applied widely across sectors both internationally and nationally. The nature and scope of its application has varied widely according to the context and sector within which it has been applied.

‘Precautionary Principle’ plays a significant role in determining whether developmental process is sustainable or not. ‘Precautionary Principle’ underlies

sustainable development which requires that the developmental activity must be stopped and prevented if it causes serious and irreversible environmental damage. The emergence of Precautionary Principle marks a shift in the international environmental jurisprudence- a shift from assimilative capacity principle to Precautionary Principle.

2. ORIGIN OF PRECAUTIONARY PRINCIPLE:

- i. The father of the precautionary approach is Hippocrates, who said “As to diseases make a habit of two things – to help, or at least, to do no harm”
- ii. The precautionary principle has its beginnings in the German principle of *Vorsorge*, or foresight. At the core of early conceptions of this principle was the belief that society should seek to avoid environmental damage by careful forward planning, blocking the flow of potentially harmful activities. The *Vorsorgeprinzip* developed in the early 1970s into a fundamental principle of German environmental law. It was subsequently incorporated into a number of regional environmental agreements in Europe.
- iii. The Club of Rome published a book in 1972 entitled “[The Limits to Growth](#)”. The fundamental argument in this book was that technological development and societal increase cannot continue to grow at an exponential rate as it has been for the past 300 years. This book was followed by a second book entitled “Mankind at the Turning Point in 1974. The explicit message of this book was that human beings had to stop what they were doing and replace growth with a no-growth or steady state economy.
- iv. The first action by the UN to address environmental issues was in 1972 at the [UN Conference on the Human Environment](#) in Stockholm, Sweden. This was the first global environmental meeting of this kind.
- v. [The Brundtland Commission](#), formally the World Commission on Environment and Development (WCED) was convened by the United Nations in 1983. The commission was created to address growing concern "about the accelerating deterioration of the human environment and natural resources and the consequences of that deterioration for economic and social development." In establishing the commission, the UN General Assembly recognized that environmental problems were global in nature and determined that it was in the common interest of all nations to establish policies for sustainable development. This was one of the first examinations of the concept of sustainable development. The Commission defines sustainable development as follows: "Humanity has the ability to make development sustainable - to ensure that it meets the needs of the

- present without compromising the ability of future generations to meet their needs.”
- vi. [The Ministerial Declaration of the Second International Conference on the Protection of the North Sea in 1987](#) stated: “Accepting that in order to protect the North Sea from possibly damaging effects of the most dangerous substances, [a precautionary approach](#) is necessary which may require action to control inputs of such substances even before a causal link has been established by absolutely clear scientific evidence”. This was one of the first mentions of Precautionary Principle type approach in a formalized multinational document.
- vii. Over the past two decades, the Principle has been incorporated into approximately twenty international environmental treaties and agreements. The first deliberate incorporation of the Precautionary Principle in environmental policy was at the United Nations Conference on Environment and Development (UNCED) also known as the [Earth Summit](#). The principle themes discussed were :
- Sustainable Development
 - Environment

3. WHAT IS PRECAUTION:

It's the common sense idea: "Be careful." "Better safe than sorry." "Look before you leap." "First do no harm."

I. The Essence of Precaution:

Critics say that the precautionary principle is not well-defined. However, the Science and Environmental Health Network ([SEHN](#)) points out that, in all formulations of the precautionary principle, we find three elements:

- a. When we have a reasonable suspicion of harm, and
- b. scientific uncertainty about cause and effect, then
- c. We have a duty to take action to prevent harm.

4. CONCEPT AND DEFINITION OF PRECAUTIONARY PRINCIPLE:

The Precautionary Principle is a tool for making better health and environmental decisions. It aims to prevent harm from the outset rather than manage it after the fact. In common language, this means “better safe than sorry.” The Precautionary Principle denotes a duty to prevent harm, when it is within our power to do so, even when all the evidence is not in. In short, the “precautionary principle” is a notion which supports taking protective action

before there is complete scientific proof of a risk; that is, action should not be delayed simply because full scientific information is lacking.

