The Concept of "Environmental Impact Assessment" And Its Application In Public International Law

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The concept of "Environmental Impact Assessment" has shown a rapid development in these last two decades after the U.S. National Environmental Policy Act has come into force. The worldwide recognition of the concept is therefore, partly due to the influence of American law in addition to the efforts of various organizations, mainly the United Nations and its institutions.

Keeping in mind that aspect of the issue, this research paper will first deal with the meaning, scope and legal framework of the concept in order to show the way the concept is being described and interpreted by experts and the international community in international law instruments. Later, the influence of American law both in the context of bilateral and multilateral international relations will be explained. After showing how the EIA concept has been adopted in some countries' domestic environmental laws, the study will end by giving examples from international institutions' conduct and their approach towards establishing the Environmental Impact Assessment procedure as an indispensible element of modern international environmental law.

I. THE CONCEPT OF "ENVIRONMENTAL IMPACT ASSESSMENT" ("EIA")

The composition of "Environmental Impact Assessment" [hereinafter "EIA"] is closely related to several issues. They all have a role in creating EIA both as a concept and process. In this section, EIA and those concepts will be discussed together.

A. Term and Scope

Assessing environmental impacts of proposed actions before making final decisions on them is an approach first established by the American Congress[1]. The U.S. National Environmental Policy Act [hereinafter "NEPA], which came into force in January 1, 1970, created the concept of "Environmental Impact Statement" [hereinafter "EIS"] as a legal principle. The American law is not only

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1 Pervical Et al., *Environmental Regulation Law, Science, and Policy*, 1151 (1992).

the source of impact assessments but is also the reason for its worldwide recognition. Although the influence of American law at the international level in the context of impact assessments will be discussed later in this study[2], it will be helpful to begin with the specific provision of NEPA in order to draw the lines for those elements which are going to be examined under this title.

The relevant provison of NEPA reads as:

> "(2) (A)ll agencies of the Federal Government shall- ... (C) include in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on-
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> (i) the environmental impact of the proposed action,
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> (ii) any adverse environmental effects which cannot be avoided should the proposal be implemented,
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> (iii) alternatives to the proposed action,
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> (iv) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and
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> (v) any irreversible and irretrievable commitments of resources which would be involved in the proposal action should be implemented[3]".

In order to avoid confusion, it should be stated that the distinction between "statement" and "assessment" is not effective on the outcome and that it's merely a technical issue. The above-mentioned provision of NEPA requires statements to follow assessments. In some countries EIS and EIA are synonym terms and EIS, after being officially approved, is recognized as EIA[4].

The key concept here is "significant impact". NEPA requires the federal officials to prepare an EIS when there is a proposed action which has the potential of "significantly affecting" the environment. Both the words "significant" and "impact" have been mentioned in many American and international law documents (like Council on Environmental Quality regulations, European Union directives, treaties) but there aren't any strict definitons[5]. In each reviewed proposal, they will have to be interpreted according to the scope of that action. In time precedents may be established, so that when similar actions would be proposed

2 See below, "The Legal Status of EIA in International Law".
3 42 U.S.C. 4332 (2) (C).
4 Gilpin, *Environmental Impact Assessment* (1995), at. 4-5. In some countries, EIS may be known as "Environmental Effects Statement" or "Environmental Statement". *Id.* at 16.
5 *Id.* at 6.

in the future, those precedents could serve as a criterion. Past experience suggests to interpret significant impact as a "collective judgement of officers, elected persons, and the public"[6]. EIA, in this context, not only serves as a tool which opens international law to actors other than states, but also to the influence of public participation which functions as a "control mechanism"[7].

From a different point of view, significant impact requires to deal with "possible risks" of a proposed action. If a proposal is suspected to pose a potential threat to the environment, then the conclusion would be that there are risks which have to be calculated, measured and estimated. This approach is called "risk assessment" and it contains two elements: *Estimating* the risk and *evaluating* the risk[8]. Estimating necessitates to determine the factor of probability and the consequences of an event, but even in seemingly simple cases, other factors like scientific uncertainty, unpredictable human conduct, lack of ecological data may make it very hard to come up with a reliable assessment[9]. Evaluating, on the other hand, deals with issues like whether risks are controllable, whether alternatives to that action exist and whether the action is an emergency[10].

Another topic of EIA is the concept of "Cost-Benefit Analysis" [hereinafter "CBA"]. CBA gives opportunity to determine which actions, projects or regulations are worth the investment and sacrificies they require[11]. CBA can also be defined as "comparing the social costs with the social benefits of a program or project, all expressed as far as practicable, in monetary terms"[12]. This is the weakness of CBA, because it inevitably focuses on "economic efficiency"[13].

Many models have been proposed to estimate economic impacts. In the United States, there are four "legislative models" which have captured attention the most: "The Cost-Oblivious", "Cost-Effective", "Cost-Sensitive" and "Strict Cost-Benefit Analysis" systems[14]. Cost-sensitive model, along with cost-effectiveness, is the "dominant congressional model" for conducting CBA in the US, because it lifts the pressure on agencies to make assessments aimed to be "purely efficient" and enables them to take into consideration various factors before issuing a decision[15].

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6 *Id.* at 7.
7 Ortolano et al., *Speculations on When and Why EIA Is Effective*, 7 Environ. Impact Assess. Rev., 285, 290 (March 1987).
8 Schaffman, *Assessing The Assessors: Toward "Risk Aware" Courts*, 6 Environ. Impact Assess. Rev., 331, 332 (December 1986). The basic difference between estimating and evaluating is that, the former is a "quantitative" measurement, while the latter is used to figure out the "significance" of the risk. *Id.*
9 *Id.* at 332-333.
10 *Id.*
11 Gilpin, at 35.
12 Rodgers, *Benefits, Costs, And Risks: Oversight of Health and Environmental Decision Making*, 4 Harv. Envtl. L. Rev., 191, 194 (1980).
13 According to traditional economists, if a policy makes some people "better off" without "hurting" anyone, it's presumed to be efficient. *Id. supra* note 18, at 194.
14 *See* Rodgers, at 201-211.

Although CBA may turn out to be insufficient or even misleading, because of the fact that the outcome of a CBA is shaped not only by the factors which have been included into the evaluation but also by those which have been excluded, it is another indispensable element of EIA.

B. The Aspects of EIA

When going through an EIA process, many aspects of a proposed project would have to be inspected in order to see the total impact as clearly as possible. That is the reason why those factors which play a role in determining the direction of EIA were underlined in the previous section. Now, it will be tried to show how those factors give rise to different aspects of EIA.

B.1. Physical and Ecological Impacts

EIA, in essence, is the evaluation of impacts on a certain part of the environment. This may be a forest, a sea-side or a mine. In each case, the question would be how the proposal, if realized, would effect a certain natural resource or resources: soil, plants, lakes, sea and alike. The question may be the number of trees which would have to be cut, the emissions from a certain source to the atmosphere, the amount of water certain production processess require. All those operations would then be evaluated with respect to the environment they would effect.

Before proceeding, special attention should be given to the term "ecosystem". The current definition of the term is "a dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit"[16]. At the same time, this definition shows the direction to draw the borders of the geographical area which will be examined through the EIA process, with all of its living and non-living elements. EIA has to be intensified on the area which will be affected the most. It may be very hard to specify impact areas, because in some cases the impact may occur many miles away due to natural causes like wind. On the other hand, the minimum requirement is to focus on the immediate environment which the activity is presumed to interact intensively with. Determining this, of course, would depend on the experts' personal understandings. This, after all, is a "matter of judgement"[17]. Experience indicates that, it is not only hard to determine the physical impact

16 United Nations Convention on Biological Diversity (June 1992), Art. 2, 31 I.L.M. 818 (1992). This Convention is also known as *"Biodiversity Convention"*. For the text of Rio Declaration *see* Birnie & Boyle, *Basic Documents International Law and the Environment*. 9-15 (1995).

17 Gilpin, at 18.

area[18], but the time of conducting assessments is a delicate issue, too. In some cases, it may be necessary to continue monitoring an area for years in order to understand the relation between a project and a certain ecosystem in different seasons[19].

Implementing ecological concerns into the EIA process is tied to the intention of broadening the area of assessment in order to address the impacts on all elements of a given ecosystem, in addition to adverse effects on human health[20].

B.2. Social and Cultural Impacts

Economic activities can be expected to show their immediate impacts on the physical environment, but in a longer period of time, the effects may go well beyond predictions.

Considering world's population, it won't be wrong to say that almost any activity may somehow affect a community which lives in a related geographical area. The area may be a rural or urban one and if it is a rural one, the impacts may turn out to be so severe that the question of social and cultural "extinction" might even arise. Another function of EIA, therefore, should be to foresee that aspect of possible impacts, too.

Specific concerns of local people may vary in a broad range: How would the community take the proposal to build a hazardous waste facility in their town? How would they react if a project would end up closing a high school which had been their long-time pride?[21].

While those concerns are not less important, the questions sometimes arise from more delicate issues with respect to social and cultural identity: For instance, coal mining creates jobs which are generally filled by people who come "from outside the impact area"[22]. In that case, in addition to trees or lakes, the question of how "strangers" willl change the life-style of local people will have to be addressed, too[23].

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18 For example, the Sardar Sarovar dam which is a part of the Sardar Sarovar Projects (India), submerges 37 000 hectares. Berger, *The World Bank's Independent Review of India's Sardar Sarovar Projects*, 9 Am. U.J. Int'l L. -Pol'y, 33, 35 (Fall 1993). For how social and cultural impacts may emerge as a consequence of physical and ecological impacts, see *infra* note 33 at 9-10.

19 For example, when a power plant is the issue, it may take 2 to 5 years to establish a judgement for its meterological background. Gilpin at 18.

20 Framework For Ecological Risk Assessment, EPA/630/R-92/001 ("Ecological risk assessments evaluate ecological effects caused by human activities such as draining of wetlands or release of chemicals. ... (E)cological risk assessment can consider effects beyond those on individuals of a single species and may examine a population, community, ecosystem".).

21 Burdge, *The Social Impact Assessment Model and The Planning Process*, 7 Environ. Impact Assess. Rev., 141, 145 (June 1987).

22 Jobes, *Assessing Impacts on Reservations: A Failure of Social Impact Research*, 6 Environ. Impact Asses. Rev., 385, 390 (December 1986).

23 *Id.* at 386-387.

In the "New Zealand Maoris" example[24], things may even get more complicated when a minority in a nation would think itself to be facing a serious threat of being assimilated by projects which don't respect their belief that sky and earth compose the union of "Creation"[25].

How local people can participate in the decision-making process in environmental issues will be discussed later in this study[26].

