



# TRANSBOUNDARY POLLUTION, POLLUTION, DEVELOPMENT AND ENVIRONMENTAL DAMAGE

✉ By: Luz María Fernández Toro<sup>1</sup>

## **Abstract:**

*Currently, it is apparent how the environment has become a fundamental issue of the interdependence situation that characterizes the current world system. This tendency involves the emergence of new responsibilities, positions and conditions for actors such as states, multinational corporations, International Organizations and NGOs, among others.*

*Regarding this framework, perhaps one of the major challenges that countries face when they interact with each other is the process of environmental pollution and damage to neighbors. Beyond the debate around the concept of transboundary pollution and its pertinence today, because of their characteristics, developed and developing countries are called to play a specific role in the global environmental scenario.*

*This paper analyzes the environmental dimension of the international system current context, in order to understand the role of the transboundary pollution responsibilities and evolution in the entire world, to define the main elements, interests concerns and challenges behind its participation, and how this process can contribute to the political and economic positioning of many countries on the international system.*

## **Key words:**

*Environment, transboundary pollution, air pollution, climate change, environmental responsibilities.*

---

<sup>1</sup> Luz María Fernández Toro. International Business Student, EAFIT University.



### **Resumen:**

*En la actualidad, es evidente cómo el medio ambiente se ha convertido en una cuestión fundamental de la situación de interdependencia que caracteriza el actual sistema mundial. Esta tendencia implica la aparición de nuevas responsabilidades, posiciones y condiciones para los actores como los estados, corporaciones multinacionales, organizaciones internacionales y ONGs entre otras.*

*En relación con esta estructura, quizás uno de los principales retos que enfrentan los países cuando interactúan entre ellos es el proceso de contaminación ambiental y daños a los vecinos. Más allá del debate en torno al concepto de contaminación tranforonteriza y su pertinencia actual, debido a sus características, los países desarrollados y en desarrollo están llamados a desempeñar un papel específico en el escenario del medio ambiente mundial.*

*Este trabajo analiza la dimensión ambiental del contexto del sistema internacional actual, con el fin de comprender el papel de los deberes en cuanto a contaminación transfronteriza y su evolución en el mundo, para definir los elementos principales, se refiere a los intereses y desafíos que plantea su participación, y cómo este proceso puede contribuir al posicionamiento político y económico de muchos países en el sistema internacional.*

### **Palabras claves:**

*Medio ambiente, contaminación transfronteriza, contaminación ambiental, cambio climático, responsabilidades ambientales.*



## Introduction

The weight of the environment on the comfort, welfare and wellbeing of humankind is a remarkable reality that has determined, through history, the interaction between individuals, nature and the development of societies. Environment assumed a fundamental position in international arena when humanity figured it as a general heritage and as a necessity for a sustainable growth and development. Since the mid-1960s the obvious need to protect the deteriorating environment has led to environmental legislation in most countries of the world.<sup>2</sup>

This assimilation brought important changes to the international system, taking the attention of all the actors for actions, which included not only the creation of new institutions, such as the United Nations Environment Programme UNEP, but also the development of international environmental law as a different and special field of the international law.

The world became aware when the damage of the environment turned more evident by health, agriculture, economy, development and other issues. Therefore, governments and people made this issue the leading cause and became it a global matter looking for the main causes and effects of this degradation. Concerning about those actions that have to be taken, the international community met at Stockholm in 1972. This conference proclaimed the preservation and enhancement of the human environment and called for its international coordinated action around the conservation and sustainability; it began with little efforts for the management of the international legal developments concerning transboundary protection of the environment. This assimilation brought decisive modifications to the international system, which included not only the creation of new institutions, such as UNEP, as it was mentioned before, but also the materialization of environmental politics and environmental law as an independent field of study.

A further theoretical and practical evolution of this field contributed to increase the concern about the level of the world's environmental degradation and the relevance of these issues. The Brundtland Report, published by the world Commission on Environment and Development in 1987, highlighted the exigency of new approximations and strategies of coordinated action to prevent the continued deterioration of natural resources.<sup>3</sup> Many years later, the United Nations celebrated its Conference on Environment and Development UNCED, also known as the Earth Summit. It is perhaps one of the most important governmental meetings celebrated until today, it contributed to integrate new components into the relationship between environment, development and law and to incorporate new actors as NGOs and Multinational Corporations into the process.

---

2 Catherine Redgwell, "International Environmental Law" In M. E. ed., *International Law*, New York, Oxford University Press, 2003, p. 657.