In simple terms, the Precautionary Principle conveys the common-sense based *adviseto err on the side of caution*. The principle intends to prevent harm to humans, environment, and eco-system at large. Before looking at some of the widely used definitions of the Precautionary Principle, it would be helpful to understand the context and rationale. When the impacts of a particular activity – such as emission of hazardous substances – are not completely clear, the general presumption is to let the activities go ahead until the uncertainty is resolved completely. The Precautionary Principle counters such general presumptions. When there is uncertainty regarding the impacts of an activity, the Precautionary Principle advocates action to anticipate and avert environmental harm. Thus, the Precautionary Principle favors monitoring, preventing and/or mitigating uncertain potential threats.

- i. One of the most important expressions of **the Precautionary Principle internationally is in the Rio Declaration from the 1992 United Nations Conference on Environment and Development, also known as Agenda 21**. The declaration stated:

'In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost effective measures to prevent environmental degradation'.

- ii. This definition is based on **1998 Wingspread Statement on the Precautionary Principle** and it states:

"...When an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically. The process of applying the precautionary principle must be open, informed and democratic and must include potentially affected parties. It must also involve an examination of the full range of alternatives, including no action. In this context the proponent of an activity, rather than the public, should bear the burden of proof."

- iii. **London Declaration(Second International Conference on the Protection of the North Sea 1987)**

'Accepting that, in order to protect the North Sea from possibly damaging effects of the most dangerous substances, a precautionary approach is necessary which may require action to control inputs of such substances even before a causal link has been established by absolutely clear scientific evidence.'

iv. **EU communication on the PP (EU, 2000)**

'The precautionary principle applies where scientific evidence is insufficient, inconclusive or uncertain and preliminary scientific evaluation indicates that there are reasonable grounds for concern that the potentially dangerous effects on the environment, human, animal or plant health may be inconsistent with the high level of protection chosen by the EU'.

5. ASSIMILATIVE CAPACITY PRINCIPLE:

Assimilative capacity principle underlies earlier legal measures to protect the environment. Before the Stockholm Conference 1972, the concept of 'Assimilative Capacity' was recognized at the international level. As per this concept the natural environment has the capacity to absorb the ill-effects of the pollution but beyond a certain limit the pollution may cause damage to the environment requiring efforts to repair it. Principle 6 of the Stockholm Declaration contains assimilative capacity principle which assumes that science could provide the policy makers with the necessary information and means to avoid encroaching upon the capacity of the environment to assimilate impacts and it presumes that relevant technical expertise would be available when environmental harm is predicted and there would be sufficient time to act in order to avoid such harm.

6. ASSIMILATIVE CAPACITY TO PRECAUTIONARY PRINCIPLE- A SHIFT:

The uncertainty of scientific proof and its changing frontiers from time to time have led to great changes in the environmental concepts during the period between the Stockholm Conference of 1972 and the Rio Conference of 1992. A basic shift to the approach to environmental protection occurred initially between 1972 and 1982. Earlier the concept was based on the assimilative capacity rule as revealed from principle 6 of the Stockholm Declaration. So, Precautionary Principle is a principle which ensures that a substance or activity posing a threat to the environment is prevented from adversely affecting it, even if there is no conclusive scientific proof linking that particular substance or activity to the environmental damage. The words 'substance' and 'activity' imply substance or activity introduced as a result of human intervention.

7. BASIC FEATURES OF PRECAUTIONARY PRINCIPLE:

The Precautionary Principle represents a paradigm shift in decision-making. It allows for five

key elements that can prevent irreversible damage to people and nature:

- 7.1. Anticipatory Action:** There is a duty to take anticipatory action to prevent harm. Government, business, and community groups, as well as the general public, share this responsibility.

- 7.2. Right to Know:** The community has a right to know complete and accurate information on potential human health and environmental impacts associated with the selection of products, services, operations, or plans. The burden to supply this information lies with the proponent, not with the general public.
- 7.3. Alternatives Assessment:** An obligation exists to examine a full range of alternatives and select the alternative with the least potential impact on human health and the environment, including the alternative of doing nothing.
- 7.4. Full Cost Accounting:** When evaluating potential alternatives, there is a duty to consider all the reasonably foreseeable costs, including raw materials, manufacturing, transportation, use, cleanup, eventual disposal, and health costs even if such costs are not reflected in the initial price. Short and long-term benefits and time thresholds should be considered when making decisions.
- 7.5. Participatory Decision Process:** Decisions applying the Precautionary Principle must be transparent, participatory, and informed by the best available science and other relevant information.