Here, it is important to point out the importance of public participation, if the possible impacts are going to occur in a socially closed and relatively poor community which, despite other disadvantages, might have to overcome the lack of expertise in order to participate in the process[27].

The relation between individuals and for example "natural sites" or "historical monuments"[28] and the way they would be affected by economic activities, too, may raise social-cultural concerns with respect to their role in a community's cultural values and life style.

B.3. Economic Impacts

CBA was mentioned before[29]. There, it has been explained that CBA's weakness is the possibility of its focusing only on the question whether the whole project would be worth spending a certain amount of money; in other words, whether it would be an "efficient" investment[30].

The economic impacts are not limited to the CBA. Conducting an assessment research provides other important benefits too. First of all, especially in big projects like dam constructions, it has been observed that EIA makes it possible to take certain measures with respect to social-cultural and physical im-

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24 Hughes, *Assessing Cultural Impacts: Individual Effluents and The New Zealand Maori*, 6 Environ. Impact Assess. 285, 285-297 (September 1986).

25 *Id.* at 285 (Trees, birds, fish and shellfish are all personified in Maori culture. When the constructions of thermal power, iron and steel, sewage treatment and petrochemical facilities were proposed in about a 15 year period, Maori community saw the issue as to protect their social and cultural identity). *Id.* at 289-296.

26 See below at II. D "Public Participation and EIA".

27 The recognition by governments an opportunity for participation can become very essential in some examples. In the case of Montana coal project, the EIS described the Ashland and Birney Indian communities as "passive recipients of change imposed from outside" and concluded that the project would "facilitate the Northern Cheyenne's *assimilation* into the mainstream of American Society.") (emphasis added). Jobes, at 387.

28 Convention for the Protection of the World Cultural and Natural Heritages (Paris, November 16, 1972), in its preamble, notes that the cultural heritage and national heritage are increasingly threatened with destruction not only by the traditional causes of decay, but also by changing social and economic conditions which aggravate the stituation with even more formidable phenomena of damage destruction (par. 2). According to article 1, the concept of "cultural heritage" refers to "monuments", "group of buildings", and "sites" which are all separately listed in the article. Article 2 deals with the "natural heritage" concept which contains "natural features consisting of physical and biological formations" and "natural sites". For the text of the Convention see Birnie & Boyle at 375-390.

29 See *supra* notes 13-15 and accompanying text at 4.

pacts in order to avoid environmental degradation, thus decreasing the overall cost of projects[31].

Every economic activity will naturally increase national wealth. This assumption however, sometimes becomes misleading. Special attention has to be given not only to "numbers", but to the total impact of a project on other values, like human health, the survival of natural resources and whether they are renewable or not[32].

Considering the difficulty in identifying and measuring the social impacts of each project, economic impacts may also be used as a tool to predict possible social impacts. What makes it easier to predict economic impact assessment can provide opinions on possible social changes as well. For example, economic impacts may trigger social events like a flood of strangers into a community due to open jobs in a new facility. This would affect real estate prices. When this is estimated in monetary terms as an economic impact, a social impact assessment can be made much more easier by drawing a line from the economic impact assessment: If prices are predicted to increase, who will buy those more expensive houses? How will this change the average resident proto-type? How will the difference between the incomes of new residents and old ones change the consumption habits?[33].

In other cases, physical impacts could trigger social-cultural and economic impacts[34]. That point should remind us that the assessment issue is a two-way road with respect to interactions which could occur between any aspects of EIA.

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31 Berger at 47.

32 Steer & Lutz, *Measuring Environmentally Sustainable Development*, in Making Development Sustainable, 17, 18-19 (1994).

33 Burdge, at 146-148 and figure 3 at 417.

34 To emphasize Sardar Sarovar Projects' significance, it should be said that they are "huge" projects: "The Sardar Sarovar dam is situated about 180 kilometers from the Arabian sea in northwestern India. Upon the completion, the dam will impound water to a full reservoir level of 455 feet and submerge approximately 37 000 hectares of land in the three states of Gujarat, Maharasthra, and Madya Pradesh. The dam... is designed to divert 9.5 million acre foot of water from the Narmada River into a canal and irrigation system delivering drinking water to drought-prone areas of Gurjarat. The canal itself, the biggest in the world in terms of its capacity, will extend 450 kilometers. ... The aggregate length of the distribution network is 75 000 kilometers. ... The impact of the Sardar Sarovar extends over an immense area and affects a large number of individuals, particularly tribal people. At least 100 000 people and 245 villages are within the area redesignated for submergence.". Berger at 35. The Projects gained world-wide concern, first of all, for their sizes. Besides that, world-wide attention also emerged from "the resistance of the people on the periphery of development, whose ancestral lands (were) being expropriated ..." *Id.* The Sardar Sarovar Projects example reminds us of taking into consideration how social impacts could cause economic consequences. When the physical aspect of a dam project like Sardar Sarovar would force ten thousands of local people to leave their homes, a social event like domestic migration would not only change the economic structure of that region, but would also have economic impacts on areas far away the impact region due to resettlement.

II. RELEVANT CONCEPTS

There are some concepts related to EIA which should be mentioned. Otherwise, the exact context and dimensions of EIA cannot be explained.

A. "State Responsibility" and EIA

The UN Conference on Environment and Development[35], openly mentioning the principle of "state responsibility", describes it as follows: "States have ... the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction" (Principle 2).

As it has been explained, the concept of EIA, basically, seeks to avoid the possibility of environmental harm by making the possible and significant impacts of a proposed activity foreseen. The relevance of the principle of state responsibility in the EIA issue is that when conducting activites within a state's jurisdiction which will have impacts beyond national jurisdictions, the scope of that EIA study would have to be arranged in such a way that it should be possible to foresee the likely impacts both in the domestic and international contexts. This also underlines the role of EIA as a legal instrument both for domestic and international environmental protection. When an EIA would be prepared with such a concern, it would not only enable a state to fulfill its responsibility under international law, but to its own citizens as well.

B. "Sustainable Development" and EIA

The concept of "sustainable development" has become the center of current environmental law in the last decade after the publication of "Our Common Future" in 1987, prepared by the World Commission on Environment and Development[36].

According to Our Common Future, "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 own needs".[37].

Obviously, this is a very optimistic attitude. But, the Commission has underlined the problems which have to be addressed at the same time: "The concept of sustainable development does imply limits -not absolute limits but limitations imposed by the present state of technology and social organization on environmental resources and by the ability of the biosphere to absorb the effects

35 Birnie & Boyle at 13.
36 World Commission on Environment and Development, Our Common Future, 1-23 (1987). This document is also known as the *"Brundtland Report"*.
37 *Id.* at 8.

of human activities. But technology and social organization can be both managed and improved to make way for a new era of economic growth[38].

Sustainable development requires development in such a manner that, without destroying future generations' opportunities for survival, we should be able to meet our present needs, plus keep on developing at the same time. In order to achieve that goal, the primary consideration should be to understand the mechanism of biosphere's ability to absorb. This is a purely scientific question: Estimating the total impact of all activities on the environment. Of course, that should be done before those activities are carried out.

When the discussion is brought into that context, sustainable development may be defined as obeying "the carrying capacity"[39] of nature. After all, we are supposed to find ways of not loading the environment with what it cannot carry while not giving up development[40].

In order to achieve that goal, there are three points which should be taken into account: First; we should judge the necessity of every project. Is it the only project we can have or are there alternatives? Second; the location of each project should be selected very carefully. Third; environmental assets have to be traded in such a way that, just for the sake of development, people wouldn't have to lose their healthy environment.

Sustainable development is, basically, an economic concept. It's a part of the efforts aimed to integrate economy with environmental concerns. The role of EIA emerges right at that point as one of the tools and indispensable elements of policy and decision-making. A properly operating EIA process can illuminate the path to decision making, so that interested parties can clearly see all the aspects of a proposal, especially the economic aspect which will be expressed in monetary figures. This will make it possible to see the "price" economic development requires. Defining and adding that price into GDP's is called "greening the accounts"[41]. When the accounts are greened, physical impacts (resource depletion and degradation), impacts on humans' and other species' health, and the calculation of productivity will all be represented in GDP in monetary terms. That will enable countries to see that development not only brings wealth due to economic activities, but causes expenditures like a more costly health care system or the loss of resources.

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38 *Id.*

39 O'Riordan, *EIA: Dangers and Opportunities*, 6 Environ. Impact Assess. Rev., 3, 4 (March 1986). For the opposite of that understanding, the "assimilative capacity concept", see *infra* notes 44 and 45 and the accompanying text at 16.

40 *Id.* at 5. O'Riordan explains that some experts see sustainable development as the objective of EIA and therefore rely on it as a tool which ensures development would be "environmentally platable". On the contrary, some experts see EIA as a tool for "manipulation" and an expression of "misguided" economic optimism. *Id.* at 4. In order to find a satisfying solution for both sides, he is proposing to give priority to those three points mentioned in the text above.

41 Steer & Lutz, at 18-19.

It is pointed that sustainable development allows the use of decreasing resources, like fossil fuels, in an efficient manner. In that situation, the objective is not sustainability of a physical stock any more but to achieve the goal of increasing human welfare by using that resource in the most convenient way, while trying to substitute it with alternative resources[42].

C. "Scientific Uncertainty", "The Precautionary Principle" and EIA

A lot of scientific debate is going on on environmental issues. The most interesting discussion with respect to scientific uncertainty seems to be the one on "global warming"[43].

On the other hand, the lack of scientific certainty does not avoid the necessity of taking adequate measures in order to prevent environmental degradation and harm.

Before focusing on that discussion, it would be helpful to consider all possibilities related to the factor of scientific uncertainty. A quick and simple reasoning would suggest that, mainly, there are three possibilities: First; We may not care and prefer to wait until the problem occurs. Second; We may stop conducting those activities which bear the risk of causing environmental harm. Third; We may continue to carry out those activities while keeping in mind that we are not aware of their full environmental impacts.

There is no doubt that the first possibility is the easiest one and in the short run, until the consequences of that approach become visible, it may even seem to be the most "feasible" one. But once that stage is passed and nature is irreversibly harmed, it would turn out to be the warst option.

The second possibility simply means to "give up" conducting those activities which are suspected to pose threats to the environment. This is not a realistic approach at all. Because, from one point of view, civilization is the sum of human activities which are aimed to change and reshape nature in order to maintain a more comfortable, better form of life. Whatever is manifactured and added into the environment, whatever is released to the atmosphere or to water re-

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42 Gilpin, at 11.

