The Historical Struggle for Environmental Domination

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International law has always been a political tool for the domination of issues of social and economic importance, and environmental protection has certainly not been an exception. It is generally considered that international environmental law emerged in the late 1960s, with the rise of the environmentalist movement and the 1972 Declaration of the United Nations Conference on the Human Environment in Stockholm, Sweden (Stockholm Declaration). However, national and international laws and policies for the protection of the environment have existed since the 19th century, when the industrial revolution increased economic growth and urban population in the developed world. Industrialised states began to expand their economies beyond their territories, and with them, the need to regulate navigation rights and commercial activities on transboundary resources such as oceans, lakes and rivers became crucial for peaceful coexistence. Additionally, during this period, social movements started to promote the conservation and preservation of the environment with the creation of natural reserves and the protection of animal wildlife. It was within this movement that values and ideas over the relationship between the economy and the environment collided for the first time, and they have remained in constant dispute until the present day. Anthropocentric approaches to the environment believe in the protection of the biosphere for its instrumental service to humankind, while ecocentric ideas consider the environment as a holistic system that should be preserved for its

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intrinsic worth. These perspectives on the environment have struggled since the origin of international environmental law for the control of the laws and policies that are enacted to regulate human activities, and the effects they have on the ecosystems of the planet. Anthropocentric perspectives on environmental protection dominated the political discussion in the beginning when they succeeded in appointing their representatives on key positions in governments of developed countries. Their postulates of conserving nature for future use by humanity ended up giving content to national and international law. Ecocentrists, on the other hand, developed their ideas in the scientific and academic fields and their influence on international environmental law was limited. The creation of the United Nations brought a new world order in which the protection of human rights was the essential issue of concern. As a result, environmental protection continued to evolve with an anthropocentric focus. However, the leniency of international environmental law permitted an unrestricted growth in technology, industry and warfare that caused severe harm to the environment. Social concerns over the irresponsible contamination of the planet gave rise to a massive environmental movement in the 1960s that urged governments to adopt stricter environmental regulations. Environmentalism represented a reawakening of ecocentrist beliefs, giving them the political power and the ideal opportunity to finally be able to incorporate their concepts into international environmental law in the 1972 Stockholm Declaration. This article examines the disputes between anthropocentrism and ecocentrism along with the historic events that motivated the legal and political frameworks that were established before the Stockholm Declaration, as well as the scientific and political discussions that shaped the evolution of international environmental law.

1. INTRODUCTION

The Treaty of Westphalia, signed in 1648, defined the sovereign right of states over their lands, people and natural resources, with no country allowed to intervene in another's internal or external affairs. This multilateral agreement consolidated the position of governments as the only actors of the international community and the sole directors of the relations between countries in the

world. Subsequently, states have prioritised their own social and economic development and avoided the adoption of obligations and responsibilities over issues that transcend their boundaries. This has resulted in governments and groups with political power manipulating international law to promote specific doctrines and discourses to control the focus of matters of international importance.

One of the matters of international significance that has been affected by political views and ideological disputes is the protection of the environment. In general, approaches to the protection of the environment differ according to the degree of importance they give to human development and ecological integrity. Anthropocentric positions state that the environment and its natural resources have to be safeguarded because they are instruments for the social and economic progress of human societies. This position is commonly supported by governments, corporations and social groups that pursue economic growth and the protection of human rights. On the other hand, ecocentric beliefs are usually promoted by environmentalist movements, activists, scientists and academics. They value the environment for its intrinsic worth and consider that preserving the ecological integrity of the planet is more important than the unrestricted social and economic development of humanity. These approaches to the protection of the environment have been in constant struggle for the control of the policies, laws and regulations (PLRs) enacted by international law to conserve and manage the ecosystems of the Earth.

Generally, it is considered that environmental protection emerged as a matter of international concern in the late 1960s, as the environmentalist movement grew in popularity and called for stringent PLRs on economic development and the protection of the environment. These events resulted in the enactment of various national legislations in developed countries, and brought the international community together to discuss the limits of the environment and its relationship with social and economic development. In 1972 the United Nations (UN) organised the UN Conference on the Human Environment (UNCHE) to discuss the protection of the biosphere and incorporate it in the international agenda, linking environmental protection with economic development with an anthropocentric approach that currently dominates environmental PLRs.

Although international environmental law (IEL) came to play a prominent role after these events, national and international PLRs have encompassed the management and conservation of natural resources since the industrial revolution during the second half of the 19th century. What is more, disputes between the different perspectives over the issues of economic development and ecological integrity also originated in these early years and struggled for domination of bilateral and multilateral agreements, as well as national legislations that were later adopted by other states.

As countries expanded their commercial activities beyond their territories, international agreements began to recognise the importance of regulating the use of common resources such as oceans and transboundary lakes and rivers, and the hunting of animal wildlife for fur, oil and meat. During the first half of the 20th century, conservation movements started to flourish and influenced the enactment of national and international PLRs for the creation of natural reserves and the preservation of endangered species. Additionally, social concerns over air and marine pollution caused by industries and environmental disasters led to the development of the principle of responsibility for transboundary pollution, basic in contemporary IEL, and gradually incorporated into international agreements even before World War II.

As can be seen, ecocentric and anthropocentric ideas have been struggling for the domination of IEL since well before the late 1960s. The objective of this article is to examine the disputes between these two perspectives and the events that motivated the legal and political frameworks that were established before the UNCHE in 1972. In addition, this article aims to explain how these scientific and political discussions were crucial to the evolution of IEL, and influenced the environmental movement of the 1960s and overall modern environmental law in a profound way. Its knowledge and study are paramount to the understanding of current environmental perspectives, as well as to the identification of the focus and motivations that led to the creation of the IEL that is currently in force in the world.

It is important to state that IEL during this period lacks consistency due to the absence of a coordinated strategy and the lack of an organisation in charge of directing international efforts on this matter. The number of bilateral and multilateral environmental treaties signed in these years is huge, and it is not an objective of this article to study them all. On the contrary, the article aims to identify the environmental PLRs that will best allow the reader to understand the motivations, discussions and historical circumstances that were behind the evolution of IEL until the signing of the Declaration of the United Nations Conference on the Human Environment (Stockholm Declaration) in 1972.

2. APPROACHES TO ENVIRONMENTAL PROTECTION

Human beings depend on the Earth's natural environment to survive and progressively improve the quality of their lives. However, the fact that the planet produces and maintains its natural resources does not mean that they are unlimited or that they cannot be extinguished by overconsumption. Access to drinkable water can become scarce due to contamination by industrial waste. Air can be polluted by harmful gases produced by factories and transportation means such as automobiles, boats and airplanes. The existence of wildlife and

ecosystems can be threatened by the clearing of forested areas for commercial purposes such as agriculture, cattle and recreational hunting. Even global climatic conditions such as atmospheric temperature, sea-level rise and precipitation patterns can be affected by an excessive use of non-renewable resources.

Before the industrial revolution, environmental pollution was not really significant. It was easy for human beings to prosper within the limits of the environment because there was enough space and time to escape negative environmental consequences such as deforestation, floods, droughts and wildlife extinction. However, the social and economic growth brought by the industrial revolution made it harder for human societies to escape these consequences. The development of manufacturing activities and the burning of fossil fuels for energy and transportation increased the levels of contamination and degradation of the environment and affected the health of urban residents in industrialised countries. The 20th century brought an increase of the human population and commercial activities, and as a result, a vast quantity of Earth's natural resources were polluted and overexploited.

Concerns for the protection of the environment and its relation to human societies led to studies into and discussions over the limits of the environment and how human beings can exist and thrive without exhausting and polluting the planet's ecosystems. As a consequence, two main approaches to environmental protection originated during the 20th century with opposing perspectives on the level of importance that should be given to ecological integrity over social and economic development.

The anthropocentric approach to environmental protection is focused on human beings and perceives the natural environment as an instrument for their social and economic progress. This human-focused perspective of the environment has its roots in the religious beliefs of the Middle Ages, which viewed humankind as superior beings and at the centre of God's creation, with the role of civilising and directing the course of the world.