8. SCIENTIFIC EXAMPLE OF PRECAUTIONARY PRINCIPLE:

Sometimes if we wait for proof it is too late. Scientific standards for demonstrating cause and effect are very high. For example, smoking was strongly suspected of causing lung cancer long before the link was demonstrated conclusively - that is, to the satisfaction of scientific standards of cause and effect. By then, many smokers had died of lung cancer. But many other people had already quit smoking because of the growing evidence that smoking was linked to lung cancer. These people were wisely exercising precaution despite some scientific uncertainty.

9. ENVIRONMENTAL REGULATIONS BY EXERCISING PRECAUTION PRINCIPLE:

When federal money is to be used in a major project, such as building a road on forested land or developing federal waste programs, the planners must produce an "**environmental impact statement**" to show how it will affect the surroundings. Then the public has a right to help determine whether the study has been thorough and all the alternatives considered. That is a precautionary action. Many of our food and drug laws and practices are more precautionary. Before a drug is introduced into the marketplace, the manufacturer must demonstrate that it is safe and effective. Then people

must be told about risks and side effects before they use it.

But there are some major loopholes in our regulations. If the precautionary principle were universally applied, many toxic substances, contaminants, and unsafe practices would not be produced or used in the first place. The precautionary principle concentrates on prevention rather than cure.

10. SIGNIFICANCE OF SHEHLA ZIA Vs. WAPDA, 1994

The Shahla Zia case, set out three most critical foundations of environmental law in Pakistan. First, by virtue of the broad meaning of the word "life" as contained in Article 9 of the Constitution, a derivative constitutional right to an unpolluted environment has been established. Secondly, the case established the application of the precautionary principle where there is a hazard to such rights. And finally, it accepted the persuasive value of Pakistan's obligations under customary international law referring to the Rio Declaration, 1992

11. PRECAUTIONARY PRINCIPLE IN PRACTICE:

Several multilateral environmental agreements refer to precautionary principle in some form, but rarely provide elaboration into specific guidance. Similarly, several national level environmental initiatives invoke the precautionary principle. Here, a brief overview of some such initiatives is provided.

10.1. MULTILATERAL ENVIRONMENTAL AGREEMENTS:

- a) **Montreal Protocol on Substances that Deplete the Ozone Layer, 1987** – 'Parties to this Protocol, determined to protect the ozone layer by taking precautionary measures to control equitably total global emissions of substances that deplete it..'
- b) **The Rio Declaration on Environment and Development, 1992** – 'In order to protect the environment the precautionary approach shall be widely applied by states according to their capabilities.'
- c) **UN Framework Convention on Climate Change, 1992** – Article 3.3 says, "The Parties should take precautionary measures to anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects."
- d) **Convention on Biological Diversity, 1992** – This Convention does not directly use the term 'precaution' but interprets the 'serious and irreversible' harm referred in the Rio Declaration in the context of biodiversity. It states, "where

there is a threat of significant reduction or loss of biological diversity, lack of full scientific certainty should not be used as a reason for postponing measures to avoid or minimize such a threat.”

- e) **The Maastricht Treaty of European Union, 1992** – “Community policy on the environment must aim at a high level of protection and be based on the precautionary principle, as well as on the principle that preventive action should be taken, that environmental damage should be rectified at source and that the polluter should pay.”
- f) **Cartagena Protocol on Bio-safety, 2000** – “In accordance with the precautionary approach the objective of this Protocol is to contribute to ensuring an adequate level of protection in the field of the safe transfer, handling and use of living modified organisms resulting from modern biotechnology that may have adverse effects on the conservation and sustainable use of biological diversity, taking into account risks to human health, and specifically focusing on trans-boundary movements.”
- g) **Stockholm Convention on Persistent Organic Pollutants (POPs), 2001** – The objective states, “Mindful of the precautionary approach as set forth in Principle 15 of the Rio Declaration on Environment and Development, the objective of this Convention is to protect human health and environment from persistent organic pollutants.” This treaty operationalizes precaution with explicit reference to it in the preamble, provisions for adding POPs, and determination of best available technologies.