43 *See* Zaelke & Cameron, *Global Warming and Climate Change - An Overview of the International Legal Process*, 5 Am. U. J. Int'l L. -Pol'y, 249-289 (Winter 1990). ("(The) problem is compounded by the difficulty of assessing and responding to global environmental risks, determining the degree of scientific certainty needed to assess the probability that global warming is in fact occuring, and identifying and measuring the expected impacts of global warming. Another hurdle is the difficulty of defining and determining concepts of liability, responsibility, and illegality for ensuring adequate compensation for the measurable harmful impacts of global warming".). Id. at 250-251. Also, to see a very interesting debate between U.S.A.'s most famous meteorologists on what caused "Blizzard '96" in north and north-eastern U.S.A., whether global warming is happening, and if so, what the likely consequences would be, *See* the cover story of Newsweek, January 22, 1996 ("The Hot Zone").

sources, whatever is dumped to soil are not "natural". Before they were produced, released or dumped, they weren't existing in the environment in that form or with that chemical composition. And because of the fact that scientific researches more and more show us how much we don't know about nature, we can't be sure whether an environmentally "sound" activity of today may transform into the horror of tomorrow. When it's put that way, the second possibility seems to be the best one with its potential to avoid environmental harm completely. On the other hand, it's not possible to return to pre-industrial ages and the development demand is very strong especially in the third world countries. Every country wants to produce and provide more and more in time, so that they can either sustain or improve their development level.

So, we are left with the third possibility: Be aware of risks and without giving up civilization, try to neutralize or avoid them.Due to uncertainty, scientists may not be able to solve a problem but, at least, science can warn us where the uncertainty is. For example, let's think that scientists suspect chemical X is causing a certain type of cancer. The chemical is one of the outcomes of a production process. At that level, there is no doubt that we have a scientific hypothesis in hand. It is yet to be proved. But, even in that case, science is still able to warn us about a serious possibility. Instead of waiting until science comes up with a definite answer, the manufacturer (or producer) should be required to change the production method, so that either X would not come out from the process any more or it would be neutralized. Only if there is no known way to do either, then the possibility of imposing a ban should be considered.

The third option seems to be the best one. It seems to give the opportunity to balance economic and environmental concerns.

However simple the above explanations may seem, the development of the precautionary approach in environmental issues has not been easy. Before the "Precautionary Principle" had gained international recognition, science -law relation had been based on the "assimilative capacity concept"[44]. The concept emphasized, "(1) The carrying capacity of the environment; (2) The ability of science to accurately predict threats to the environment and the measures needed to prevent such threats; (3) The availability of technical possibilities to mitigate threats once they have been accurately predicted; and (4) The reliance on short-term economic considerations and the uncertainties involved in determining the present value of future environmental degradation"[45].

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44 Hey, *The Precautionary Concept in Environmental Policy and Law: Institutionalizing Caution*, 4 Geo. Int'l Envtl. L. Rev., 303, 308.

45 *Id.* To compare the "assimilative capacity concept" with the present interpretation of the issue from the point of view of the "sustainable development concept" see *supra* note 37 and accompanying text at 11.

This concept is not valid anymore due to growing scientific knowledge. Today, it is known that world environment's capacity to absorb the impacts of human activities is limited. Because of the fact that scientific research takes time, "scientific certainty comes too late to design effective policy responses" in most cases[46]. Taking into account alternative methods which can be used in activities related to the environment, a different approach is needed based on long-term considerations[47]. In this context, "assessment procedures" and specifically EIA can best serve the goal of dealing with scientific uncertainty, while figuring the possible and likely impacts of each activity on a long-term perspective[48].

The precautionary principle can be found in many international environmental law documents[49]. In order to show how international law understands the principle, Principle 15 of Rio Declaration will be reminded here: "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"[50].

D. "Public Participation" and EIA

The direct link between science and environment has not only brought into attention new concepts like the precautionary principle, but has also strongly influenced the way of making law in international forums. The Convention on Climate Change is a very striking example of the new trend[51]. If the international community were not familiar with those scientific indicators proving that climate change was actually happening, then let alone preparing a Convention in a relatively short period of time, we might not even had one today.

Because environmental law is largely shaped by scientific findings, governments and states no longer enjoy the monopoly they used to have on decision-making processes in domestic and international laws. Though every country doesn't have the equivalent of the US Administrative Procedure Act which ena-

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46 Hunter et. al, *An Introduction to Concepts and Principles of International Environmental Law*, UNEP Trade and Environment Paper No. 2, at 19 (1994).
47 Hey, at.
48 *Id.*
49 See "EIA in International Law Documents" at 20-36.
50 Birnie & Boyle at 13.
51 Taking the Vienna Convention for the Protection of The Ozone Layer and The Montreal Protocol on Substances That Deplete The Ozone Layer as relevant models, the United Nations General Assembly unanimously passed a special resolution in December 1988 (G.A. Res. 43/53, A/RES/43/53 (Jan 27, 1989)). The resolution called for the preparation of a framework convention on climate change. Zaelke & Cameron at 277. Largely based on the findings of the Intergovernmental Panel on Climate Change (IPCC), which conducted scientific research on the issue, the Convention on Climate Change was signed at Rio on June 5, 1992 during the "Earth Summit". When considering traditional international law system's speed, the Convention was negotiated and signed by state representatives in an amazingly short period of time.

bles citizens and groups to participate in the administrative process, they could still play a key role when they would ask the courts to review administrative decisions. In that case, scientific researches conducted by those private parties can be used to challenge official evaluations.

The evolving understanding of eco-systems all over the world is largely due to the efforts of scientists and NGOs. In environmental issues, decisions are not based on facts only officials know, but the public, too can have access to the same facts through privately-conducted researches, even if it were not possible to obtain government documents. This development puts the pressure on public authorities, mostly when they are dealing with environmental issues which would have impacts on areas beyond national jurisdictions.

In an era in which concepts like "global citizenship"[52] are being discussed, environmental issues cannot be isolated from public and international interference. EIA comes under light at this point, because being the first step of proposed activities, it is important to examine as many scientific studies and hear as many opinions as possible from people who have social, cultural and/or economic interests in the projects.

United States' experience provides precious information about the effect of public participation in the EIA process. Retrospective analysis of NEPA prepared in 1970's have clearly shown that federal agencies had become much more sensitive to public opinion when preparing an EIS[53]. In those studies, it had also been concluded that federal agencies prefered not to come up with "truely environmentally damaging projects", because they didn't want to face severe criticisim during the public review period[54].

52 *See* Hunter, *Towards Global Citizenship in International Law*, Willamette L. Rev. 547-560, (Summer 1992).

53 Berzok, *The Role of Impact Assessments in Environmental Decision Making in New England: A Ten-Year Perspective*, 6 Environ. Impact Assess. Rev., , 103, 108 June (1986).

54 Public reaction to projects with a high potential of causing radical change in social, cultural and economic life is generally being called as the "Not-In-My-Back Yard" ["NIMBY"] syndrome (Percival et al. at. 382). In the United States, especially the search for landfills for waste dumping is getting more and more harder. Therefore, any possible site for dumping causes tension between local people and administration due to the not so pleasing American experience in the past on landfills. *Id.* at 382. NIMBY simply means that, in addition to facilities which cause pollution, local people or communities don't want landfills, incinerators or any kind of facilities which deal with eliminating the pollution those facilities cause. NIMBY isn't only a local, regional or national issue. It is so visible at international relations that there are two fundamental conventions with respect to global and continental (Africa) concerns on the international movement of hazardous substances and wastes. Chronologically, the first one is The 1989 Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal (28.I.L.M. 657 (1989)). The second one is the 1991 (Bamako) Convention on the Ban of the Import Into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes Within Africa (30 I.L.M. 773 (1991)). African countries, tired of being developed world's "wasteland" and not being satisfied with the Basel Convention adopted the abovementioned Convention for solely Africa and added a new dimension to NIMBY. For additional information about the background discussions of Bamako Convention, see Kaminsky, *Assessment of the Bamako* Convention on the Ban of Import Into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes Within Africa, 5 Geo Int'l. Envtl. L. Rev., 77-83 (1992).For a general evaluation on the Convention text regarding its EIA aspect see below, III.I.

The influence of EIA can clearly be seen on many projects in the States of New England, sometimes being the reason for modifying a project or even annuling it[55].

Even in an open and democratic country like the United States with a well-established administrative system, it is not always easy to encourage public participation. This is the other side of the issue. Environmental evaluations necessitate a high standard of expertise, and sometimes it is very hard to explain the interaction between expected impacts and the effect of scientific uncertainty on a specific project at the same time. It has been observed in the past that the public is distrustful of scientists who make risk assessments. One reason is the public's expectation of scientists to provide more certain information than it could actually be possible in many cases; "(p)eople demand certainty when there is none"[56]. In addition to the scientific factor, it has been argued that individuals distrust agencies in general and feel powerless before them[57]. When this feeling is combined with scientific uncertainty, it may cause two totally different results: The public may become prejudiced and turn hostile to every big project (like a dam construction)[58], no matter how serious agencies handle assessment studies. On the contrary, the public may show indifference. When that's the case, the public would feel reluctant to follow the process and participate, due to the opinion that whatever they might claim, agencies would come up with confusing and complicated scientific explanations. Without expertise, those arguments cannot be challenged.

To solve the problem,administrative authorities should provide the public information about risks on a regular basis and in a comprehensive manner[59].

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55 For example, trying to revitalize its depressed economy, the town of Hull's Redevelopment Authority (Massachusets) signed a contract with a private consulting firm, to develop a 33-acre parcel along Nantasket Beach to meet local housing need. The private contractor sought state funding in order to free itself from federal law requirements on federal funding. But, because the project was covered by the State Environment Policy Act, an EIA report was requested. At that level of the project, public participation caused a great deal of local controversy and finally the state authority rezoned the construction site in a way that the height proposed for buildings was lowered radically. *Id.* at 116-117. Another example which is about an annulled project too, shows the authorities' sensitivity to public opinion. The Lincoln Dam was planned to be built in Aroostook County (Maine) and it was port of the Dickey-Lincoln School Lakes Project which also covered the construction of the Dickey Dam. In 1978 when the Draft EIS produced by the Corps of Engineers was found to be inadequate, the Washington office contracted with several outside agencies and firms to prepare additional assessments. As a result, the project was found to be "unsound" with respect to its benefits to the State and impacts on wildlife. The Congress stopped the funding for the Dickey Dam. *Id.* at 120.

56 Stenzel, *The Need For a National Risk Assessment Communication Policy*, 11 Harv. Envtl. L. Rev., 381, 389 (1987).

57 *Id.* at 385.