3 World Commission on Environment and Development, *Our Common Future*, Oxford, Oxford University Press, 1987.



Some of those characteristics confirm the need for states to have an active participation on environmental policies and in international organizations concerned by the climate change issues and environmental problems. More if we saw that global problems require active and permanent solutions.

In order to understand what is the current concern for a country when the pollution produced by a neighbor affects the sustainable development of it, it is necessary be familiar with the term transboundary pollution; defined by the OECD, it is the pollution that originates in one country but, by crossing the border through pathways of water or air, is able to cause damage to the environment in another country.<sup>4</sup>

Understanding the above, the purpose of this article is then to analyze the specific situation of neighboring pollution and the challenges of the whole world in global environmental law, regarding specifically the balance between environment and development. The way in which the world behaves in terms of environmental issues has experienced an intense transformation, and it is going to be determinant for the evolution of the environment, the cooperation and responsibility in the transnational boundary matters. It is necessary then to determine the relevant mechanisms for the states to establish a consolidated position and to cooperate, in order to find an option of inclusive action that allows countries to balance development and environment according to their individual national perspectives, and to use this approach to achieve a more relevant status on the international political and economic system.

## First steps and actual situation on transboundary pollution issues

Since the 1970s, the environment became a central issue for the international community. However, it has not always been equally important for all the countries and regions. Developed countries dominated the scenario for many years, focusing their approach on their specific perspectives and on the biophysical elements of the environment. That made developing countries to have little influence on the definition of key issues in the field. However, recent transformations changed this situation, and the interaction and cooperation on the topic of environmental issues between all countries without differentiation have increased. The proliferation of environmental agreements and the building of new bridges towards other disciplines such as international economics and international law allow countries to be aware of the damages of their neighbors and themselves.

Prior to the 1972 Stockholm Conference, the situation of transboundary environmental protection has been an international concern, and later, principles 21 and 22 prioritized its management and use to lay down responsibilities for states. In that sense, Principle 21 says that

---

4 Organization of Economic Cooperation and Development (OECD) s.v: *Transboundary Pollution Glossary of Statistical Terms OECD*, [online]. available at: <http://stats.oecd.org/glossary/detail.asp?ID=2754>, retrieved; october 29



states have to ensure that the activities within their jurisdiction and control do not cause damage to the environment of other States or areas beyond their limits of national jurisdiction, even though they can exploit their own resources pursuant their own environmental policies. The above principle is enforced by the 22 one, it demands the liability and the compensation for the victims of pollution and other environmental damage.<sup>5</sup>

The way of how these principles perform in the international system, make states accept these binding obligations. However, there is some reluctance in the way of how these principles should be entered into force; there is not any institution that can obligate states or even enterprises to be responsible of the damages in other areas of neighbor states. Some experts talk about the need of a regulatory institution that promotes the cooperation between states when there is a requirement of compensation. On the question of a possible international environmental court, BakaryKante, the Director of UNEP's Division of Environmental Law and Conventions (DELIC), said such a court could pose a conflict with the United Nations International Court in The Hague, which is authorized to hear environmental cases.

The debate continues playing an important role, but even more important than that discussion is the how to review and bring emerging issues to the attention of governments and the international community for quick and effective action.

## Transboundary air pollution

The idea that the impact one has on a local environment could be carried to impact an environment thousands of miles away is relatively new. However, as we learn more about global circulatory systems — atmospheric, river or ocean — we begin to understand the implications of what's known as transboundary pollution.<sup>6</sup>

The incredible distances that pollution can spread means that it is not controlled within the boundaries of any single nation; the most common and easy one is the pollution produced by air, Carbon dioxide, a greenhouse gas, is the main pollutant that is warming Earth. Generally any substance that people or enterprises introduce into the atmosphere that has damaging effects on living things and the environment is considered air pollution. For example, the smog hanging over cities, the carbon dioxide, considered to be a pollutant when associated with transportation, power plants, and other human activities that involve the burning of fossil fuels such as gasoline and natural gas, among others.

5 Declaration of the United Nations Conference on the Human Environment, U.N Doc. A/Conf.48/14/Rev.1 (1973); 11 I.L.M 1416 (1972)

6 Scholastic Inc, "Transboundary Pollution", Scholastic web site, [online] available at: [www.scholastic.com/teachers/article/transboundary-pollution](http://www.scholastic.com/teachers/article/transboundary-pollution), retrieved: october 29



Most people agree that to control global warming, a variety of measures need to be taken. On a personal level, driving and flying less, recycling, and conservation reduces a person's "carbon footprint"—the amount of carbon dioxide a person is responsible for putting into the atmosphere<sup>7</sup>. Nevertheless, it is the easiest way of doing it, and the way of how human people can be compromised with the cause, there are many polluted gases that have to be regulated and legislated on a strong way.