10.2. NATIONAL EXPERIENCES:

- a) **Asia** – Even though several countries have adopted well drafted environmental and biodiversity laws, reference to ‘precautionary principle’ is missing. For instance, Malaysia’s National Biodiversity Policy makes explicit reference to the *Convention on Biological Diversity (1992)* but refrains from using the term ‘precautionary principle’. Similarly other countries in the region, Vietnam, Indonesia and Lao PDR also do not directly invoke precautionary principle in their laws. On the other hand, in several countries (e.g., India and Pakistan) the highest judicial authority has cited ‘precautionary principle’ in its judgments.
- b) **Africa** – Several countries have made explicit reference to ‘precautionary principle’ in their laws. Examples include the *1997 Mozambique Environment Legislation*, the *1996 General Environmental Law of Cameroon*, and *South Africa’s National Environmental Management Act*.

- c) **Latin America** – Many countries in this region have incorporated precaution as guiding principle in their national environmental laws. Examples include general and biodiversity related environmental laws in Argentina, Peru, Costa Rica and Ecuador.
- d) **Australia** – The precautionary principle is deeply rooted in Australia's environmental policy, as reflected in the *Inter-Governmental Agreement on Environment of 1992*, and the *Commonwealth Environment Protection and Biodiversity Conservation Act of 1999*.

As mentioned above, precaution is deeply entrenched in the environmental legislations of several European countries. On the other hand, in the United States of America precaution is rarely stated explicitly in any of its laws. However, the precautionary principles are well entrenched in several protection acts such as *Endangered Species Act of 1973*, and the *Wild Bird Conservation Act of 1992*.

12. PRECAUTIONARY PRINCIPLE IN INDIAN CONTEXT:

In India, there are lots of environmental regulations but environmental regulations as *Water (Prevention and Control of Pollution) Act, 1974*, the *Air (Prevention and Control of Pollution) Act, 1981*, and the *Environment (Protection) Act, 1986* are aimed at cleaning up pollution and controlling the amount of it released into the environment. They regulate the harmful substances as they are emitted rather than limiting their use or production in the first place. These laws are based on the assumption that humans and ecosystem can absorb a certain amount of contamination without being harmed. But the past experience shows that it is very difficult to know what levels of contamination, if any, are safe and therefore, it is better to err on the side of caution while dealing with the environment.

The Precautionary Principle has not been explicitly mentioned in any environmental laws in India. However, the Supreme Court of India has invoked this principle while passing judgments.

Building on some of the near-precautionary approaches we saw in Indian legislation, in

- 12.1. ***Punjab v. Modern Cultivators, Ladwa 1964 SCR (8) 273***, and ***Rajkot Municipal Corporation v. Manjulben Jayantilal Nakum (1997) 9 SCC 552***, expectations for precaution are used as measures of tort liability.
- 12.2. The ***Oleum Gas Leak Case, (M. C. Mehta v. Union of India, Writ Petition (Civil) No.12739 of 1985)*** extends the principle of strict and absolute liability for those engaged in hazardous activities, thus providing the necessary impetus for precautionary action when dealing with toxic

materials and allowing punishment for a failure to err on the side of caution.

12.3. Precautionary Principle does not find any place in judicial decisions in India before **Vellore Citizens Welfare Forum v. Union of India AIR 1996 SC 2715**, where Supreme Court referred the *Brundtland Report* and other international documents in addition to Articles 21, 48A and 51A(g) of the Constitution of India. And also taken into account the legislative mandate "to protect and improve the environment" as found in enactments like the *Water (Prevention and Control of Pollution) Act, 1974*, the *Air (Prevention and Control of Pollution) Act, 1981*, and the *Environment (Protection) Act, 1986*.

Drawing support from various Articles of the Constitution of India and arguing that the Precautionary Principle is part of customary international laws (and hence part of domestic laws), the Court has strongly supported the application of precautionary principle. In fact, the Court has also applied the reversal of burden of proof and demanded that the proponents of the activity must demonstrate that the activity is environmentally benign. In this case the Court explained the meaning of 'Precautionary Principle' in the context of municipal law as under:

- i. Environmental measures by the State Government and the Statutory Authorities – must anticipate, prevent and attack the causes of environmental degradation.
- ii. Where there are threats of serious and irreversible damage, lack of scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.
- iii. The onus of proof is on the actor or the developer/industrialist to show that his action is environmentally benign.