58 See *supra* note 34 at 10.

59 Stenzel gives a remarkable example. Michigan Department of Natural Resources ("DNR") was planning to build the world's largest trash-to-electricity incinerator. When the project was announced in April, 1986, it was seen that the project was ten years old and it had never been discussed publicly until that day. DNR's efforts to persuade the community and the study they prepared right after the announcement -which contained a proposal to apply new technology for air filtering in order to lower the tension didn't work. *Id.* at 382-383.

III. EIA IN INTERNATIONAL LAW DOCUMENTS

The concept of EIA has gained international recognition in many international law documents, both in conventions and in soft law instruments.

This section should begin with the "Stockholm Declaration", a mile-stone document on international environmental cooperation.

A. Stockholm Declaration

EIA is not openly mentioned in Stockholm Declaration[60], but in numerous articles, the basic structure and logic of the concept can be found. It should be kept in mind that the Declaration was signed only two years after NEPA had come into force and the EIA concept was relatively new. In the "Preamble", the signatories have announced that humanity had reached such a point in history that actions throughout the world had to be shaped with a "more prudent care for the environmental consequences" (para. 6). It has been recognized that the global environment's capacity to absorb the discharge of toxic substances, other substances or the release of heat was limited, therefore all countries were required to halt such conduct in order to ensure that serious or irreversible damage wouldn't be inflicted on the environment (Principle 6). Principle 6 indirectly talks about the precautionary approach. The acceptance of an environment with limits is one of the themes of that concept[61]. Principle 13 of the Stockholm Declaration is maybe the article which gives the closest definition of EIA: "In order to achieve a more rational management of resources and thus to improve the environment, States should adopt an integrated and co-ordinated approach to their development planning so as to ensure that development is compatible with the need to protect and improve the human environment for the benefit for their population". This principle also gives a hint of "sustainable development" which was going to gain world-wide reputation about fifteen years later[62]. Although not mentioning openly the EIA concept, Principle 13 shows the relation between sustainable development and the importance of conducting studies to foresee the future, in a very successful way. Principle 14 talks about "rational planning" and underlines its vital importance to balance economic expectations with the need to protect the environment. Principle 18 is the only article of the Declaration to bring together and combine science and technology, with economic and social development, while mentioning the concept of "risk": "Science and technology, as part of their contribution to economic and social development, must be applied to the identification, avoidance and control of environmental risks and the solution of environmental problems and for

60 Declaration of the United Nations Conference on the Human Environment, Stockholm, June 1972.
61 See p. 13-17.
62 See p. 11-13.

the common good of mankind". Being in the same context with this article, Principle 21 lays the principle of "state responsibility" in international law: "States have... the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other states or of areas beyond national jurisdiction". State responsibility is an important principle with respect to both institutionalizing caution and EIA, as it will be explained later[63]. Another concept the Stockholm Declaration has cited in numerous articles is "The Duty to Cooperate" (Preamble paragraphs 2, 6, 7; Principles 5, 6, 7, 9, 12, 17, 18, 20, 22, 24, 25, 26). This principle creates a convenient climate for international collaboration aimed to enable countries both to provide and ask for scientific-technical assistance and information. The duty to cooperate has been given such a broad area of application by the signatory states that it also contains the duty for the states to enter bilateral and/or multilateral agreements to realize the goal of environmental protection (Principle 24), as well as the duty to "ensure" that international organizations would play "a co-ordinated, efficient and dynamic role" for the protection and improvement of the environment (Principle 25).

B. Rio Declaration

The Rio Declaration which came twenty years later[64], after reaffirming the Stockholm Declaration, has followed the same development path and putting the goal of establishing a new and equitable "global partnership" amongst its top priorities, it has given a list of principles which all provide theoretical basis for EIA. State responsibility (Principles 2, 14), sustainable development (Principles 3 and 4), duty to cooperate (Principles 5, 7, 9, 12, 13, 14, 18, 19, 21, 24, 25, 27). Furthermore, the Rio Declaration mentions the precautionary approach, scientific uncertainty, EIA and public participation issues in separate articles: "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". (Principle 15); "Environmental impact assessment, as a natural instrument, shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment and are subject to a decision of a competent national authority". (Principle 17); "Environmental issues are best handled with the participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information con-

63 See "The Status of EIA as an International Law Principle" at 36-39.
64 Declaration of the UN Conference on Environment and Development, Rio de Janerio,, June 3-14, 1992. This document is generally known as *"Rio Declaration"*. *See* Birnie & Boyle at 9-15 (1995).

cerning the environment that is held by public authorities... and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided". (Principle 10) and "Indigenous people and their communities, and other local communities, have a vital role in environmental management and development because of their knowledge and traditional practices. States should recognize and duly support their identity, culture and interests and enable their effective participation in the achievement of sustainable development". (Principle 22).

C. Convention on Long-Range Transboundary Air Pollution

In 1979, the Convention on Long-Range Transboundary Air Pollution has been adopted[65]. The Convention describes "long-range transboundary air pollution" as "air pollution whose physical origin is situated wholly or in part within the area under national jurisdiction of one State and which has adverse effects in the area under the jcurisdiction of another State at such a distance that is not generally possible to distinguish the contribution of individual emission sources or groups of sources". (Art. 1 (b)). After giving the contracting parties the responsibility "to endeavour" to limit and reduce and prevent pollution, as far as possible (Art. 2); the Convention has listed the relevant principles in order to reach that target: Exchange of information, consultation, research and monitoring (Art. 3, 8, 9); to review policies, scientific activities and technical measures regarding the prevention of pollution (Art. 4); to develop best policies and strategies, including "air quality management systems" (art. 6); the duty to co-operate on scientific issues and policy development (Art 7 (a), (b), (c)); and cooperation on "the economic, social and environmental assessment of alternative measures for attaining environmental objectives including the reduction of long-range transboundary air pollution" (Art. 7 (e)).

D. Convention on The Law of The Sea

Three years later, the Convention on the Law of the Sea had been adopted[66]. The Convention refers to EIA in the context of marine environment, in Article 206: "When States have reasonable grounds for believing that planned activities under their jurisdiction or control may cause substantial pollution or significant and harmful changes to the marine environment, they shall, as far as practicable, assess the potential effects of such activities on the marine environment

65 The Convention on Long-Range Transboundary Air Pollution, Geneva, November 13, 1979. For the text of the Convention *see* Birnie & Boyle at 277-300.

66 The United Nations Convention on The Law of The Sea, Montego Bay, December 10, 1982, 21 I.L.M. 1261 (1982).

and shall communicate reports of the results of such assessments in the manner provided in article 205". Article 205 regulates states' duty to publish the information they would obtain, based on monitoring, observing, measuring, evaluating and analizing the "risk"s of activities-which is another requirement of the Convention in Article 204. The Convention on the Law of The Sea has not only implemented the assessment concept, but has also allocated a considerable number of its provisions to EIA and related principles and concepts: States shall design measures in order to protect the harvested species' population at "the maximum sustainable yield" level, which, in other words, means the "sustainable use" of marine resources (Art. 61 (3)); states, when determining the allowable catch measures as well as establishing other conservation measures, have to base their decisions on "the best scientific evidence available" (Art. 119 (1)(a)); the principle of state responsibility is to "act so as not to transfer, directly or indirectly, damage or hazards from one area to another or transform one type of pollution into another." (Art. 195); states' responsibility to improve the technologies they are using in catching marine species (Art. 196); the duty to co-operate on a global or regional basis (Art. 197); notification of imminent or actual damages due to activities which are within the territory or under the control of the notifying state (art. 198); the duty to co-operate on all dimensions of scientific research (art. 200-202).

E. Vienna Convention For The Protection of The Ozone Layer

The Vienna Convention for the Protection of The Ozone Layer (1985)[67] has been another ground-braking instrument in international environmental law. It is maybe the first Convention in history which is based on purely scientific evidences and consequential environmental concerns. In addition, it may also be said that the Convention has established the link between science and international environmental law in such a way that the trend cannot be reversed. The Convention, in its preamble, begins its explanations with pointing to the scientific factor: The Contracting Parties are *"(a)ware* that measures to protect the ozone layer from modifications due to human activities require international co-operation and action, and should be based on relevant scientific and technical considerations" (emphasis in original) para. 7) and *"(a)ware also* of the need for further research and systematic observations to further develop scientific knowledge of the ozone layer and possible adverse effects resulting from its modification". (emphasis in original) (para. 8). Although the Convention doesn't mention EIA openly in any of its provisions, the logic of the Convention itself reflects a precautious approach in terms of "protecting human health and the environment against adverse effects resulting from modifications of the ozone

67 The Vienna Convention for the Protection of The Ozone Layer, Vienna, March 22, 1985, 26 I.L.M. 1529 (1987).

layer". (para. 9). Therefore, the "general obligations" (art. 2); research and systematic observations on the factors affecting the ozone layer (Art. 3); duty to cooperate in the legal, technical and scientific fields (Art. 4); and information exchange (art. 5) all indicate international community's willingness to understand the reasons of ozone depletion exactly and assess its likely consequences. Furthermore, because the Contracting Parties are under the obligation to "adopt appropriate legislative or administrative measures and cooperate in harmonizing policies to control, limit, reduce or prevent human activities under their jurisdiction or control" (Art. 2 (2) (b)), technically, the domestic implementation of this provision necessitates the conduct of an EIA regarding the possible impacts of a proposed national activity.

F. Goals and Principles of Environmental Impact Assessment (United Nations Environment Program)

Organizations within United Nations, too, prepare and issue documents which are not binding, but have a legal effect to a certain degree[68]. For example, United Nations Environment Program's [hereinafter "UNEP"] Governing Council took under decision the "Goals and Principles of Environmental Impact Assessment"[69]. The document defines EIA as "an examination, analysis assessment of planned activities with a view to ensuring environmentally sound and sustainable development". The "Goals" of the Document, at the same time show United Nation's approach towards EIA, in general: To establish a system in which the effects of projects that are likely to affect the environment "significantly" would be taken into full account before decisions are made; to promote the efforts to establish such a system in domestic laws all over the world; and to encourage the development of reciprocal procedures for information exchange, notification and consultation between States when activities are likely to have significant "transboundary impacts".

According to Principle 1, an EIA study should include, at a minimum, a description of the environment which faces the possibility of being affected significantly; a description of practical alternatives; an identification of measures available to mitigate adverse environmental impacts of the proposed activity; an indication of gaps in knowledge and uncertain aspects of the proposal; an indication of any possible transboundary impacts; and a brief non-technical summary of all of the issues mentioned above. Principles 11 and 12 focus on the responsibilities of States when evaluating a proposed activity within their national jurisdiction which is likely to significantly affect other states, in detail.