According to this perspective, the social, economic and ecological sectors have to be given equal importance and thus the idea is to find common ground between them, allowing concessions in one sector to improve the situation of another.[1] Because the environment is seen as an instrument for human progress, anthropocentric environmental protection is concerned with human rights and the fair distribution of existing resources to alleviate poverty and misery in the world. The biosphere is identified as the "human" environment and so it has to

1 Klaus Bosselmann, David Grinlinton and Prue Taylor (eds) *Environmental Law for a Sustainable Society* (2nd ed, New Zealand Centre for Environmental Law, Auckland, 2013) at 4.

be protected in order to be available for the satisfaction of present and future human necessities.

Anthropocentric models for environmental protection are based on international agreements and national PLRs that regulate human activities on the environment for the sake of humanity. These include the conservation of natural areas for human recreation and future generations, as well as the protection of species that are useful to human activities such as agriculture, fishing and hunting. Additionally, anthropocentric models focus on economic development as a way to solve social vulnerabilities and they trust that the financial resources and technological innovations of society will compensate for the losses in the biosphere with alternatives that will maintain society's lifestyle regardless of the environmental limitations.

The typical notion of anthropocentric environmental protection was determined by the Brundtland Report *Our Common Future* in 1987, which defined the concept of sustainable development as fulfilling the needs of the present (intragenerational equity), without compromising the ability of future generations to meet their own needs (intergenerational equity).[2] This concept of anthropocentric sustainable development was based on the idea of the planet's ecosystems as the human environment that was first acknowledged at the UNCHE and recognised by the international community in the United Nations Conference on Environment and Development (UNCED) that took place in Rio de Janeiro, Brazil, in 1992.

On the other hand, ecocentric approaches to environmental protection give pre-eminence to the ecology as an overarching system in which society and the economy are both constituent elements. Humans are one of the many biological organisms in the planet and thus their development is essentially limited to the natural capabilities of the biosphere. Ecocentric perspectives recognise the interests and values of the present and future non-human world and promote a more holistic approach to the protection of the environment. Human beings should progress only within the parameters of the planet, consuming primarily its renewable resources without depleting or contaminating them, and allowing them to be replenished over time.[3]

Ecocentric environmental protection is based on the concept of "ecological integrity" first mentioned by Aldo Leopold in his book *A Sand County Almanac* in 1949. This concept refers to the preservation of the dynamic processes of the ecosystems that ensure their resilience and acknowledges the constantly

2 World Commission on Environment and Development *Our Common Future* (Oxford University Press, Oxford, 1987) at 41.

3 At 95–108.

evolving internal nature of the biosphere that gives it the capacity to endure pressure from external forces on its own.[4]

Ecocentric models of environmental protection tend to be built on PLRs that protect specific natural areas and wildlife for their inherent value and not for the benefit that they could present to human societies. These can contain prohibitions against felling, clearing or exploiting in any way specific areas of nature such as forests, mountains, volcanoes, wetlands, mangroves, oceans and coastal areas. They can also include the protection of endangered species from illegal poaching and hunting, and the prohibition of commercial activities that could threaten their existence, regardless of their utility to humankind. Furthermore, ecocentric PLRs can be aimed at prohibiting environmentally hazardous activities in particular areas, such as logging, mining, fossil-fuel burning, air and marine pollution, and waste dumping on oceans.

Although the anthropocentric approach to environmental protection is currently the internationally accepted perspective, its struggle with ecocentric approaches during the late 19th century and 20th century has been crucial for the evolution of IEL. Anthropocentric ideas have been more in line with human growth while ecocentric thinking has been the basis of conservationist movements and a more radical environmentalist activism.

Even though the vast majority of international environmental PLRs are linked to social and economic development and are centred on the satisfaction of human needs, ecocentric regulations have been progressively incorporated into them, establishing restrictions on human activity and preserving biodiversity that is not really useful to the progress of humankind. Examining IEL from its origins and not just from the moment it became a popular discipline is essential to comprehend its internal motivations, discourses, failures and accomplishments.

3. THE FREEDOM OF THE SEAS AND THE FISHERY INDUSTRY

IEL originated in the last decades of the 19th century and the early 20th century in the form of uncoordinated bilateral or regional agreements between states that were motivated by economic and utilitarian interests. Indeed, economic concerns had an important influence at this early stage of IEL. The late 1800s and early 1900s were characterised by an exponential increase in the rate of

4 Klaus Bosselmann and Kristen Jones *The Planetary Integrity Project: Creating a Safe Operating Space through Law and Governance* (New Zealand Centre for Environmental Law, Auckland, 2016) at 70–75.

financial and technological progress in the developed world caused by the effects of the industrial revolution.

Commercial fishing activities started to flourish around the developed world with the improvement in transportation mechanisms in the 19th century. The international conflicts that arose from the growing industry brought to attention the need to regulate navigation and commercial activities in oceans, rivers and lakes that were shared between two or more states. The regulations that resulted became the first manifestations of IEL in the world. Regulations on navigation and the fishery industry were based on Hugo Grotius's principle of "freedom of the seas" by which the sea was not susceptible of occupation and thus everyone could use it for navigation and fishery activities.[5] In consequence, a ship carrying a sovereign state's flag could not be interfered with by other states.

During the 19th century and the early years of the 20th century, international agreements were signed between developed countries of the northern hemisphere over regulations on navigation rights and commercial fishing in the ocean. These agreements were especially important to the United States of America (US), a country that was separated from the developed states of Europe and Asia by the Atlantic and the Pacific oceans. The US signed international agreements with Great Britain,[6] and Russia,[7] to regulate freedom of navigation and the fishery industry in the North Atlantic Ocean and the Pacific Ocean, respectively.

Navigation and commercial fishing on transboundary lakes and rivers was another focus of conflict in the developed world, and gave rise to several bilateral agreements to settle them. The US signed treaties with the British Dominion of Canada to settle navigation differences between them, provide the regulation of fishery activities without restriction,[8] establish conflict resolution devices for conflicts over transboundary waters between them,[9] and to preserve halibut fisheries in the North Pacific Ocean and the Bering Sea.[10] Focusing on

5 Hugo Grotius *The Freedom of the Seas* (1608) ch V.

6 Convention Respecting Fisheries, Boundary and the Restoration of Slaves, US–UK (signed 20 October 1818).

7 Convention between the United States of America and His Majesty the Emperor of All the Russias, Relative to Navigating, Fishing, Etc., in the Pacific Ocean, US–Russia (signed 17 April 1824).

8 Treaty of Washington, UK–US (signed 8 May 1871).

9 Boundary Waters Treaty, US–Canada (signed 5 May 1910).

10 Convention for the Preservation of the Halibut Fishery of the North Pacific Ocean, US–UK XXXII LNTS 93 (signed 2 March 1923); and Convention for the Preservation of the Halibut Fishery of the North Pacific Ocean and the Bering Sea, US–Canada 121 LNTS (signed 9 May 1930).

its southern border, the US signed with Mexico a treaty to resolve existing conflicts over irrigation activities in the Rio Grande.[11]

International agreements over navigation, transboundary waters and fishery also began to be signed between European countries in the early 20th century in order to resolve boundary disputes. Among others, France and Great Britain signed conventions on fishing activities in the English Channel;[12] and Germany, the Netherlands and Switzerland signed a treaty for the regulation of salmon fishery in the Rhine River Basin,[13] which was later adopted by Luxembourg and Prussia in 1892.[14] European countries signed similar agreements over transboundary waters in their colonies in Africa.[15] After World War II, fishery agreements were signed in Washington for the Northwest Atlantic Ocean,[16] Tokyo for high seas fishery on the North Pacific Ocean,[17] Bucharest for the Danube River,[18] Varna for the Black Sea,[19] and London for the Northeast Atlantic Ocean.[20]

In 1958 the UN celebrated the first Conference on the Law of the Sea (UNCLOS I) in Geneva and, among others, the parties signed agreements on the regulation of natural resource exploitation on the continental shelf and

11 Convention of Equitable Distribution of the Waters of the Rio Grande, US–Mexico (signed 21 May 1906).

12 Convention between France and Great Britain for Defining the Limits of Exclusive Fishing Rights, France–Great Britain (signed 2 August 1839); and Convention between France and Germany Relative to Fisheries, France–Germany (signed 11 November 1867).

13 Convention between Germany, the Netherlands and Switzerland for the Regulation of Salmon Fishery in the Rhine River Basin (signed 30 June 1885).

14 Convention between the Grand Duchy of Luxembourg and Prussia Concerning the Regulation of Fisheries in Boundary Waters, Luxembourg–Prussia (signed 5 November 1892).