12.4. In **Taj Trapezium Case AIR 2002 SC 3696** the Supreme Court was dealing with the problem of protecting the 'Taj Mahal' from the pollution of nearby industries. The Court applied the 'Precautionary Principle' as explained by it in Vellore case and observed – The environmental measures must anticipate, prevent and attack the causes of environmental degradation. The 'onus of proof' is on an industry to show that its operation with the aid of coke/coal is environmentally benign. It is rather, proved beyond doubt that the emissions generated by the use of coke/coal by the industries in Taj Trapezium are the main polluters of the ambient air.

The court ordered the industries to change over to the natural gas as an industrial-fuel or stop functioning with the aid of coke/coal in the Taj trapezium and relocate themselves as per the directions of the Court.

12.5. In **Calcutta Tanneries Case (1997) 2 SCC 411** applying the Precautionary Principle Court ordered the polluting tanneries operating in the city of Calcutta (about 550 in numbers) to relocate themselves

from their present location and shift to the new leather complex set-up by the West Bengal Government.

- 12.6.** In ***Badkhal & Surajkund Lakes Case*** (1997) 3 SCC 715 the Supreme Court held that the 'Precautionary Principle' made it mandatory for the State Government to anticipate, prevent and attack the causes of environmental degradation. The Court has no hesitation in holding that in order to protect the two lakes from environmental degradation it was necessary to limit the construction activity in the close vicinity of the lakes.

Even though the Vellore judgment was followed in the subsequent decisions of the Supreme Court, the Court felt the need to explain the meaning of the 'Precautionary Principle' in more detail and lucid manner so that Courts & Tribunals or Environmental Authorities can properly apply the said principle in the matters which might come before them.

- 12.7.** In ***A P Pollution Control Board v. Prof. M. V. Nayudu*** [1999] 2 SCC 718 the Supreme Court has reiterated its earlier stand on the precautionary principle and demanded that the burden of proof should rest with the person/entity proposing the activities (which may have harmful effects on the environment and/or human beings).

- 12.8.** In ***Narmada Bachao Andolan v. Union of India*** 2005(4) SCC 32, precautionary principle came to be considered by the majority of judges. The Court also took the view that the doctrine is to be employed only in cases of pollution when its impact is uncertain and non-negligible.

- 12.9.** In ***S. Jagannath v. Union of India*** (1997) 2 SCC 87, the Supreme Court held that sea beaches and sea coasts are gifts of nature and any activity polluting the same cannot be permitted. The intensified shrimp (prawn) farming culture industry by modern method in coastal areas was causing degradation of mangrove ecosystem, depletion of plantation discharge of highly polluting effluents and pollution of potable as well as ground water.

- 12.10.** In ***KM Chinnappa, TN Godavarman Thirumalpad v. Union of India*** 2002 (10) SCC 606 , the Court recognized the importance of India's treaty obligations, placing the precautionary principle in this case in the context of the *Convention on Biological Diversity*. Despite India's dualist legal tendencies and a lack of implementing legislation at the time, the government was held responsible for adhering to its treaty responsibilities that did not conflict with domestic statutes. In this case,

mining in the Kudremukh National Park was deemed to be inconsistent with the precautionary nature of India's treaty requirements.

13. LEGAL SIGNIFICANCE OF THE PRECAUTIONARY PRINCIPLE:

Environmental principles can serve several functions. Their significance ranges from mere guiding policy incentives without any legal consequences as such to legally binding principles which can be invoked before the judiciary. Of special interest to lawyers are the questions under which circumstances environmental principles can be used before a court and what good they can do.

The following examples show whether or not the precautionary principle can be invoked before the judiciary at the international (A), the European Community (B) and the national level (C), and what the actual use of the principle can be.

A) International level

- French nuclear tests

The first case to be discussed has to do with the nuclear tests conducted by France in the year 1995; under the following heading on the European case law, a second case dealing with the same matter will also be discussed below. Here, the Order of the International Court of Justice of 22 September 1995 serves as a first example of the possible legal significance of the precautionary principle.