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68 See below for discussions on "soft law" documents in international law, "The Legal Status of EIA in International Law".

69 UNEP Goals and Principles of Environmental Impact Assessment, Governing Council, Decision 14/25, June 17, 1987.

States are expected to cooperate in order to provide notification, exchange of information and agreed-upon consultation on the potential environmental impacts of the above-mentioned activities (Principle 11). If an EIA study indicates that one state's environment will be affected significantly by an activity planned in another state, the state of the proposed activity will not only notify the potential impacts, but will also transmit all relevant information to the state which may be affected (Principle 12 (a) and 12(b)). Upon agreement, those states will also enter timely consultation (Principle 12(c))[70].

G. Basel Convention on The Control of Transboundary Movements of Hazardous Wastes and Their Disposal

The Basel Convention on The Control of Transboundary Movements of Hazardous Wastes and Their Disposal[71], stating in its preamble that the transboundary movement of hazardous waste is a serious threat to human health and the environment (para. 1 and 2), declares that States should take necessary measures to ensure that the management of hazardous wastes would be consistent with the protection goals of the Convention and they should also ensure that the transportation and disposal of wastes, by those who generate it, would occur in a protective manner (para. 5 and 6). The Preamble also reflects the parties, concern that the enhanced control of transboundary movements of all kinds of hazardous wastes would provide an incentive for "environmentally sound management" and waste reduction (paragraph 11). Despite other tools, like scientific information, these points can be achieved by conducting assessments; for example, in order to establish "environmentally sound management" of hazardous wastes, an operation process should go through assessing the present situation, so that environmentally unsound aspects could be eliminated. The definition given in the Convention ties that target to the necessity of conducting EIAs: " 'Environmentally sound management of hazardous wastes or other wastes means taking all practicable steps to ensure that hazardous wastes or other wastes are managed in a manner which will protect human health and the environment against the adverse effects which may result from such wastes". (Art.2). Each party's obligation in this area has also been stated in Article 4(2)(d). Considering the high-technology level the Convention requires, special attention has been shown to "international co-operation" in terms of information, technology and expertise transfer (Art. 10).

70 For comparison see the Convention on Environmental Impact Assessment at 27-30.
71 The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, Basel, March 22, 1989, 28 I.L.M. 657 (1989).

H. Convention on Environmental Impact Assessment in a Transboundary Context

In 1991, the international appeal towards the concept of EIA has reached the level of adopting a convention on EIA[72]. In the Preamble, the Contracting Parties begin by announcing their awareness of the "interrelationship" between economic activities and their environmental consequences (para. 1). Referring to sustainable development, they have affirmed the need to ensure "environmentally sound and sustainable development." (para. 2). The Preamble also focuses on a very critical dimension of EIA, which this study has pointed out in previous pages with big concern: The Contracting Parties are *"Conscious* of the need to give explicit consideration to environmental factors at an early stage in the decision-making process by applying environmental impact assessment, at all appropriate administrative levels, as a necessary tool to improve the quality of information presented to decision makers so that environmentally sound decisions can be made paying careful attention to minimizing significant adverse impact, particularly in a transboundary context". (para 7) (emphasis in original) The Convention defines EIA as "a national procedure for evaluating the likely impact of a proposed activity on the environment". (Art. 1(vi)). "Impact" means "any effect caused by a proposed activity on the environment including human health and safety, flora, fauna, soil, air, water, climate, landscape and historical monuments and other physical structures or the interaction among these factors; it also includes effects on cultural heritage or socio-economic conditions resulting from alterations to those factors". (Art. 1 (vii)). The activities which require the preparation of an EIA have been listed in Appendix I[73] and Appendix II sets forth the minimum level of information each EIA should contain[74]. Each Party is obliged to take the necessary legal, administrative and other measures in terms of implementing the Convention. For the activites listed in Appendix II, the parties have to establish an EIA procedure that permits "public participation." (Art.2(2)). The State in which the activity would be conducted has to en-

72 Convention on Environmental Impact Assessment in a Transboundary Context, Espoo, February 25, 1991, 30 I.L.M. 800 (1991).

73 Appendix I contains activities such as the construction of certain types of oil refineries, thermal power stations, nuclear reactors, production or enrichment of nuclear fuels, cast-iron and steel production, construction of motorways, construction of large-diameter oil and gas pipelines, large dams and reservoirs and so forth. For the complete list, *See Id.* at 812-813.

74 Appendix II foresees the minimum number of elements EIA's should contain as follows: "(a) A description of the proposed activity and its purpose; (b) A description, where appropriate, of reasonable alternatives (for example, locational or technological) to the proposed activity and also the no-action alternative; (c) A description of the environment likely to be significantly affected by the proposed activity and its alternatives; (d) A description of the potential environmental impact of the proposed activity and its alternatives and an estimation of its significance; (e) A discription of mitigation measures to keep adverse environmental impact to a minimum; (f) An explicit indication of predictive methods and underlying assumptions as well as the relevant environmental data used; (g) An identification of gaps in knowledge and uncertainties encountered in compiling the required information; (h) Where appropriate, an outline for monitoring and management programmes and any plans for post-project analysis; and (i) A non-technical summary including a visual presentation as appropriate (maps, graphs, etc.)." *Id.* at 814.

sure that "affected Parties" are "notified" if the proposal is within the scope of Appendix I (Art.2(4)). The State in which an activity is proposed, the public who live in the areas "likely to be affected" will be given an opportunity to "participate" in the EIA procedures; futhermore, the opportunity provided to other States' publics has to be the "equivalent" of that given to natives (Art. 2(6)). Article 2(7) indicates the proposed activities' level of preparing EIAs: "Environmental impact assessments as required by this Convention shall, as a *minimum* requirement, be undertaken at the *project level* of the proposed activity." (emphasis added). "Notification" (Art. 3) and the "Preparation of the Environmental Impact Assessment Documentation " (Art.4) enable us to understand the role of the duty to co-operate in the preparation of EIA's. Both provisions require the flow of information from the State of origin to the affected parties, in a way that they would have sufficient time to examine and evaluate the project and participate efficiently in the decision-making process. A very interesting provision in the Convention is Article 2(5), which is not only relevant to the participation issue, but also carries the potential for expanding the area of the Convention. Article 2(5) gives the opportunity to "Concerned Parties" to "enter discussions" on proposed activities which haven't been listed in Appendix I. Although the Convention doesn't force the State in which the activity would be undertaken to "agree" with the concerned Party, if both sides conclude that the project should be treated as an Appendix I activity, then it "shall be thus treated". (Art.2(5)). After the phase of EIA documentation is completed, the State of the proposed activity will enter consultations with the affected Party without delay (Art.5) and issues such as possible alternatives to the proposed activity, the no-action alternative, possible measures to mitigate significant adverse transboundary impact, to monitor the effects of such measures at the expense of the State of the proposed activity, other forms of possible mutual assistance and all other appropriate matters relating to the proposal may be included to consultations (art.5 (a), (b), (c)). After all of those levels are passed, the State of the proposed activity can make its final decision, ensuring that "due account is taken of the outcome of the environmental impact assessment" (Art.6(1)). The process may end at this point, but the Convention has also taken into consideration the possibility of asking for a "post-project analysis" (Art.7). The Parties, at the request of any Party, may determine to carry out a post-project analysis in order to study the activity and to see whether it had caused any adverse environmental effects (Art.7(1)). If the result of the post-project analysis would be that adverse effects are actually happening - there is a strong possibility, then the concerned Parties will enter consultations to find ways to reduce or eliminate those effects (Art.7(2)).

I. Convention on The Ban of The Import Into Africa and The Control of Transboundary Movement and Management of Hazardous Wastes Within Africa

The Convention on The Ban of The Import Into Africa and The Control of Transboundary Movement and Management of Hazardous Wastes Into Africa[75] is the result of efforts aimed to prevent developed countries from dumping their wastes to African countries[76]. The Bamako Convention has been negotiated and adopted in an atmosphere in which the parties wished to "redress the short comings" observed in the Basel Convention[77]. The Bamako Convention requires special attention for the way it has established the precautionary approach. In previous documents we have examined, it has been seen that the precautionary approach had already reached the level of international recognition. On the other hand, the Bamako Convention is the first treaty which "explicitly contains the precautionary approach in its operative parts"[78]. The relative provision is Article 4(3)(f): "Each Party shall strive to adopt and implement the preventive, precautionary approach to pollution problems which entails, inter-alia, preventing the release into the environment of substances which may cause harm to humans or the environment without waiting for scientific proof regarding such harm. The Parties shall co-operate with each other in taking the appropriate measures to implement the precautionary principle to pollution prevention through the application of clean production methods, *rather than the pursuit of permissible emissions approach based on assimilative capacity assumptions."* (emphasis added). Especially the last part of the article indicates a radical change in the area of scientific uncertainty and in no other Convention before Bamako have the states declared that shift by openly referring to the assimilative capacity approach and that it is not valid anymore.

J. The Framework Convention on Climate Change

The growing evidence on global warming, mainly due to the increase of emissions of "greenhouse gases" to the atmosphere, has led the international community to give a quick response to the threats this issue is posing to global environment[79]. The Framework Convention on Climate Change has been accepted at Rio, on June 5, 1992[80]. Being accepted a year later than the Bamako Convention, the Convention on Climate Change, too, reflects the changing trend in evaluating scientific issues in terms of dealing with scientific uncertain-

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75 Convention on The Ban of The Import Into Africa and The Control of Transboundary Movement and Management of Hazardous Wastes Within Africa, 30 I.L.M. 773 (1991). Also known as the *"Bamako Convention"*.

76 Kaminsky at 77. See *supra* note 54 at 18.

77 *Id.* For comparison see Basel Convention at 28-29.

78 Kaminsky at 84.

79 See *supra* note 43 at 13.

80 The Framework Convention on Climate Change, New York, May 9, 1992. For the text of the Convention *see* Birnie & Boyle at 252-277.

ty and considering that factor under the light of economic concerns[81]. Although the Contracting Parties have underlined the fact that there were "many uncertainties" in predicting climate change's time of occurrence, magnitude and regional patterns and a like (Preamble para.5); they nevertheless recognized the necessity of enacting "effective environmental legislation" in order to implement "environmental standards", "management objectives" and "priorities" relevant to climate change (Preamble para.10). According to Article 3(3), the Parties should take "precautionary measures" to "anticipate, prevent or minimize" the causes of global warming. After stating those issues, Article 3(3) reads as "(w)here there are threats of serious or irreversible damage, *lack of full scientific certainty should not be used as a reason for postponing such measures."* (emphasis added).