In the field of air pollution, only on multilateral treaty exists, the 1979 Geneva Convention on Long-Range Transboundary Air pollution, to which almost all European States and the United States and Canada are parties. This Convention has been amended in 1984, 1985, 1988 and 1994 at the Protocol on Further Reduction of Sulphur Emissions.

Instead of using treaties, there are several ideas that can regulate and punish the most polluting actors, for example the measure taken by governments to limit emissions of carbon dioxide and other greenhouse gases. One way is through the Kyoto Protocol, an agreement between countries that they will cut back on carbon dioxide emissions. Another method is to put taxes on carbon emissions or higher taxes on gasoline, so that people and companies will have greater incentives to conserve energy and pollute less.

Even with all of the above regulatory methods, the main problem of transboundary pollution persist, it is that can carry pollution away from a heavy emitter and deposit it onto a nation whose emissions are relatively low. That is the case of New Zealand. Ozone depletion in early spring over Antarctica had been reported in the journal *Nature* in May 1985, much more severe than any prediction, and confirmed by NASA in October 1985. In reporting the NASA results, the *Washington Post* newspaper gave the world the expressive term "ozone hole".<sup>8</sup> The funny thing in this problem is that New Zealand represents one of the lowest polluting countries, its emission of gases does not match with the ones of the most polluting countries such as, the United States, China, European Union and Russia.

For example, the United States, the richest country in the world, is also the one that emits gases that contribute to global warming, a total of 22%. When it signed the Kyoto Protocol in 1997, Washington committed itself to reducing its emissions by 6%. But soon after he retired and today its carbon dioxide emissions have increased by 15% compared to 1990 levels.

---

7 National Geographic, "Air Pollution", National Geographic, [online], available at: <http://environment.nationalgeographic.com/environment/global-warming/pollution-overview/>, retrieved: october 29

8 Joe Farman, "Unfinished business of ozone protection". (September 17 2007), [online], available at: <http://news.bbc.co.uk/2/hi/science/nature/6995667.stm>, retrieved: october 29



In March 2001, President George W. Bush announced he would not ratify the protocol, arguing that damaged the economy of his country and did not require the developing nations reduce their emissions. So Bush decided to support the voluntary emission reductions, rather than imposing goals, through the development of green technologies.<sup>9</sup>

This problem of who is the most polluting country or not, or who should pay for the damages, continue been a challenge in the international agenda, on the other hand, the 870 international legal instruments in which at least some provisions deal with the environment have to be enforce to keep in balance the whole international system, instead of regarding who is the more danger, the solution is in the hand of each country and government. The soft law, the customary international law and the international environmental diplomacy have to continue with their efforts to find a middle point between development and environment, they have to manage and focus, not only on the development issues of all countries but being ecological friendly with the neighbors and the Earth if the dream is to build future generation with the same probabilities and resources that we all know now.

## Environment or development

The controversy between environment and development is probably the most important issue in the participation of the developed and developing countries in the current international agenda, because the formers recognized its hegemony of doing efforts to be environmental friendly, looking for alternatives of energy supply, such as the green fuels, and alternatives to cooperate each other and with the developing ones; while the second ones are just noticed their importance in this scenario, because of their predominant natural resources and its role in all the environmental issues. The connection between environmental and development variables with poverty, increase the complexity of the issues and the developing countries' vulnerability to them. This debate that only began to be studied from a theoretical perspective in the 1970s calls for new definitions about the world's quest for development and about mechanisms to balance economic growth with the need to preserve environmental resources. Development is perceived as a degradation factor for the environment. Additionally, environmental concerns of the industrialized countries are seen as a mechanism to exercise more control over the aspirations of the South.

The reconciliation of these ideas was partially achieved in the 1992 Earth Summit, when the idea of sustainable development was formally introduced. This was the first speculative recognition of the link between the processes of development and environment. The Rio Declaration and the Agenda 21 represented in many ways a framework to stimulate national efforts to balance environment and development and to the inclusion of all the actors that beyond states, were committed to the issues of global environmental concerns.