15 Agreement between Great Britain and Germany respecting the boundary between British and German territories from Yola to Lake Chad, Great Britain–Germany (signed 19 March 1906); the Convention between the French Republic and Germany for the Delimitation of the Colony of the French Congo and the Colony of Kamerun and the French and German Spheres of Influence in the Lake Chad Region, France–Germany (signed 15 March 1894); and Anglo-German Treaty of Obokum, UK–Germany (signed 11 March 1913).

16 International Convention for the Northwest Atlantic Fisheries 157 UNTS 158 (signed 8 February 1949).

17 International Convention for the High Seas Fisheries of the North Pacific Ocean 205 UNTS 79 (signed 9 September 1952).

18 Convention Concerning Fishing in the Waters of the Danube 339 UNTS 23 (signed 29 January 1958).

19 Convention Concerning Fishing in the Black Sea 377 UNTS 219 (signed 7 July 1959).

20 Northeast Atlantic Fisheries Convention 486 UNTS 157 (signed 24 January 1959).

on the conservation of fish and other living resources of the high seas.[21] This conference was an anthropocentric effort to recognise the right of the states to engage in fishing activities without limits and to promote the conservation of fish to secure a maximum supply of food for human consumption. However, its implementation was problematic due to the customary freedom that was historically given to states on the fishery industry. Eventually it was renegotiated in 1960 at UNCLOS II to include fishery limits,[22] but the conference did not result in new agreements because international law on fishing would lead to changes in the practices of many states, and technical assistance had to be available to help them make adjustments in their fishing industries.

IEL emerged from an anthropocentric focus within the economic development that occurred after the industrial revolution, with no particular regulations on the protection of the environment. Navigation rights on the ocean and transboundary waters did not prevent contamination of the ecology, and the PLRs on fishery activities were aimed at rationalising the fishery resource and organising the industry in the most efficient way for developed countries. However, a social movement concerned with the conservation of natural resources gradually began to include the fishing industry in a global effort to protect overall marine biodiversity. Furthermore, the importance of navigation on transboundary water issues began to lessen as problems derived from marine pollution began to take their place.

4. THE RISE OF THE CONSERVATIONISM MOVEMENT

As economic and industrial development continued to develop in the early 20th century, a progressive movement originated in the US that advocated for a more active involvement of their government in their economy and stood against laissez-faire policies that predominated after the industrial revolution. Within these progressive efforts a conservationist movement began to promote the protection of wilderness and landscapes from overexploitation by industrial capitalism.

The theory and ideology of this conservationist movement was gradually brought to life with the writings of ecologists such as John James Audubon, Gifford Pinchot, John Muir and George Perkins, along with organisations such as the Sierra Club and the American Forestry Association. Furthermore, depictions of the country's wild lands by explorer artists and photographers

21 Convention on Fishing and Conservation of the Living Resources of the High Sea 559 UNTS 285 (signed 29 April 1958).

22 Second UN Conference on the Law of the Sea A/CONF.19/L.15 (signed 26 April 1960).

increased the support for the movement among urban dwellers who started to appreciate nature and looked for recreational places and camping areas to escape the modern overcrowded cities. As a consequence, American conservationism gained massive popularity in the country and was later replicated over the developed world.

The protection of the natural environment was a clear objective for the promoters and supporters of the conservationist movement. Nonetheless, disagreements regarding the internal causes and motivations broke the movement into two factions: anthropocentric conservationists and ecocentric preservationists. Conservationists believed in safeguarding nature and natural resources for its instrumental value to human beings. The preservationists, on the other hand, supported the preservation of the environment for its intrinsic values, and advocated for stringent PLRs that banned development in natural landscapes and reserves.

The philosophical differences between the two conservationist groups were in some cases irreconcilable and led to confrontations between them. Ultimately, the conservationist faction gained political relevance with the US presidency of conservationist Theodore Roosevelt from 1901 to 1909, and their postulates ended up dominating the movement and influencing the content of national and IEL. Preservationists were academics, writers and activists. Their ideas and researches developed outside the political arena, and became the basic platform for the development of ecocentric approaches to environmental protection for the rest of the 20th century.

The conservationist movement brought an upsurge of internal legislation for the protection of wildlife and natural resources. The Forest Reserve Act in 1891 allowed the government to declare forest sectors as public domain and led to the creation of the US Forest Service. Conservationist movements also supported the creation of the Yellowstone National Park in 1872, the first national park in the world, the Yosemite National Park in 1890, and the creation of the National Park Service in 1916. In addition, President Roosevelt organised in 1908 a conference on conservation with the governors of the country, and in 1909 he summoned the first National Conservation Commission, establishing conservationism as a priority in the US national agenda.

International conservationist movements began in the early 20th century, when developed countries started signing multilateral treaties for the protection of species that had commercial value for their economies. These included the conservation of animal wildlife that had been killed without restriction for its meat, fur or body parts, and even for sport and entertainment, causing the extinction and endangerment of numerous species in the world. European countries with African colonies signed a convention to regulate the preservation of animal wildlife in Africa that was useful or harmless to man, the hunting activities and commercial trade of skins and furs, and the

encouragement of domestication of specific animal species.[23] Additionally they signed a multilateral agreement for the protection of birds that were useful to agriculture.[24]

Conservationist movements in Africa led to the formation of the Society for the Preservation of the Wild Fauna of the Empire (SPFE) by British and American naturalists and politicians in Africa. The SPFE was perhaps the first conservationist non-governmental organisation of the world, and was highly influential in the evolution of the movement for the rest of the century. The SPFE believed that there was a need to protect declining African species from the activities of native hunters because they were not able to safeguard nature by themselves — a racist logic that was used for the creation of natural reserves in Africa and South Asia during the early 20th century.[25]

In 1909 the US, Mexico and Canada celebrated the first multilateral conference on the conservation of nature. Before leaving the US presidency, Roosevelt summoned the first World Conservation Conference to take place at the Netherlands, in September 1909. Unfortunately, although 54 nations were invited and 30 nations had already confirmed participation, Roosevelt's successor, William Howard Taft, cancelled the plan.[26]

Due to the continued failures to establish a global effort for the protection of nature, international conservationism continued to develop through bilateral and isolated, multilateral agreements. The US, Great Britain, Japan and Russia signed a convention to regulate the hunting and commercial trading of fur-bearing mammals such as seals and sea otters.[27] The US signed bilateral treaties with Canada and Mexico, respectively, to regulate the commercial hunting of migratory birds and game mammals.[28] Multilateral conventions on plant protection were also signed, though they were only concerned with the preservation of agricultural plant products.[29] Several European and African countries signed an international agreement to institute a regime for

23 Convention Designed to Ensure the Conservation of Various Species of Wild Animals in Africa, Which are Useful to Man or Inoffensive (signed 19 May 1900).

24 Convention for the Protection of Birds Useful to Agriculture (signed 19 May 1902).

25 Kenneth Iain MacDonald "IUCIN: A History of Constraint" (address given to the Permanent workshop of the Centre for Philosophy of Law, Higher Institute for Philosophy of the Catholic University of Louvain (UCL), Louvain-la-neuve, Belgium, 6 February 2003) at 5–6.

26 Charles T Rubin (ed) *Conservation Reconsidered: Nature, Virtue, and American Liberal Democracy* (Rowman & Littlefield, Lanham, MD, 2000) at 93.

27 Convention between the US and Other Powers Providing for the Preservation and Protection of Fur Seals (signed 7 July 1911).

28 Convention for the Protection of Migratory Birds in the US and Canada (signed 16 August 1916); and Convention for the Protection of Migratory Birds and Game Mammals LNTS 4119 (signed 7 February 1936).

29 International Convention for the Protection of Plants LNTS 126 (signed 6 April

the preservation of fauna and flora in their territories.[30] Additionally, various countries in America signed an agreement to protect and preserve their natural habitats,[31] and 12 nations agreed on establishing Antarctica as a demilitarised zone, preserved only for scientific research.[32]

The conservationist movement also brought together more than 20 countries to discuss and sign an international agreement on the conservation of whales. However, like the rest of conservationist IEL produced in this period, the Convention for the Regulation of Whaling had an anthropocentric motivation within. Whale hunting for oil was a commercial activity that had existed for centuries around the world. The introduction of steam-powered ships and explosive harpoons spread commercial whaling into Antarctica, where the majority of whales fed and reproduced. Furthermore, the whaling market expanded during World War I with the use of explosives made of glycerine from whale oil.[33] Overexploitation in the whaling industry led to a decline in the price of whale oil in the early 1930s, and after World War II there was a shortage in the supply of fats in the world.[34]

Multilateral agreements on the regulation of whaling were signed in 1931[35] and 1937[36] without the expected results, and in 1946 the International Convention for the Regulation of Whaling[37] was signed with the objective of protecting whales as a natural resource for its consumption by future generations. This treaty created the International Whaling Commission to adopt regulations on protected areas and hunting activities. Although the objective of the agreements was to conserve whales, their underlying motivation was essentially economic, with no recognition of their intrinsic values.