It may seem strange that, despite all the evidence which establishes a direct link between greenhouse gas emissions and global warming, the Convention hasn't tried to implement an immediate ban on sources of those emissions. Putting aside the fact that world's realities make it practically impossible, or even nonsense of even considering such a ban, the Convention foresees the reducement of emissions according to a timetable and this is exactly the way of applying the concept of sustainable development regarding the causes of global warming[82].

K. Convention on Biological Diversity

Another Convention adopted at Rio on June 5, 1992 is the Convention on Biological Diversity[83]. In the Preamble of the Convention, the precautionary approach and the factor of scientific uncertainty have again been referred to: *"Aware* of the general lack of information and knowledge regarding biological diversity and of the urgent need to develop scientific, technical and institutional capacities to provide the basic understanding upon which to plan and implement appropriate measures", (para.7) (emphasis in original) and *"Noting also* that 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", (para.9) (emphasis in original). In Article 7(c), the Contracting Parties have been put under the obligation to "(i)dentify processes and categories of activities which *have* or are *likely* to have *significant adverse impacts* on conservation and sustainable use of biological diversity" (emphasis added). Article 8(1) requires the Contracting Parties, "as far as possible and as appropriate" to "regulate or manage the relevant processes and categories of activities" when there is a determination of "a significant effect on biological diversity ... pursuant to Article 7." After recognizing the role of "cooperation" (Art.5); "Sustainable Use Of Components of Biological Diversity" (Art.10); "Research and Traini..." (Art.12) with respect to meeting the need of

81 See "the third option" above at II. C.
82 See *supra* note 42 and accompanying text at 13.
83 United Nations Convention on Biological Diversity, 31 I.L.M. (818).

technology, expertise and education in developing countries; "Public Education and Awareness" (Art.13); the Convention regulates the EIA procedure in biodiversity conservation, under the title of "Impact Assessment and Minimizing Adverse Impacts" in Article 14: "1. Each Contracting Party, as far as possible and as appropriate, shall: (a) Introduce appropriate procedures requiring environmental impact assessment of its proposed projects that are likely to have significant adverse effects on biological diversity with a view to avoiding or minimizing such effects, and where appropriate, allow for public participation in such procedures". In addition to this obligation, the Contracting Parties shall introduce appropriate arrangements to ensure that in their programmes and policies, the likely adverse and significant impacts are fully taken into account (Art.14(1)(b)); shall promote, on the basis of reciprocity, notification, exchange of information and consultation on activities under their national jurisdiction which are likely to affect adversly the biodiversity of other States, by encouraging the conclusion of bilateral, regional or multilateral arrangements (Art. 14(1)(c)); shall notify immediately the potentially affected States in the case of imminent or grave danger or damage, originating from activities under their jurisdiction or control (Art.14(1)(d)); shall promote national arrangements for emergency responses to activities or events, which present a grave and imminent danger to biodiversity, no matter whether that danger had occured due to natural or other causes, and support such national efforts in terms of international cooperation by establishing joint contingency plans (Art.14(1)(e)).

IV. THE LEGAL STATUS OF EIA IN INTERNATIONAL LAW

It is a well known fact that the traditional (or classic) instrument of international law have been treaties. A treaty is binding on all parties which have signed it[84] and therefore a state, after having that treaty ratified in its domestic law would have to fulfill its commitment to the international community by either enacting new laws or modifying old ones according to international law.

The Statute of International Court of Justice [hereinafter "Statute of ICJ"], in Article 38(1) has listed the primary sources of international law with respect to disputes brought into its jurisdiction. The first mentioned source there, is "international conventions, whether general or particular, establishing rules expressly recognized by the contesting states" (Art. 38(1)(a))[85].

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84 Buergenthal & Maier, *Public International Law*, 25 (1990).

85 Id. at 20. The ICJ Statute doesn't declare whether there is a hierarchical order between the three sources which are listed in Article 38 ("Customary law" (art. 38(1)(b)) and "the general principles of law recognized by civilized nations" (Art. 38(1)(c)), in addition to treaties, are also sources of international law. "The judicial decisions and the teachings of the most highly qualified publicists of the various nations" function "as subsidiary means for the determination of rules of law" (Art.38(1)(d)), therefore they are not a part of the discussion on hierarchy). On the other hand, "in practice it would appear that an international court, faced with a dispute between two states, would give precedence to a specific treaty provision binding on the parties over a conflicting rule of customary international law, provided the latter did not have the status of a peremptory norm of international law (*jus cogens*) which a treaty may not nullify." (emphasis in original) *Id* at 21-22.

On the other hand, after the Second World War, other instruments like "Declaration"s or "Principles" began to broaden their area of application in addressing various issues in international law. It has been observed that "(t)he 'UN family' of organizations plays the leading role here"[86]. This relatively new development in international law has given rise to the concept of "soft law", *i.e.*, non-compulsory or non-binding law[87].

International environmental law is largely benefiting from soft law. This shouldn't seem suprising. First of all, the issues international environmental law deals with cannot be defined as "traditional" or "classic". Subjects like global warming or the conservation of biological diversity have, themselves, established precedents. On the contrary, traditional international environmental law treaties used to cover issues like multilateral or bilateral trade agreements or agreements on non-aggression.

It won't be wrong to say that one of the fundamental characteristics of international environmental law is its faith in global cooperation. It can be said that the reason of this is the channels international environmental law has to science. There is a parallel development between growing scientific information and international environmental law's emphasizing the concept of cooperation. As it can be seen more and more clearly in years, world's ecologic system is based on the interaction between all living and non-living elements of our planet. Thus, the branch of law which deals with problems related to the environment has to promote and provide global participation at the highest level in conservation and protection efforts. These differences of nature international environmental law has when compared with the traditional international law system have a role in making soft law more attractive.

The treaties are binding and when a state representative signs a treaty on behalf of his/her country, that state would be under the obligation of having the document ratified by its competent national authority. Soft law instruments, on the other hand, don't have to be ratified and they don't set time-tables for compliance. When a state representative signs, for example, a declaration, that country's "obligation" to the international community would be a "promise" to spend "best efforts" in order to adopt those "principles" set forth in the declaration[88]. Right at this point, the tension between developed and developing countries should be reminded. Although in international environmental law documents the special situation of developing countries is being recognized, the relation between economics and environment and the cost of developing while

86 Dupuy, *Soft Law and The International Law of The Environment*, 12 Mich. J. Int'l. L. 420, 420-421 (1991).

87 The term "soft" is "paradoxical", because "the rule of law is usually considered 'hard', *i.e.*, compulsory, or it simply does not exist". *Id.* at 420. Although this point seems confusing, soft law "certainly constitutes part of the contemporary law-making process." *Id.*

88 "It is thus generally understood that 'soft' law creates and delineates goals to be achieved in the future rather than actual duties, programs rather than prescriptions, guidelines rather than strict obligations". *Id.* at 430.

protecting global environment from harm may be discouraging for relatively poor countries. In that case, instead of undertaking the responsibility of a treaty, it might be preferable to collaborate with other states in the making of a soft law document.

The legal fact that soft law is not binding shouldn't lead to a wrong conclusion; all those soft law documents in the area of international environmental law do have a certain degree of legal value and effect. The Statute of ICJ brings light to this aspect of the discussion. Article 38(1)(b) cites customary law as "evidence of a general practice accepted as law". Customary international law develops from the practice of states and this means "official governmental conduct reflected in a variety of acts, including official statements at international conferences and in diplomatic exchanges, formal instructions to diplomatic agents, national court decisons, legislative measures or other actions taken by governments to deal with matters of international concern"[89]. When state representatives sign soft law documents, declare their country's commitment to the issues referred to there, they actually begin the making process of customary international law.

By the end of 1994, more than seventy countries had implemented the EIA procedure in their domestic laws[90]. Even if a country is not party to the 1991 Convention on Environmental Impact Assessment in a Transboundary Context[91], the adoptation of the institution by a significant number of countries gives the opportunity to claim that sufficient state practice has already occured in order to claim that EIA has been established as a customary law principle, as well as the basis the above-mentioned Convention provides for the customary law claim and argument.

There is no known ICJ decision in international law which illuminates whether the concept of EIA has become a "principle" of customary international law. Aside of that fact, the continous repetition of EIA in state practices, especially its domestic implementation by legislators all over the world, will enable its evolution to be completed in the near future, if it hasn't already been completed.

V. THE INFLUENCE OF THE US LAW

The US law has a strong influence on international environmental law both as a source for technical law and as a provider of a convenient climate for developing environmental conservation efforts all over the world. This is partly due to NEPA, which will be discussed under the following title in terms of its "impact" in international law. Another factor seems to be the post-cold war era. After shifting from communism to market- orientated economy model and its social, political and legal components, the Russian Federation and all members of

89 Buergenthal & Maier, *Id.* at 22-23.
90 Gilpin, at 93.
91 See above, III.H.

the former Warsaw Pact have shown admirable determination to catch-up with the Westerns countries in the area of international environmental law. Of course, one of the strongest motives in that trend is to be able to have a prestigious position in international forums, especially the United Nations and the European Union.

As the end of the 20th century is approaching, there are very convincing evidences that U.S. will even get more involved in global environmental issues in the next century, combining environmental conservation efforts with international and regional "security" concerns[92].