New Zealand had obtained a decision by the [International Court of Justice \(ICJ\)](#) on French Nuclear test in the past: the Nuclear Tests case of 1974. ICJ Reports, 1974, p. 253. This time however, the ICJ did not allow the case to be re-opened, so no substantive decisions were taken. However, from the dissenting opinions we can learn that the role of the precautionary principle in a case which would not stumble over procedural blockades might be important in the future.

B) European level

- French nuclear tests

The second example of case law again deals with the *Danielsson v. Commission*, Case T-219/95 R, [1996] ECR II-3051 (French Nuclear tests) This time, a private person, living in the vicinity of the place where the tests were carried out, tried to get the European Commission to prohibit the testings. The plaintiff claimed, that the Commission had violated the precautionary principle (codified in Article 130R(2) EC Treaty, see section 4 above) by allowing France to carry out its tests. However, the ECJ never got to answer on the substantial side of this matter, as the plaintiff was denied legal standing in the case for the following reasons:

Even on the assumption that the applicants might suffer personal damage linked to the alleged harmful effects of the nuclear tests in question on the

environment or on the health of the general public, that circumstance alone would not be sufficient to distinguish them individually in the same way as a person to whom the contested decision is addressed, as is required by the fourth paragraph of Article 146 of the Treaty, since damage of the kind they cite could affect, in the same way, any person residing in the area in question. Meanwhile, the Commission had alleged that it did comply with the precautionary principle. The reasoning they used was peculiar though, as they defined precaution as investigating the worst case scenario. As has been shown above, there is a lot more to precaution than merely the worst case scenario, even in the more limited definition employed in for instance the Rio Declaration.

C) The national level

- Yellow-bellied gliders and giant burrowing frogs

The third and final national case is an Australian one which deals with endangered species. ***Leatch v National Parks and Wildlife Service and Shoalhaven City Council (1993) 81 LGERA 270 at 281-285 Stein J of Land and Environment Court.***

A third party had objected to the issuing of a license to take and kill endangered fauna (the yellow-bellied glider and the giant burrowing frog). The judge in question, J. Stein, examined the extent to which the precautionary principle had been received into Australian law and policy at both the national and the state level. He examined in particular the non-binding Commonwealth Strategies on Endangered Species and Biological Diversity and the Intergovernmental Agreement on the Environment (IGAE) and the implications of this agreement on decision-making. Although in the National Parks and Wildlife Act of 1974 which governed the decision the precautionary principle was not expressly mentioned, the subject matter, scope and purpose of the Act made consideration of the precautionary principle clearly relevant. Judge Stein remarked that in his opinion, the precautionary principle is a statement of commonsense and has already been applied by decision-makers in appropriate circumstances prior to the principle being spelt out. It is directed towards the prevention of serious or irreversible harm to the environment in situations of scientific uncertainty. Its premise is that where uncertainty or ignorance exists concerning the nature or scope of environmental harm (whether this follows from policies, decisions or activities), decision-makers should be cautious.

After thus having established that the precautionary principle was of legal importance, Judge Stein used the principle to check whether or not the decision to take or kill the species should have been granted. Note that this seems to go one step further than the case discussed previously, where the Bundes Verwaltungs Gericht ordered that there was a duty for the administration to make use of the precautionary principle in assessing the situation. Here, Judge Stein states that as the species are endangered, caution should be the keystone to the Court's approach. Application of the

precautionary principle appears to me to be most apt in a situation of a scarcity of scientific knowledge of species population, habitat and impacts. Indeed, one permissible approach is to conclude that the state of knowledge is such that one should not grant a license to "take or kill" the species until much more is known. **The appeal was thus upheld and the license refused, through the application of the precautionary principle.**

14. PRECAUTIONARY PRINCIPLE IN AUSTRALIAN GOVERNMENT:

A good example of where the precautionary principle is being applied in Australia as part of ESD is in the context of water quality management. **The National Water Quality Strategy (August 1992) states:**

"Ecologically sustainable development provides the basis for water quality management."

In the publication, National Water Quality Management Strategy - Policies and Principles - A Draft Reference Document (August 1992) it is stated:

"The combination of equity considerations with the fourth principle of dealing cautiously where there is uncertainty about the environmental outcomes of development, requires that the management of water resources should be precautionary with respect to decisions that impact upon water quality. The precautionary approach requires a philosophical and strategic sympathy with avoidance of resource degradation. Decisions which may result in even small erosions of water quality should be carefully evaluated and avoided where possible".