The end of World War II brought a new world order with the creation in 1945 of the United Nations. There was still at that time, however, no awareness

1929); and International Plant Protection Convention 150 UNTS 67 (signed 6 December 1951).

30 London Convention relative to the Preservation of Fauna and Flora in their Natural State LNTS 241 (signed 8 November 1933).

31 Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere (signed 12 October 1940).

32 The Antarctic Treaty 5778 UNTS 402 (signed 1 December 1959).

33 World Wide Fund for Nature "A History of the International Whaling Commission (IWC)" WWF <http://wwf.panda.org/what_we_do/endangered_species/cetaceans/cetaceans/iwc/history/>.

34 William F Perin, Bernd Würsig and JGM Thewissen (eds) *Encyclopaedia of Marine Mammals* (2nd ed, Academic Press, San Diego, CA, 2009) at 625.

35 Convention for the Regulation of Whaling 155 LNTS 349 (signed 24 September 1931).

36 International Agreement for the Regulation of Whaling 90 LNTS 79 (signed 8 June 1937).

37 International Convention for the Regulation of Whaling 161 UNTS 72 (signed 2 December 1946).

of the need for a joint global effort on environmental protection. The Charter of the UN did not include matters of IEL because its focus was the promotion of human rights. As a consequence, environmental protection had to evolve within the human rights sphere, and later these two issues began to be addressed as integral to one another. This subjugation of ecological affairs to the scope of human rights was an essential victory for anthropocentric conservationist approaches to environmental protection, and the basis for the legal framework on the environment for the rest of the decade.

In the absence of specific UN environmental entities, IEL was promoted by human rights organisations created by the UN with functions related to the environment, such as the Food and Agriculture Organization (FAO), in charge of achieving food security, and the economic and social progress of human beings; the World Health Organization (WHO), with the goal of combating diseases and building better futures for human societies; the UN Economic and Social Council (ECOSOC), in charge of coordination and policy review on economic, social and related issues; and the UN Educational, Scientific and Cultural Organization (UNESCO), with the purpose of contributing to peace and security by the promotion of educational, scientific, cultural and environmental reforms.

In 1948 the International Union for the Protection of Nature (IUPN) was created and sponsored by UNESCO and other international stakeholders, with the objective of promoting the preservation of the biosphere and its natural resources as the foundations of human civilisation. The IUPN had influences from preservationists and conservationists, and tried to balance the two ideologies by advocating the preservation of species at the same time as the reasonable administration of natural resources for the prosperity of humankind.

The IUPN's first responsibility was the organisation of a technical conference on the conservation of nature that brought together thousands of scientists and academics, although their discussion was limited by the ECOSOC to a mere exchange of experiences in resource use and conservation techniques.[38] The IUPN also organised a conference to analyse methods of teaching people a better understanding of the relationship between humans and the environment, and produced the first list of threatened species in the world.[39]

Although the conferences were a success, the IUPN struggled to develop in its early years and receive funding from governments. The organisation was largely composed of scientists and ecologists who were mostly concerned with the preservation of nature. Consequently, governments seemed to perceive that it tended to care more for wildlife than for human needs. This perception was

38 UN Scientific Conference on the Conservation and Utilisation of Resources (signed November 1948).

39 Martin Holdgate *The Green Web: A Union for World Conservation* (2nd ed, Earthscan, London, 2013) at 41.

accentuated by the term "protection of nature" in its name.[40] In an attempt to become more attractive to governments, the organisation decided to modify its name to International Union for Conservation of Nature and Natural Resources (IUCN). The IUCN's change of name was a symbol of the organisation's decision to embrace the notion of conservationism over preservationism, as well as the idea that social and economic development needed to be considered in conservation issues.

The IUCN maintained a certain influence within the international community, promoting conventions on the conservation of nature in Africa[41] and on the protection and reasonable use of wetlands.[42] Although it continued to face funding problems and was still criticised for appearing too preservationist and restrictive to human beings, the IUCN maintained its position as a scientific advisory institution without political leanings, but with an anthropocentric perspective on conservationism.

Conservationism played an important role in positioning the issue of the protection of nature in the international debate. Anthropocentric approaches were always dominant within the movement, prioritising human development over the intrinsic values of the environment, while ecocentric ideas were alienated by political and economic interests and relegated to the scientific and academic fields. Nevertheless, preservationism did succeed in promoting the creation of heavily protected natural reserves that are still kept pristine, and in the protection of wildlife species that were not valuable for human beings.

Although the preservationist movement was unable to gain political power in the conservationist movement, the incapacity of IEL to prevent high levels of pollution and resource overexploitation, together with social concerns over nuclear warfare and the use of chemical pesticides, revitalised the ecocentric approach within a widespread environmentalist movement that demanded a limit to economic growth and a respect for the planet's ecosystems.

5. ECONOMIC EXPLOSION AND ENVIRONMENTAL CRISIS

While developed countries were regulating navigation and commercial rights over the world's natural resources and the conservationist movement was discussing and promoting its postulates, the effects of unrestricted industrial development on the environment began to emerge in the form of air and water

40 At 40 and 55.

41 African Convention on the Conservation of Nature and Natural Resources 1001 UNTS 3 (signed 15 September 1968).

42 Convention on Wetlands of International Importance especially as Waterfowl Habitat 996 UNTS 245 (signed 2 February 1971).

pollution. However, the majority of governments did not make a conscientious attempt to tackle pollution until its consequences became hazardous to human health and environmental disasters damaged the world's common resources. As a result, a fierce environmentalist movement emerged, driven by the ideas of ecocentrists, demanding stringent PLRs for the protection of an environment that was being rapidly depleted and destroyed.

The economic explosion of the industrial revolution produced large population migrations to cities and changed the structure of countries with rural-based employment. Governments were unable to adapt to the drastic transformation of their societies. The growing numbers of urban dwellers overwhelmed the systems of access to water and sewerage that cities had in place, contaminating freshwater sources with waste and human excrement. Coal-burning factories were built around the cities and operated without restrictions, releasing chemicals and toxins into rivers and streams, intensifying the rates of water pollution. In addition, the smoke that was emitted by industrial plants, along with the use of coal for residential heat, dramatically increased the rates of urban air pollution.

Unfortunately, environmental pollution was not an important issue for the developed countries as is evidenced by the lack of national and international PLRs on the matter. The United Kingdom (UK) was one of the first states to enact legislation to combat pollution. The government reacted to the outbreaks of cholera and typhus epidemics from water pollution with laws that compelled authorities to clean streets and sewers and ensure suitable access to drinking water,[43] and created the first pollution control agency to limit pollutant discharges from smoke-emitting industries.[44] In 1909 a study into the unhealthy conditions of young men for the army led to the enactment of a planning law to define zone areas for the location of industrial factories and infrastructure to protect the health of urban residents.[45]

In the US, some regions gradually became aware of the problems related to air pollution. In the late 19th century and early 20th century, cities such as Chicago and Cincinnati enacted the first municipal legislation on smoke restriction. The first state laws on smoke abatement were issued for the cities of Boston, Massachusetts, and Providence, Rhode Island, and the Albany County, in New York State, passed the first county legislation to regulate air pollution.[46]

Even though pollution was not seen as significant for IEL during the first half of the 20th century, the water and air pollution caused by the unrestricted use of transboundary resources gave rise to legal disputes between neighbouring

43 Housing, Town Planning, &c. Act 1909 (UK).
44 Alkali Act 1863 (UK).
45 Housing, Town Planning, &c. Act 1909 (UK).
46 Arthur C Stern "History of Air Pollution Legislation in the United States" (1982) 32(1) Journal of the Air Pollution Control Association 44 at 44.

states, urging courts to tackle the problem that was ignored by the law. As a consequence, environmental principles such as transboundary harm were gradually developed by national and international jurisprudence, although at first they were perceived from an anthropocentric standpoint as an offence to sovereignty more than as a violation to the environment itself.