A. On International Law

Even in 1970 when the international environmentalist movement was still crippling, the American Congress designed NEPA not only as a domestic act,

92 In February 1996, the U.S. Secretary of State Warren Christopher ordered State Departmant bureaus and embassies to incorporate environmental issues into all diplomatic activity and planning, including the programs for his international trips. The memo sent by Christopher to State Department bureaus and embassies put the environment near the top of U.S. national security interests: "Worldwide environmental decay threatens U.S. national prosperity. Severe pollution directly affects cropland, livestock, fisheries and other biological resources essential to global prosperity. Pollution's impact on a nation's health takes an enormous toll on its manufacturing, service and agricultural productivity. When this occurs in developing countries, it makes for weaker trading partners and for grater reliance on foreign assistance". The Washington Post, March 5, 1996, A9. It seems that implementing environmental issues into U.S. foreign policy will give a boost to American activities relevant to this topic at the international context. The point Christopher has made in the memo requires very radical changes in many countries' -especially developing countries'- both domestic and international policies. Because when it is seen from Secretary of States' point of view, the issue is not just promoting the adoptation of environmental laws regarding developed world's standards. In order to achieve the goal Christopher has brought into consideration, states would have to change, for example the way the use their lands for agriculture so that environmental degradation wouldn't occur or -taking into account the "security" element of the argument- should be required to enter agreements, for example sharing and mutually benefiting from international waters. In that case, U.S. policy would be even far more reaching than it has ever been with respect to playing delicate roles in especially environmental issues which have the potential of causing regional and/or global disturbances. Although some American conservatives see this latest development as emerging from President Clinton's reelection campaign (Sheehan, "Greening of the State Department", The Washington Times, May 1, 1996, A17), given the past record of U.S.A.'s interest in global environmental issues, Christopher's memo seems to be the beginning of a very interesting era in both international environmental law and international environmental policy. As a matter of fact, before Christopher's announcement, there were already evidences which indicated the policy change in the U.S. administration in terms of integrating foreign policy with the environment. For example, the then-Associate Director of Global Environment of White House's Office on Environmental Policy, David D. Doniger had said in 1994 that "(i)n our first year in the White House, we have undertaken what might be called a thorough house inspection to see what is in the government's attic on global environmental issues. We have already made important changes in policy on the greenhouse effect, forest destruction, species extinction, and other issues. We are seeing extraordinary pressures around the world on resources vital to agriculture, including shortages of fresh water and desertification. We have seen the collapse of certain fisheries from over fishing. On short, we are seeing many patterns of economic activity and resource use that are unsustainable over the long haul. ... We believe that the only responsible approach to these uncertainties is a precautionary approach. ... We have a responsibility to ourselves and to future generations not to make big mistakes. ... This (the precautionary) principle entails taking early measures to mitigate these problems. Most often these measures are good for the economy in the short- and the long- run as well". Symposium on The Environment and The Law sponsored by the Federalist Society, David D. Doniger's speech at the panel (21 Ecology L.Q. 477-479, 477).

but as a legislation with a range which would go beyond national jurisdiction. Although there is controversy on the exact scope of section 102(2)F[93], NEPA requires all federal agencies "to recognize the world-wide and long-range character of environmental problems, and where consistent with the foreign policy of the United States, lend appropriate support to initiatives, resolutions and programs designed to maximize international cooperation in anticipating and preventing a decline in the quality of mankind's world environment"[94].

In 1980, President Carter issued the Executive Order 12, 114 [hereinafter "Order"][95]. The Order doesn't bring any new procedures or methods to the NEPA system. It's aim, is rather to expand the application of NEPA to areas beyond U.S. national jurisdiction[96]. The concern on the protection of "global commons" (*e.g.*, the oceans, Antarctica, outer space) is not a strange subject to see in a domestic legislation like NEPA. U.S. has vital interest in economic and scientific activities regarding the resources of high seas or outer space.

The Order has been criticised mainly for leaving a broad area of discretion to agencies[97].

Despite the discussions and U.S. Court decisions on NEPA's and Order's scope of application[98], focusing on some examples would be very educating in order to see how the American approach directed international developments.

The Antarctic Treaty[99], established a protective system in terms of conserving the Antarctic environment in an era which the U.S.S.R. was following "pragmatic approach" towards the continent[100]. Although Russian administrations largely complied with the Antarctic regime, they nevertheless began a construction project of a station, which later had to be canceled for the Antarctic Treaty[101].

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93 Young, *The Application of Environmental Impact Statements to United States Participation in Multinational Development Projects*, 8 Am. U.J.Int'l. L. & Pol'y 309, 315 (Fall 1992).

94 42. U.S.C. 4332(2)(F).

95 Executive Order No. 12, 114, 3 C.F.R. 356 (1980), *reprinted in* 42 U.S.C. 4321 (1988).

96 The Order requires agencies to prepare an EIS for federal major actions outside the U.S. and this includes "actions significantly affecting the environment of the global commons outside the jurisdiction of any nation". (2-3(a)).

97 The Order allows the interested agency of a proposal to determine whether its activity would be a "major federal action" and whether the action would affect the global commons "significantly". Because no president, including Carter, has designated any resources as having global importance, it has been claimed that the Order is "ineffectual" in nature. Young, at 320-321. *See* also Holmes, *Protection of The Antarctic By The Use of Environmental Impacts Assessments*, 6 Geo. Int'l. L. Rev. 73, *supra* note 57 at 82.

98 Application of federal law extraterritorially has begun on a case-by-case basis beginning in 1909 and neither court decisions nor agency application have been able to establish stability. *See* Holmes, at 83-85 and Young at 317-320.

99 Antarctic Treaty, Dec. 1, 1959, 12 U.S.T. 794, 402 U.N.T.S. 71 (entered into force June 23, 1961).

100 In 1955 when the negotiations began on a treaty for Antarctica, Russians announced that they would build three bases in Antarctica and that "all rights based on discoveries and explorations of Russian navigators... including the right to present corresponding territorial claims in the Antarctic were reserved. Holmes, at 86.

101 *Id.*

U.S. being the promoter of the Antarctic Treaty, on the other hand, didn't attempt to follow such a pragmatic approach as U.S.S.R's, but discussions on NEPA's extraterritorial efficiency in general and specifically with respect to Antarctica, caused a lot of domestic controversy[102].

The expansion of international conservation efforts and the collapse of the Warsaw Pact directed the former members of the "iron curtain" to adopt western-type environmental laws. These developments were followed by the Protocol to Antarctic Treaty on Environmental Protection[103].

The significance of the Protocol is that, almost at the beginning of 1990's, it not only gives an opinion on the direction international environmental law is following, but also indicates the American approach (*i.e.*, NEPA) in international platforms. In Article 3(2)(c), the Protocol obliges Contracting Parties to conduct their activities "on the basis sufficient to allow prior assessments of, and informed judgements about, their possible impacts on the environment and dependent and associated ecosystems". Article 3(2)(c) continues to list the factors which would be considered to achieve that goal; other factors in the same context, focusing on "the scope of the activity" and "cumulative impacts of the activity" (Article 3(2)(i),(ii)). Article 8 ("Environmental Impact Assessment") requires proposed activities to be evaluated according to whether they would have "less than a minor or transitory impact", "a minor transitory impact" or "more than a minor or transitory impact" (Art. 8(1)(a),(b), (c)). Article 11 establishes a "Committee for Environmental Protection" and Article 12 states the "functions of the Committee" in a broad range; from the effectiveness of measures taken pursuant to the Protocol, to provide inspection procedures and collection of relevant data (Art. 12(a)-(j)).

Another remarkable source of the international influence of American law is the U.S. International Development and Finance Act[104].

In its most significant provision, Article 262 m-7(d)(1) ("Pelosi Amendment"), the Act directs the Secretary of Treasury to instruct "the United States Executive Director of each multilateral development bank" to propose that the respective bank "develop ... a procedure for the systematic environmental assessment of development projects". In other words, according to Article 262m-7(a)(1), a U.S. Executive Director of any multilateral Development Bank is prohibited from voting in favor of any proposed action which has a significant effect on the human environment unless an EIA has been completed at least 120 days prior to the date of the vote. The exact legal range of such a provision may not be easily understood at first glance. When taking into account that biggest

102 See *supra* note 93 and accompanying text at 41.
103 Protocol to the Antarctic Treaty on Environmental Protection, Madrid, October 4, 1991. For the text of the Protocol *see* Birnie & Boyle, 468-513 (1995).
104 International Development and Finance Act of 1989, Pub. L. No. 101-240, 103 Stat. 2492 (codified at 22 U.S.C.A. 262m-7) (1990).

benefitors of those institutions are developing countries, it can be concluded that the provision mentioned above could function as a convenient tool to promote the efforts on globally standardizing both the theoric and enforcement dimensions of environmental law. And, of course, the example which should be followed is the American system[105]. The Act doesn't openly mention NEPA in any of its articles. However, it has been pointed that the elements executive directors would look for in an EIA would be judged "taking into account" the UNEP Guidelines and Principles of EIA[106]. The similarity between NEPA (1969) and UNEP's mentioned document (1987) are obvious[107].

B. On Domestic Laws

After the collapse of the Warsaw Pact, there has been a rapid development in former Warsaw Pact countries' domestic laws in the area of environmental legislation. Especially some Central and Eastern European countries have adopted new EIA laws or modified their present legislations with the beginning in 1990's[108]. Now in order to give an opinion about the direction of that new approach and to establish links between American and those countries' EIA systems, issues like what kind of projects require an EIA and who prepares it will be discussed[109].

On the question on the type of projects which require an EIA; In Romania, the Ministry of Environment has thoroughly regulated EIA's by Order No. 170 (November 1, 1990) and activities are also listed in Appendix 1 of Order No. 437 and Appendix 2 of Decision No. 113. All the activities, whether old, new or modified, fall in the scope of at least one of the Appendixes and Order No. 170. Bulgaria requires EIA's for construction, expansion, reconstruction, and refurbishment of public or private facilities listed in Annexes 1 and 2 of the Environmental Protection Act. National, regional, urban and landscape development programs. Also, the Ministry has the discretionary power to require EIA's for any kinds of facilities or activities which interprets as to exert substantial impact on the environment.

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105 It seems that the Pelosi Amendment's real target is to improve the environmental protection efforts especially in Central and Eastern European countries. CIEL Memorandum, "Using National Laws to Improve the Environmental Performance of Multilateral Development Banks" April 21, 1992. In the context of Eastern and Central Europe the goal of improving the sensitivity in newly established European Bank for Reconstruction and Development on projects with the possibility of affecting the environment significantly, seems to have been influential too. *Id.*

106 Young, at 323.

107 For comparison see NEPA 42 U.S.C. 4332(2)(C) at x and UNEP Goals and Principles at xx.

108 For detailed information especially on Central and Eastern European countries *see* CIEL Paper, "a Comparison of Eight Environmental Impact Assessment Regimes" (United States, Romania, Bulgaria, Czech Republic, Slovakia, European Community, The World Bank, European Bank for Reconstruction and Development), 1-50.

109 The information on Romania and Bulgaria is based on the CIEL Paper.

On the question on who conducts EIA's; In Romania the investor is responsible to conduct an EIA, but is not prevented from asking for technical expertise. It is permitted that the EIA could be performed by ministries and specialized organizations, universities by obtaining ministrial recognition (Order No. 619, 2.1). In Bulgaria, the "investor" or "initiator" of the activity ensures that the EIA is performed and submitted to the competent authority (Act No. 244, 5, para. 1). The important point here is that the investor or initiator doesn't conduct the EIA itself, but sees that "professionally competent" experts with "no direct interest in the fulfillment of the project or activity" would prepare the assessment (Environmental Protection Act, Art.21, para.1; Regulation No. 1, Art. 3, para 1).