15. THE PRECAUTIONARY PRINCIPLE IN DUTCH WILDLIFE LAW AND THE INFLUENCE OF THE HABITAT DIRECTIVE:

A. The precautionary principle in the Netherlands

The question is whether within the national system the precautionary principle must be applied. This problem can be split up into two sub-questions. The first question is whether the license system also applies for activities of which it cannot be said with any kind of certainty whether or not they will cause damage to a nature protection area. The second question is what the effects of these uncertainties about the occurrence and extent of the damage to the protected areas will be for the *granting* of licenses.

The answer to the first question is on the whole positive. Although this cannot be directly inferred from the text of Art. 12 The Nature Conservancy Act, 1967:

'1. It is forbidden to perform actions, have actions performed or allow actions that are harmful to the natural beauty or the particular scientific importance of a protected nature reserve or that spoil its character without being authorized by the Minister or contrary to the conditions specified in a licence.

2. Actions considered harmful to the natural beauty or the particular scientific importance of a protected nature reserve are in any case actions affecting the essential characteristics of a protected nature reserve specified in the order of designation.

3. Actions provided for in a management plan as referred to in Article 14 shall not require a licence.

According to the jurisprudence, potentially harmful activities, too, require a licence. However, there are also examples which reflect a different interpretation of Art. 12 Nature Conservancy Act. One of these examples concerns the Wadden Sea. The Wadden Sea is the biggest nature protection area in the Netherlands and one of the most important wetlands in Europe. **K. VAN DER ZWIEP/CH.W. BACKES, INTEGRATED SYSTEM FOR CONSERVATION OF MARINE ENVIRONMENT, Baden Baden 1994, p. 21.**

The comment on the classification of parts of the Wadden Sea as nature protection area of 18 May 1981 states that a licence is only required for activities which 'are evidently harmful to the proper functioning of the Wadden Sea as nature protection area'. On the basis of such an interpretation, Art. 12 Nature Conservancy Act certainly does not comply with the requirements of the precautionary principle. Also in case law examples can be found in which the licence requirement in relation to the likelihood of damage is interpreted more restrictively than usual.

The answer to the second question seems to us to be less favorable. Since the law does not set out any criteria to go by in granting licences and since the weighing of interests is guided merely by general principles of proper administration, there does not seem to be sufficient assurance that the potential damage that could occur will be taken into account, thus doing justice to the precautionary principle. The case law which we studied seems to confirm this supposition. Two judgments were found in which the judge reproached the licensing authority for having insufficiently studied the potentially harmful effect of the activity in question and for having insufficiently argued its assumption that no actual damage would occur. In a judgment concerning drainages around the "Groote Peel", a rare high peat moor district, a Dutch administrative judge found that in the framework of the licence requirement under

Art. 12 Nature Conservancy Act it was not only relevant whether the individual drainage applied for causing damage. In addition, the cumulative effect of all drainages within a particular zone had to be taken into account. The argument that it could not be proved that precisely the drainage applied for would have a detrimental effect was accordingly dismissed. This judgment, too, might be understood as confirming the validity of the precautionary principle in granting licences under Art. 12 Nature Conservancy Act. However, there are also judgments illustrating that the precautionary principle is not applied under Art. 12 Nature Conservancy Act in situations in which the harmfulness of the planned activity is uncertain. Firstly there is the case law which argues that a licence on the basis of the external effect of Art. 12 Nature Conservancy Act need not be applied for unless there is obvious damage to essential features of the nature reserve. Other judgments also reflect a restrictive approach of the licence requirement, for planned activities within the nature protection zone. These judgments, too, express that in applying Art. 12 Nature Conservancy Act in the case of uncertainty concerning the expected harmfulness of an activity, the precautionary principle is not always applied as a matter of course. In any case it can be stated that neither the text nor the legislative history of Art. 12 Nature Conservancy Act even remotely discusses the precautionary principle or a corresponding rule to base a decision on. The result is that the Nature Conservancy Act does not offer a guarantee that the precautionary principle will or must be applied together with the relevant article.