At the national level, the *Donauversinkung* decision, issued by the Weimar Republic's Constitutional Court in 1927, prohibited activities that were aimed to manipulate the flow of a transboundary river in ways that could harm the territories of neighbouring states. In addition, the *Société Énergie Électrique* decision was delivered in 1939 by a court in Fascist Italy over a conflict between two power plants that were located on a transboundary river between Italy and France. The Court stated that international law recognised the right of every state to enjoy the advantages of the shared natural resources to fulfil their own needs.[47]

At the international level, the *Trail Smelter* case gave rise to the principle of international responsibility for transboundary environmental harm. Between 1925 and 1927, sulphur dioxide emissions from Trail Smelter, a Canadian smelting company, began to reach US territory, harming crops, cattle and forested areas. In 1935 the US and Canada agreed to submit the dispute to an arbitration tribunal. The Court's decision was issued in 1941, stating in dicta that no state had the right to make use of its territory in a way that caused harm by air pollution to the territory of another state. The Court specified that the petitioner state needed to prove the harm caused by the emission of another state, and not simply show that a transboundary emission had occurred. Although the arbitration tribunal's decision only referred to the specific case, and was not a binding precedent for future conflicts, it was crucial to the development of environmental principles and IEL in following years.[48]

The principle of transboundary harm continued to evolve with the *Corfu Channel* case in 1947. Great Britain filed a lawsuit before the International Court of Justice (ICJ) against the Republic of Albania over state responsibility for transboundary damage. Two British warships suffered grave losses and human deaths when they navigated through the Corfu Channel and hit mines in Albanian waters. The ICJ concluded that Albania was responsible for not warning the warships of the mines that were located in the channel, because every state had the obligation of preventing the use of its territory for the harm of other states.[49]

In 1957 the *Affaire du Lac Lanoux* decision was the first judicial resolution that considered the principle of transboundary harm from an environmental

47 Aaron Schwabach *International Environmental Disputes* (ABC-CLIO, Santa Barbara, CA, 2006) at 13.

48 At 14–15.

49 At 16.

perspective. This was a dispute between Spain and France over the intention of the latter to divert the river Carol for electricity, and the fear that this proposal would affect Spain's interests and rights, even though the project would not reduce the quality and flow of the river. The tribunal rejected Spain's claim because it did not prove that the French proposal would produce harm to the country. As a consequence, the principle of transboundary harm was refined in the sense that states had a right to exploit their natural resources without limit as long as the exploitation resulted in no harm to another country.[50]

After World War II, innovations in technology, industry and warfare continued to stimulate economic growth, causing further damage and contamination to the ecology. Coal-burning industries maintained their unrestricted operations, and people continued using coal to heat their homes, releasing dangerous amounts of toxins and smoke into the atmosphere. The expansion of oil exports by sea and the practice of discharging radioactive and chemical wastes into the ocean aggravated water pollution. The evolution of nuclear energy and the nuclear warfare race became a serious threat to the existence of humankind. The use of synthetic pesticides and environmental poisons for agriculture began to affect human health and damage animal wildlife. Unfortunately, once again, the international community only took notice of these environmental issues when they became a severe hazard for the well-being of human societies.

In 1952 a thick black fog made up of smoke covered London for four days, killing around 12,000 people from exposure with an additional 100,000 more becoming ill from respiratory diseases. This event is considered the worst air-pollution event in the history of England and gave rise to the enactment of the Clean Air Act of 1956,[51] which created smoke control areas, regulated industrial smoke emissions, and promoted the use of cleaner energy in residences.

The US also issued state and federal legislation on smoke and air pollution abatement only as a response to environmental disasters with human casualties. In 1939 the city of Saint Louis, Missouri, suffered a dense fog made up of smoke for nine days, an event that led to the first city ordinance to control smoke emissions and limit the use of low-quality coal.[52] In 1948 the steel town city of Donora, Pennsylvania, was covered in a heavy yellow fog comprised of poisonous gases for 12 hours, killing more than 60 people and leaving

50 At 18.
51 Clean Air Act 1956 (UK).
52 Andrew Hurley *Common Fields: An Environmental History of St. Louis* (Missouri History Museum Press, St Louis, MO, 1997) at 215, 216 and 300.

thousands more with respiratory problems.[53] In 1953 New York City was engulfed in thick smog for 11 days, causing the death of around 260 people.[54]

These environmental disasters raised public concerns over the fatal consequences of air pollution on human beings. As a result, the US enacted a law to provide resources for research into air pollution, but left states with the authority of regulating pollution sources.[55] Notwithstanding the terrible consequences of air pollution on human health, no multilateral agreement was signed to address this issue and IEL remained oblivious to the matter until the late 1970s.

Oil transportation by sea aggravated marine pollution by oil spills in the second half of the 20th century. In addition, the discharge of industrial and radioactive wastes into oceans, rivers and lakes caused massive deaths of animal wildlife and affected human health, elevating cancer rates and producing birth defects and deadly diseases. As a result, bilateral and multilateral agreements were signed between transboundary countries for the protection of their shared waters against pollution.[56]

The first comprehensive multilateral agreement on the prevention of marine pollution by oil was signed in 1954 in London. Developed parties agreed to establish zones in which oil discharges were prohibited, and coastal states needed to maintain facilities that could be used by ships to dispose of their oil wastes. The responsibility of promoting regulatory frameworks for marine pollution by oil ship discharges was given to the International Maritime Organization (IMO). Nonetheless, the restriction of oil discharge by ships was not absolute, and non-compliance mechanisms were not established in the treaty, leaving its enforcement to the law of the parties to the convention.[57] This treaty was amended in 1962 to broaden regulations on the oil discharge facilities, and to incorporate oil record books into oil ships. In addition, the UNCLOS gave special regard to marine pollution, adopting an agreement for

53 Lynn Page Snyder "The Death-Dealing Smog Over Donora, Pennsylvania: Industrial Air Pollution, Public Health Policy, and the Politics of Expertise, 1948–1949" (1994) 18(1) Environmental History Review 117 at 117–118.

54 Jeffrey W Vincoli *Basic Guide to Environmental Compliance* (John Wiley & Sons, New York, NY, 1993) at 9.

55 Air Pollution Control Act 1955 (US).

56 Protocol to Establish a Tripartite Standing Committee on Polluted Waters 66 UNTS 285 (signed 8 April 1950); Convention on the Protection of Lake Constance Against Pollution 620 UNTS 191 (signed 27 October 1960); Protocol Concerning the Constitution of an International Commission for the Protection of the Mosel Against Pollution 940 UNTS 211 (signed 20 December 1961); and Convention Concerning the Protection of the Waters of Lake Geneva Against Pollution 922 UNTS 49 (signed 16 November 1962).

57 International Convention for the Prevention of Pollution of the Sea by Oil 327 UNTS 3 (signed 2 May 1954).

the prevention of oil pollution and dumping of radioactive waste on the high seas, and urging states to enact national legislation to prevent marine pollution.[58] Unfortunately, the motivations for the international PLRs on marine pollution were the protection of the states' interests over their coastal development and thus IEL was not rigorous enough to reduce marine pollution.

On the other hand, the atomic bombs that were dropped by the US onto the Japanese cities of Hiroshima and Nagasaki during the Second World War, together with the nuclear arms race between the US and the Soviet Union during the Cold War, raised public concerns over the evolution of nuclear energy and the threats it could pose to human existence. The UN General Assembly addressed the issue by establishing the Scientific Committee on the Effects of Atomic Radiation to assess levels and effects of radiation exposure. The International Labour Organization summoned a convention concerning the protection of workers against radiation effects,[59] and the Organisation for Economic Co-operation and Development (OECD) promoted an agreement to ensure adequate compensation for persons that suffered damage over nuclear incidents.[60]

Furthermore, public unease over nuclear testing activities and their consequences on the health of human beings forced the international community to negotiate conventions to restrict them. Multilateral agreements were signed to prohibit nuclear testing and radioactive waste discharges in Antarctica[61] and to regulate civil liability for nuclear harm.[62] Finally, in 1963 a large part of the international community gathered in Moscow, Soviet Union, to sign a treaty to ban all nuclear test detonations on the ground, underground and underwater, and slow the nuclear arms race.[63] Nonetheless, complexities surrounding the surveillance and notification of underground testing, as well as protests among states over its verification mechanisms, led to the signing of a partial ban treaty that did not include restrictions on underground nuclear testing.