Amongst those countries which adopted new mechanisms in environmental conservation, the Russian Federation requires special attention. In 1991, the Russian Federation passed the law on Environmental Protection[110]. Section I contains an international scope which has the purpose to regulate relations between society and nature for the sake of present and future generations and human beings. Among the basic principles of the Act is international cooperation on environmental protection matters. Section II of the Russian Act provides broad rights to both individuals and groups (like environmental associations) in terms of performing public environmental assessments and demand state environmental assessments. Section V of the Act sets the principles to determine the appropriateness of commercial or other activities and the state assessments are not only mandatory, but all projects, not only governmental projects, go through the state assessment process. Although the Russian legislation reflects today's trends very successfully at the theoretic level, the application has not been evaluated as successful, in general[111].

Up till 1995, the European Union [hereinafter "EU"] has adopted more than 200 legislative measures relating to environmental protection[112]. Environmental law has not only shown a rapid development in EU with respect to regulations, but the European Court of Justice, too, has held that protection of the environment is an essential goal of the Community[113].

In EU's involvement with environmental law, the development path from U.S. law to public international law and from there to EU law can be seen[114]. On January 1, 1970 NEPA came into force, a legislation to become a ground-

110 The information about Russian Federation's Law on Environmental Protection is based on Young's article, *Id.* at 86-91.

111 For the evaluation of Russian Federation's current environmental legislation *see* Dehgan, *A Criticism of the New Mechanisms For Environmental Protection in The Russian Federation*, 19 Review of Central and East European Law, 661-705 (1993).

112 Visek, *Implementation and Enforcement of EC Environmental Law*, 7 Geo. Int'l Envtl. L. Rev., 377, 377 (Spring 1995).

113 Case 240/83, Procureur de la Republique v. Association de Defense des Bruleurs d'Huiles Usagees, 1985 E.C.R. 531, 549. *Id. supra* note 4 at 377.

114 Gilpin at 75.

braking environmental document for international environmental law in the following decade. Two years later, the Stockholm declaration was adopted. Shortly after, in 1973, the then- "European Community" adopted its first environment program[115].

Today, the European Council Directive on EIA requirements is still in effect[116].

According to the Directive, activities are divided into two categories in Annex I and Annex II. For activities in Annex I (like construction of crude-oil refineries, nuclear reactors and so forth) an EIA analysis is *generally* required. For activities in Annex II (like major agricultural activities, extractive industry and so forth), an EIA analysis *might* be required. Following the international direction inspired originally by the U.S., the Directive requires a broad range of factors to be addressed in the EIAs, such as, physical characteristics of the projects; an estimation, by type and quantity, of expected residues and emissions; main alternatives to the projects; a description of the aspects of the environment likely to be significantly affected by the proposed project and so forth[117].

The Directive has been adopted by EU countries, but especially in the Mediterranean region, there are serious application and enforcement problems due to the differences between the development levels of EU members[118].

VI. THE ROLE OF INTERNATIONAL INSTITUTIONS

The role of international institutions in international environmental law has become essential in the last decade. Various groups, associations, financial institutions are playing effective roles in the international arena. It is not possible to go through all the operations of all those institutions. In order to establish a criterion, the UN and its specialized agencies and related organizations can be accepted to deserve attention. This preference is primarily due to the UN's leading role in international environmental law-making, but there are other bases for that kind of a determination, too. 24 years ago, Stockholm Declaration had emphasised the role of international organizations in terms of playing a coordinated role in environmental conservation[119]. Also, in 1992, the UN General Assembly issued a resolution in which it requested "all United Nations specialized agencies and related organizations of the United Nations system to strengthen and adjust their activities, programmes and medium-term plans, as appropriate, in line with Agenda 21, in particular regarding projects for promoting

115 *Id.* at 74.
116 European Council Directive, June 27, 1985.
117 Information about the requirements of the Directive is based on Gilpin, *Id.* checklists 5.1, 5.2, and 5.3 at 75.
118 *Id.*
119 See principle 25 of Stockholm Declaration at 22.

sustainable development, in accordance with paragraph 38.28 of Agenda 21"[120] and invited "The World Bank and other international, regional and subregional financial and development institutions... to submit regularly to the Commission of Sustainable Development reports containing information on their experience activities and plans to implement Agenda 21"[121]. Under this title, some of those institutions will be brought into attention.

A. UNEP

Despite being one of the most active organizations in environmental law and also being a strong promoter of EIA in international documents, UNEP has implemented the precautionary approach in its agenda earlier than many other organizations. For example UNEP convened an expert's meeting in 1977, when so little was known on ozone depletion, which adopted a World Plan of Action on the Ozone Layer[122]. From 1974 to 1990 UNEP has sponsored a wide variety of plans, programmes, declarations, agreements like the Convention on Long-Range Transboundary Air Pollution to Regional Environmental Programme for Latin America and the Caribbean area[123]. In the U.N. system UNEP is a "catalyst, mobilizing other UN agencies, governments or organizations to take action"[124].

B. World Bank (International Bank for Reconstruction and Development)

The World Bank has begun going through a transition period since Barber Conable's statement in May 1987, that the institution would address environmental aspects of developments projects[125].

In the last decade, the development of environmental concerns have reached such a level in World Bank that an "unprecedented action"[126] occured in the Bank and the Inspection Panel had been established[127]. The relevance of the Panel with respect to EIA is at its function: In projects financed by the World Bank, the Panel "shall receive requests for inspection presented to it by an affected party in the territory of the borrower which is not a single individual (i.e., a community of persons such as an organization, society or other grouping of individuals), or by the local representative of such party or by another representative in the exceptional cases where the party submitting the request contends that appropriate representation is not locally available and the Executive

120 UN General Assembly Resolution 47/191 (1992): Commission on Sustainable Development, Birnie & Boyle, 658-665, 665.
121 *Id.*
122 UNEP, UNEP Profile, 1-42, 4 (1990).
123 *Id.* at 42-43.
124 Woods & Cody, *Environmental Activities of Selected International Organizations*, (CRS report for Congress), December 15, 1989, 1-30, 7.
125 *Restructuring the World Bank: The Environmental Light Shines on the Funding of Development Projects, (notes)* 2 Geo. Int'l. Envtl. L. Rev., 161, 163 (1989).
126 Hunter & Udall, The World Bank's New Inspection Panel: Will It Increase the Bank's Accountability?, CIEL Brief, 1-4, 1 (April 1994).
127 International Bank for Reconstruction and Development (World Bank) International Development Association, Resolution No. 93-10. IDA 93-6, September 22, 1993.

Directors so agree at the time they consider the request for inspection. ... (t)he affected party must demonstrate that its rights or interests have been or are likely to be directly affected by an action or omission of the Bank as a result of a failure of the Bank to follow its operational policies and procedures with respect to the design, appraisal and/or implementation of a project financed by the Bank (including situations where the Bank is alleged to have failed to follow-up on the borrower's obligations under loan agreements with respect to such policies and procedures) provided in all cases that such failure has had, or threatens to have, a material effect"[128]. In other words, World Bank has established the Inspection Panel in order to follow the environmental impacts of the projects it has financed and when necessary, to take efficient measures to address and eliminate those adverse effects.

The World Bank Inspection Panel In World Bank's interest towards environmental concerns, may be the Sardar Sarovar Dam Project in India has played the most significant role[129]. Today, World Bank has a very detailed EIA procedure regarding dam projects[130]. Various factors such as upstream and downstream considerations, economic measurement of environmental effects and so forth are being considered at the project level in order to construct environmentally sound dams and related irrigation systems[131].

Despite dam projects, World Bank also has developed a very detailed EIA strategy in years beginning with the adoption of the Operational Directive 4.00[132]-covering all the environmental and related aspects of projects financed by the Bank and showing what kind of assessment studies should be made- to standardize and institutionalize the EIA understanding within its organization.

C. European Bank for Reconstruction and Development

The European Bank for Reconstruction & Development [hereinafter EBRD] has been established on May 29, 1990 by fourty countries and two European Community institutions[133].

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128 *Id.* Art. 12 ("Powers of the Panel").

129 World Bank administration established for the first time in its history an Independent Review Panel for investigating the increasing complaints on the Sardar Sarovar Projects which the Bank was supporting. The Panel members made long field studies and also communicated with local people. When local people were asked what they were thinking about the project, especially the dam's impact on their social and cultural values were seen easily. The Panel completed its review and submitted its report concluding that the projects would cause very serious environmental harm if carried out as planned. World Bank administration took some measures in order to complete the inadequate EIA phase of the project and began to consider proper modifications. Berger at 32-40.

130 *See* Dixon et al., *Dams and the Environment Considerations in World Bank Projects*, 1-63 (1995).

131 *Id.* at 7-31. For examples of application *see* the projects in Chapter 5. *Id.* at 35-47.

132 The World Bank Operational Directive (OD) 4.00, in The World Bank Operational Manual, October 1989.

133 Wold & Zaelke, *Promoting Sustainable Development And Democracy In Central And Eastern Europe: The Role of The European Bank for Reconstruction & Development*, 7 Am. U. J. Int'l. L. & Pol'y, 559-604.

EBRD's role in the efforts of the Eastern and Central European countries' to transform their ex-communist systems to market-based economy model was seen as to solve three major problems: "(E)nvironmental degradation on an order seen nowhere else in the developed world; undemocratic political systems that vested power in elite bureaucracies insulated from the demands of their citizens; and centrally planned economies that could not compete with those of the free market world"[134].

Due to the climate in international institutions in 1990, EBRD showed a faster development in terms of adopting an EIA strategy for projects it would finance.

Unlike the World Bank, EBRD lends money to private developers as well as to governments. Therefore, due to the requirement of preparing an EIA study in order to provide fiancial support, EBRD obliges the borrowers -whether public or private- to conduct an EIA under the leadership of a Bank staff. The EIA analysis should contain information about both beneficial and adverse environmental impacts regarding biological, physical, and sociological impacts[135].

CONCLUSION

EIA has become one of the major concepts in international environmental law in the last decade both in domestic and international laws as this study tried to show. Considering that EIA being the first step economic activities with the potential of significantly effecting the environment, when properly conducted, would provide immense benefits in terms of environmental protection and conservation.

Whether EIA has become a "principle" of public international law can be discussed throughly and experts, courts and states may reach different conclusions.

Putting aside that technical aspect, one cannot ignore the recognition EIA has gained in domestic and international legislations and regulations. This is a very natural and healthy evolution. As EIA is understood better, the essential relation between environmental protection and assessments prior to activities will gain more and more respect and consideration. Being the first step of official decisions, it should be accepted that without EIA, non of the goals of environmental law can be achieved.

134 *Id.* at 559.
135 Information on EBRD's EIA requirements is based on the CIEL Paper, *Id.*