Another commercial activity that flourished after World War II was the use of pesticides for the protection of agriculture and livestock from plagues

58 Convention on the High Seas to Prevent Oil Pollution and Dumping of Radioactive Waste on the High Seas 559 UNTS 286 (signed 29 April 1958).

59 ILO Convention number 115 Concerning the Protection of Workers Against Ionising Radiation 431 UNTS 41 (signed 22 June 1960).

60 OECD Convention on Third Party Liability in the Field of Nuclear Energy 956 UNTS 251 (signed 29 July 1960).

61 The Antarctic Treaty 5778 UNTS 402 (signed 1 December 1959).

62 Paris Convention on Third Party Liability in the Field of Nuclear Energy 1041 UNTS 358 (signed 29 July 1960); and Vienna Convention on Civil Liability for Nuclear Damage 1063 UNTS 265 (signed 21 May 1963).

63 Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water 480 UNTS 43 (signed 5 August 1963, entered into force 10 October 1963).

and epidemics, and for the control of mosquitoes in residential areas. Highly toxic chemicals such as dichlorodiphenyltrichloroethane (DDT) were developed in laboratories, while others such as the organophosphate insecticide were initially developed as military gases for warfare and later adapted for farms. The chemical pesticide industry expanded during the 1940s and 1950s with the enthusiasm of farmers and the thrill of consumers as they watched food prices become cheaper due to the reduced costs of food production.

Nevertheless, the absence of regulations, testing and information on pesticides led users to apply them in massive amounts with the aim of achieving pest-free environments. As a consequence, pests became resistant to them and numerous plants and animals were harmed. Pesticides were poisonous to living organisms and affected their fertility, killing fish and crabs and reducing the thickness of birds' egg shells. Some of these pesticides were also insoluble, could travel long distances in the atmosphere, and accumulated in fat tissues, posing serious threats to human health.

In 1962 Rachel Carson, a marine biologist and conservationist, published her book *Silent Spring*, publicly warning that the irresponsible use of chemical pesticides would produce the destruction of Earth's ecosystems. By the end of that year, more than 100,000 copies of the book had been sold in the US, and more than 40 Bills had been promoted in different states for the regulation of pesticide use.[64] In 1964 the Federal Insecticide, Fungicide, and Rodenticide Act was amended to state that pesticide products needed a federal registration number and labels containing the toxicity of their products.[65]

The works of Rachel Carson and the concepts of Aldo Leopold regarding ecological integrity[66] were vital factors in the surfacing of an environmental movement in the decade of the 1960s that opposed the irresponsible behaviour of industrialised society towards the ecology, and urged governments to adopt effective PLRs for the protection of the environment as part of a higher standard of living. The technological development of those years was also crucial for the growth of the environmentalist movement. Television, movies and pop music helped spread the idea of an inevitable ecological crisis, and enabled the environmentalist message to reach huge numbers of people.

The environmentalist movement was also nurtured by the context of social upheaval over civil rights of the 1960s, especially by the protests against the Vietnam War, a conflict with severe environmental implications. The US military began a military programme called Operation Ranch Hand, designed to eliminate vast areas of forest in Southeast Asia to prevent the North Vietnamese

64 Arlene Rodda Quaratiello *Rachel Carson: A Biography* (Greenwood, Westport, CT, 2004) at 106.

65 Stephen J Toth, Jr "Federal Pesticide Laws and Regulations" (North Carolina Cooperative Extension Service, March 1996) at 1–2.

66 See text accompanying above n 4.

Army from hiding in them. Additionally, the US cleared more than 750,000 acres of land in order to increase rainfall and obstruct Vietnamese roads, and air-sprayed more than 200 million gallons of herbicides, causing the loss of 8 per cent of the region's agricultural land, 14 per cent of its forests and more than half of its wetlands.[67]

This social environmental uproar was a reawakening of preservationist ideas, yet the goals of the environmentalist movement went further than the safeguard of natural landscapes and the ecology. The environmentalists also focused on how the consequences of environmental degradation could affect human lives. The popularisation of environmentalism was favourable for ecocentrists, who had been largely unable to translate their discourses and efforts into policies and legislation. Ecocentrists became, for the first time, part of a mass movement, and their scientific research and political ideas helped stimulate its discourses and objectives.

In 1967 Lynn White published an article in which he explained how Christian anthropocentric approaches had influenced the world and were the roots of the world's ecological crisis after the industrial revolution.[68] In the same year, Roderick Nash published *Wilderness and the American Mind*, in which he analysed the attitude of American people towards nature, perceiving anthropocentrism as the enemy to wildlife preservation and ecocentrism as the ideal approach for the protection of nature.[69] In 1968 ecologist Garret Hardin published his article "The Tragedy of the Commons", in which he described the problem of common resource systems where individuals acted in their own self-interest instead of in the interests of all the users, resulting in resource depletion and contamination. In his opinion, governments had to intervene to regulate the use of common resources to prevent their exhaustion.[70]

The environmentalist movement became progressively more radical, and ecocentrist literature aided in proliferating the idea that the survival of humankind was in grave danger. Important activist non-governmental organisations originated during this period, such as the World Wildlife Fund, Greenpeace and Friends of the Earth, joining with existent preservationist organisations such as the Sierra Club. The first Earth Day was held in April 1970 with the participation of more than 20 million Americans in the streets.[71]

67 Schwabach, above n 47, at 18.

68 Lynn White "The Historical Roots of our Ecological Crisis" (1967) 155(3767) Science 1203–1207.

69 Roderick Nash *Wilderness and the American Mind* (Yale University Press, New Haven, CT, 1967).

70 Garret Hardin "The Tragedy of the Commons" (1968) 162(3859) Science 1243–1248.

71 Jacobus A Du Pisani "Sustainable development — historical roots of the concept" (2006) 3(2) Environmental Sciences 83 at 89.

In that same year, the Club of Rome published the book *The Limits of Growth* that used a computer simulation to describe how the planet's resources were insufficient to support the rates of economic and population development beyond the year 2100.[72] In 1972 Edward Goldsmith published *A Blueprint for Survival*, a text that proposed a radical change in the lifestyle of society because, otherwise, the increases in population and consumption would deplete natural resources and compromise human survival.[73] Finally, Christopher Stone epitomised the radicalisation process of ecocentrists when in 1972 he stated that trees and other natural objects should have rights, at least the same ones as corporations, so environmentalist organisations could represent them and defend them in court.[74]

Environmentalism reached a peak in popularity and extremism such that social unrest could not be longer ignored by the international community. Ecocentrists had finally succeeded in gaining enough political power to challenge unrestricted economic growth, and influence the creation of environmental PLRs that were not human centred and that could finally preserve the ecology for its intrinsic worth. Additionally, governments began to see environmentalism as an opportunity to gain popularity and thus PLRs with an ecocentrist inclination began to be enacted in the developed countries.

6. ECOCENTRIC RESURGENCE AND HUMAN ENVIRONMENT

The environmentalism movement of the 1960s marked a slow transition from anthropocentric to ecocentric perspectives on the protection of the ecology. Civil society realised that the national and international PLRs that had been enacted had not been effective in preserving the ecosystems of the planet nor in reducing pollution. Meanwhile, governments acknowledged the political opportunity of supporting such a popular topic, and began to promote the enactment of more rigorous legislation on the protection of the ecology and on the development of projects that could have adverse effects on nature. Nonetheless, a comprehensive framework on environmental protection was still missing, and environmental catastrophes continued to damage the planet.

In the US, President Lyndon Johnson began a preservationist process of legislation with the enactment of around 300 conservation laws between 1963

72 Donella H Meadows and others *The Limits to Growth* (Universe Books, New York, NY, 1972).

73 Edward Goldsmith *A Blueprint for Survival* (Houghton Mifflin, Boston, MA, 1972).

74 Christopher D Stone "Should Trees Have Standing?" (1972) 45 Southern California Law Review 450.

and 1968 that included measures to create more national parks and to regulate pollution, waste disposal and wildlife preservation.[75] The UK, on the other hand, prohibited the emission of dark smoke, and incorporated the use of tall chimneys for industrial factories in an attempt to release pollution as high as possible into the atmosphere.[76] Laws that addressed problems over pollution were also enacted in other countries of the world, such as the 1967 Basic Law for Environmental Pollution Control in Japan[77] and the 1969 Environment Protection Act (Miljoskyddslag) in Sweden.[78]

Unfortunately, these PLRs were not enough to prevent more environmental catastrophes from damaging the planet. In 1967 the oil tanker ship *Torrey Canyon* crashed into a reef and spilled 110,000 tonnes of oil into the English Channel. This was the worst environmental disaster in history at the time, and aggravated the social protests that expanded all over the developed world.[79] In the US an offshore natural gas operation blew out and released massive amounts of oil and natural gas for 11 days into the coastal waters of Santa Barbara, California, damaging around 35 miles of coastline and killing more than 3,600 seabirds, seals and dolphins, and an innumerable amount of marine biodiversity.[80] Later in that same year, 1969, the Cuyahoga River, in Cleveland, burst into flames due to a spark from a railroad train that ignited oil sediments that were dumped by oil industries and that floated in its surface.[81]

With the environmentalist movement at its peak of popularity and radicalism, Richard Nixon was elected as President of the US. Although a conservative, he took advantage of the political opportunity that the protection of the ecology provided, and enacted landmark PLRs on the environment that were later adopted by a large number of countries in the world. For the first time, the US had an outline for environmental policies and objectives, and

75 Adam Rome "'Give Earth a Chance': The Environmental Movement and the Sixties" (2003) 90(2) Journal of American History 525 at 534. Among the regulations that were enacted during this period were the Wilderness Act of 1964, the Clean Air Acts of 1963 and 1967, and the Water Quality Act and Solid Waste Disposal Act of 1965.

76 Clean Air Act 1968 (UK).

77 Yong Zhou and others *Science for Better Environment: Proceedings of the International Congress on the Human Environment (HESC) (Kyoto, 1975)* (1st ed 1977, Pergamon Press, Oxford; Elsevier, 2015) at 95.

78 Viktor Knapp *International Encyclopaedia of Comparative Law* (Martinus Nijhoff, Leiden, 1978) at 126.

79 Virginie Terrier "Are 'black tides' inevitable?" (2001) 6(2) Coventry Law Journal 25.

80 Keith Clarke "The Santa Barbara Oil Spill: A Retrospective" (2002) 64 Yearbook of the Association of Pacific Coast Geographers 157.

81 Mark J Kovasity "The Cuyahoga River Fire" (2013) 12(2) The American Society of Safety Engineers EnviroMentor 14 <http://www.asse.org/assets/1/7/MarkKovasityArticle.pdf?ref=ps>.

environmental impact assessments were required for all major federal actions that affected the environment.[82] In 1970 the Environmental Protection Agency (EPA) was created to protect human health and the ecology and enforce the national environmental PLRs of the country. The US also enacted laws to regulate marine mammal casualties and its commercialisation,[83] ocean disposal of wastes and materials,[84] and banned the use of chemical pesticides such as DDT for its adverse effects on the ecology and its potential risks for human health.[85]

In the international arena, the environmentalism movement and the consequences of ecological disasters were also putting pressure on governments to protect nature in a more rigorous manner. Multilateral agreements were signed to prevent marine pollution from oil, as well as to include civil liabilities for oil damage.[86] In addition, the international community signed a treaty to ban the use of the seabed and the ocean floor for emplacement of weapons of mass destruction.[87]

Even though several bilateral and multilateral agreements had been signed for the protection of the environment, it seemed that an effective effort to prevent contamination and natural resource depletion would only come from a global and comprehensive legal framework. In 1968 the UN, through UNESCO, the FAO, WHO and IUCN, organised for the first time an intergovernmental conference of scientific experts in Paris, in which 300 delegates from 60 countries participated to analyse the human impact on the biosphere, in an attempt to reconcile the ecology and the economy.[88]

The delegates at the conference concluded that the environment had been deteriorating and that the decline of the planet's ecosystems was caused by

82 National Environmental Policy Act 1969 (US).
83 Marine Mammal Protection Act 1972 (US).
84 Marine Protection, Research and Sanctuaries Act 1972 (US).
85 US Environmental Protection Agency "DDT — A Brief History and Status" EPA <https://www.epa.gov/ingredients-used-pesticide-products/ddt-brief-history-and-status> (accessed 11 November 2016).
86 Agreement for Co-operation in Dealing with Pollution to the North Sea by Oil and Other Harmful Substances 704 UNTS 3 (signed 9 June 1969); International Convention on Civil Liability for Oil Pollution Damage 973 UNTS 3 (signed 29 November 1969); International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Damage 9 ILM 25 (signed 29 November 1969); and the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage 11 ILM 284 (signed 18 December 1971).
87 Treaty on the Prohibition of the Emplacement of Nuclear Weapons and Other Weapons of Mass Destruction on the Seabed and the Ocean Floor and in the Subsoil thereof 955 UNTS 115 (signed 11 February 1971).
88 Intergovernmental Conference of Experts on the Scientific Basis for the Rational Use and Conservation of the Resources of the Biosphere (signed 13 September 1968).

population growth, urbanisation and industrialisation. They declared that the use of natural resources had to be consistent with their conservation and ecological impacts had to be considered in far-reaching projects. The traditional ways of managing natural resources had to change in order to acknowledge that the biosphere was a complete system that could be affected by careless activities carried out in any part of it. Delegates were also concerned that the process of industrialisation of developing countries could produce irreversible harm to their largely untouched and pristine ecosystems, and that this could inhibit their socio-economic growth. As a result, the conference recommended UNESCO establish an international and interdisciplinary research programme on the relationship between man and the biosphere.[89]

The conference's admission that industries and economic development were the major causes of environmental pollution and depletion represented a huge success for ecocentrism. For the first time, an intergovernmental conference recommended that economic and industrial activities had to change to recognise that the ecology had limited resources and could be damaged if it was not conserved responsibly. The developed world began to acknowledge that a full anthropocentric focus on environmental protection had been one of the central causes of the continuous failure of IEL to combat effectively the environmental crisis that anthropocentrist economic activities brought upon the planet.

The delegates to the conference on the biosphere also agreed on the fact that environmental problems did not have regional or national boundaries, and so their solutions required a global strategy and the participation of every country in the world.[90] In July 1968 the Swedish government, facing dangerous levels of acid rain in its region, submitted a proposal to the ECOSOC for the summoning of an international conference on the human environment. The UN General Assembly quickly issued a resolution stating the need for a comprehensive framework in order to tackle the problems of human environmental degradation that could only be solved by international cooperation.[91] The UN defined the structure and agenda for the event and accepted Sweden's invitation to host the conference. In June 1972, representatives from 113 states gathered in Stockholm for the UNCHE, marking the beginning of modern international environmental law.

The most complex issue that was faced in the UNCHE had to do with the relationship between environmental protection and economic development. Developed countries had suffered severe environmental disasters and a massive amount of their civil society demanded restrictions for industries and stricter ecocentrist regulations for the use and management of natural resources and

89 John McCormick *Reclaiming Paradise: The Global Environmental Movement* (Indiana University Press, Bloomington, IN, 1991) at 88–90.

90 At 88–90.

91 At 91.

the preservation of the biosphere. One of the main objectives of developed countries in the UNCHE was to persuade developing countries to pursue social and economic growth in a manner that did not damage their almost unaffected natural environments. In fact, radical ecocentrists perceived that if developing countries pursued unrestricted economic growth and polluted as did developed countries, the destruction of the planet would be imminent. However, developing countries such as Brazil and China believed that IEL could be used as a pretext by developed countries to halt developing countries' economic growth. Some developing countries, such as India, Algeria and Bangladesh, were even reluctant to discuss the environment at all, and wanted the conference to focus exclusively on development.

The organisers of the UNCHE felt that the reluctance of developing countries to adopt environmental regulations could threaten the success of the conference. In order to gain their favour, the UN General Assembly adopted resolution 2657 for the conference's preparatory process, affirming that environmental policies had to be considered in the context of economic and social development, and taking into consideration the needs of the developing countries.

The preliminary meetings that were held between the Preparatory Committee of the UNCHE and the representatives of developing countries resulted in the Founex Report on Development and Degradation, which stated that the degradation of the environment in developed countries was caused by their economic policies, while degradation in developing countries was a result of underdevelopment and poverty. In other words, developed countries were to blame for the degradation of the ecology, and developing countries needed economic development to overcome their environmental constraints. The UN General Assembly also required developed countries to fix their internal ecology and also pay for the environmental damage that they had caused in developing countries. Finally, the UN resolution affirmed that environmental protection activities should not impose more constraints on developing nations, especially by the establishment of environmental standards that could result in export barriers from developing to developed countries.[92]

Developed countries and ecocentrists were disappointed with the direction that the UNCHE took because they were more interested in promoting a purely environmental agenda. Nonetheless, the connection between development and environment became incontestable during the UNCHE and became the base for all future international environmental policies — a huge blow for

92 André Aranha Corrêa do Lago *Stockholm, Rio, Johannesburg: Brazil and the Three United Nations Conferences on the Environment* (Instituto Rio Branco, Fundação Alexandre De Gusmão, Brasilia, Brazil, 2009) at 32–40; and Anne E Egelston *Sustainable Development: A History* (Springer, Netherlands, 2012) at 61–63.

ecocentrist interests and goals. This assertion would be included in principles 8, 9 and 11 of the Stockholm Declaration, which stated that economic and social development is essential for a favourable environment for man, that environmental deficiencies generated by underdevelopment could be best remedied by accelerated development, and that environmental policies should enhance and not adversely affect the present or future development potential of developing countries. From here on, environmental protection policies would be closely linked with the social and economic development of the states.

The Stockholm Declaration was a historical success in the sense that it was the first comprehensive framework that was designed to address environmental problems associated with international cooperation. However, the UNCHE failed to determine binding regulations for the protection of the environment, and had to settle for a set of non-binding principles for international action. On the other hand, a new world order was established after the conference, based on responsibilities over environmental degradation between the developed countries in the north and the developing countries in the south. The principle of common but differentiated responsibilities was created by giving more responsibility to developed countries for environmental protection. The UNCHE also created the United Nations Environment Programme (UNEP), an institution with a small budget, located in Nairobi, Kenya, in charge of coordinating other UN agencies with environmental-related objectives rather than a powerful specialised agency in charge of pursuing international environmental goals and policies.

The UNCHE was discussed from a political and economic perspective, with little consideration of the scientific research that was shared in the conference of the biosphere that took place in 1968. Therefore, the discussions around economic development took pre-eminence over ecocentric concerns over unlimited population growth and industrialisation, especially in developing countries. Ecocentrists achieved small victories in the UNCHE. They managed to include the need to safeguard and protect natural resources, even if its objective was to benefit present and future human generations. The conference also stated that it was a human responsibility to protect wildlife and its habitat, and that nature conservation was important in development planning policies. Finally, ecocentrists succeeded in incorporating the need to halt the discharge of toxic substances and heat in order to prevent irreversible damage to the ecosystems, and the principle of transboundary harm, even if the principle also acknowledged the sovereign right of states to exploit their own resources and determine their own environmental policies.[93]

93 Declaration of the United Nations Conference on the Human Environment A/RES/2994 (signed at Stockholm, Sweden, 15 December 1972), principles 2, 4, 6 and 21.

Although ecocentric perspectives had gained important political power in the discourses of developed countries, they could not overcome the demands of developing countries around economic development and the belief of these latter countries that environmental protection was a covert strategy to undermine their competitiveness in the international market. As a result, anthropocentric ideas ended up dominating the UNCHE and continued to influence IEL for the rest of the century.

7. CONCLUSION

Anthropocentrism and ecocentrism have been struggling for the control of environmental protection PLRs since the first signs of IEL. Anthropocentric approaches originated in the last decades of the 19th century and the early 20th century in the form of uncoordinated bilateral or regional agreements between states that had the objective of regulating navigation on their aquatic borders and the fishery activities that were carried out in them. However, these regulations were not motivated by a genuine desire to protect the environment, and did not prevent its contamination and the overexploitation of its natural resources.

The real struggle between anthropocentrism and ecocentrism originated within the conservationist movement that formed around the same time as the navigation and fishery agreements, and that promoted the protection of the wilderness from industrial activities and economic development. The movement divided itself between the anthropocentric conservationists, who believed in safeguarding nature for its instrumental value to humanity, and the ecocentric preservationists, who believed in preserving the environment for its intrinsic worth. The two factions of the movement struggled to determine its direction, but conservationists ended up politically dominating the creation of conservationist PLRs, while preservationists were limited to the scientific and academic fields of the movement. As a result, anthropocentric ideas took control of the first national and international efforts to protect the environment.

The creation of the UN after World War II brought a new world order in which the protection of human rights was the most important issue of concern. At the time there was still no awareness of the importance of environmental protection, and so its issues were not directly addressed by specialised agencies created by the UN for the protection of human rights. Meanwhile, ecocentrists continued to develop their research and ideas, as well as their efforts to include preservation measures in national and international conservation agreements. In this sense, ecocentrists succeeded in achieving the preservation of nature with the creation of national parks and natural reserves that were kept pristine, and in the protection of several wildlife species that were not useful or instrumental

to human beings. Nevertheless, the preservationist defeat over the control of the conservationist movement was made evident when the IUPN, the first UN-sponsored international conservationist organisation, decided to change its name to IUCN, replacing the word "protection" with "conservation" in order to be more attractive for governments that were reluctant to support it for its apparent preference for nature over human interests.

Anthropocentric IEL was insufficient to prevent the effects of industrial development on the biosphere and only reacted when environmental disasters with grave consequences for human lives occurred. The growing numbers of urban populations and the smoke released from coal-burning factories and residences polluted the air and freshwater sources such as lakes, rivers and streams. Transboundary pollution gave rise to legal disputes between states that forced courts to tackle the pollution problem that was ignored by the law. Environmental principles such as transboundary harm were developed by judicial bodies, although as an offence to state sovereignty rather than as a violation of the environment itself.

After World War II, innovations in technology, industry and warfare caused further damage to the ecology, and anthropocentric IEL was not stringent enough to prevent it. As a result, air and marine pollution continued to increase, nuclear testing was carried out almost without limit, and massive amounts of unregulated toxic chemical pesticides were used in the environment. Ecological catastrophes began to occur, damaging complete ecosystems, annihilating animal wildlife, and causing disease and the death of thousands of human beings.

Social concerns over the irresponsible contamination of the planet, along with the research and ideas of ecocentrist scientists and academics, gave rise to a massive environmental movement in the 1960s that urged governments to adopt effective PLRs for the protection of the environment. The environmental movement was a reawakening of preservationist ideas, and represented a new opportunity for ecocentric approaches to incorporate their discourses into IEL. Environmentalism gradually became more radical as environmental disasters continued to occur and as ecocentrist literature proliferated the idea that the survival of humankind was in danger.

Environmentalism gained the political power to challenge unrestricted economic growth, and governments saw in the movement an opportunity to gain popularity. As a result, rigorous environmental PLRs with ecocentrist inclinations were enacted, and a slow transition commenced from anthropocentrism to ecocentrism. The developed world began to realise that a full anthropocentric focus on environmental protection had been one of the central causes of the failure of IEL to combat effectively the environmental crisis. Nonetheless, even though bilateral and multilateral agreements were signed as a result of the pressures of the environmentalist movement, a lack

of a global and comprehensive legal framework for environmental protection persisted.

In June 1972, representatives from 113 states gathered in Stockholm for the UNCHE, marking the beginning of modern international law. The most complex issue that was faced in the UNCHE was related to the relationship between the environment and economic development. One of the main objectives of developed countries in the UNCHE was to promote ecocentric PLRs and persuade developing countries to pursue economic growth in a manner that did not damage their almost unaffected natural environments. However, developing countries believed that IEL was a pretext used by developed countries to halt their economic growth. Fearing the failure of the UNCHE, the UN began issuing resolutions stating that environmental policies had to be in line with economic and social development, blaming the economic policies of developed countries for the degradation of the environment and requiring them to fix their internal ecology and pay for the environmental damage that they had caused in developing countries.

Developed countries and ecocentrists were disappointed with the direction that the UNCHE took. They were more interested in promoting a purely environmental agenda. The connection between environment and development became incontestable during the conference and became the base for all future IEL, a huge blow for ecocentrist interests and goals. Although ecocentric approaches gained important political power in the developed countries, they could not overcome the demands of developing countries for linking the environment with the economy. Anthropocentric ideas won once again the struggle for environmental domination, and ended up shaping IEL for the rest of the century.