---

<sup>9</sup> Cambio Climatico, "Los 10 países que más contaminan" cambio climatico web site, [online], available at: <http://www.cambio-climatico.com/los-10-paises-que-mas-contaminan>, retrieved: october 29



The evidence of a difficult consensus between the developing countries and the impact of economic growth, trade and development still have over the environment without a common approach being achieved.

Today, when poverty reduction is such a fundamental trend for the international community, the connection between environment and development should not be ignored. To balance these two processes is a fundamental condition for the global system of environmental governance to generate the appropriate trends towards the conservation of the environment in a sustainable way.<sup>10</sup>

## A future scenario

Since 1972, when the Stockholm Conference was celebrated, the scenario of transnational boundary environmental pollution has undergone critical transformations. The understanding of the concept of sustainable development, together with the impact of globalization called for the participation of all the actors involved with environmental issues. Globalization made all countries subjects to the increasing interconnection at all levels and more vulnerable to environmental damage, which extent was the most in the last decades of the 20th century. However, even if countries affected by other state pollution succeed in making their voice heard in international environmental law, either by their own or by the pressure of other actors, and are able to defend their interests and to balance their position with the damages and the environmental concerns, these elements do not guarantee a central role of compensation and cooperation in the state interest.

The real result and the real fact is that even though transboundary pollution is a matter for the whole world every day, the important solution is to keep stable the own environmental problems and try to fix and reduce the damages of the others with policies and sanctions for the actors that provoked them.

---

<sup>10</sup> Michael Greenstone, Adam Looney, "We Are What We Breathe: The Impacts of Air Pollution on Employment and Productivity", Brookings. web site [on line], available on line: [http://www.brookings.edu/opinions/2011/0506\\_jobs\\_greenstone\\_looney.aspx](http://www.brookings.edu/opinions/2011/0506_jobs_greenstone_looney.aspx), cambio climatic, retrieved: october 29.



## Bibliography

- Adams, W. (2009). *Green Developmento: Environment and sustainability in a developing world* (3ra ed.). London, United Kingdom: Routledge.
- Agarwal, A., Sharma, A., & Narain, S. (1999). *Green Politics: Global Environmental Negotiations 1*. New Delhi, India: Centre for Science and Environment.
- Bell, R., & Russell, C. (2002). Environmental Policy for Developing Countries. *Issues in Science & Technology*, 18 (3), 63-70.
- Bryant, R., & Bailey, S. (1997). *Third World Political Ecology*. New York, NY: Routledge.
- Cambio Climatico. (2004). *Los 10 países que más contaminan*. Retrieved October 21, 2011, from <http://www.cambio-climatico.com/los-10-paises-que-mas-contaminan>
- CDIAC. (2011). *Carbon Dioxide Information Analysis Center*. Retrieved October 23, 2011, from <http://cdiac.ornl.gov/>
- CHAPTER 14: THE POLLUTION SOLUTION. (2010). Retrieved October 22, 2011, from <http://www.ruwart.com/Healing/chap14.html>
- Chasek, P. S., Downie, D. L., & Brown, J. W. (2006). *Global Environmental Politics* (4 ed.). Boulder, CO: Westview Press.
- Clemençon, R. (2004). On the Back Burner Again: Environment and Development Politics since the 1992 Rio Conference. *The Journal of Environment and Development*, 13 (2), 111-118.
- Commission on Developing Countries and Global Change. (1992). *For Earth's sake: a report from the Commission on Developing Countries and Global Change*. Ottawa, Canada: International Development Research Centre.
- DeSombre, E. (2007). *The Global Environment and World Politics*. London: Continuum International Publishing Group.
- Díez, J. (2008). Globalization and Environmental Challenges Confronting the South. In J. Díez, & O. Dwivedi, *Global Environmental Challenges: Perspectives from the South* (pp. 11-42). Buffalo, NY: Broadview Press.
- Europe Legislation. (2005, October 28). *Convention on Long-Range Transboundary Air Pollution*. Retrieved October 22, 2011, from [http://europa.eu/legislation\\_summaries/environment/air\\_pollution/l28162\\_en.htm](http://europa.eu/legislation_summaries/environment/air_pollution/l28162_en.htm)



- Farman, J. (2007, September). *Unfinished business of ozone protection*. Retrieved October 23, 2011, from <http://news.bbc.co.uk/2/hi/science/nature/6995667.stm>
- Greenstone, M., & Looney, A. (2011, May 6). *We Are What We Breathe: The Impacts of Air Pollution on Employment and Productivity*. Retrieved October 22, 2011, from [http://www.brookings.edu/opinions/2011/0506\\_jobs\\_greenstone\\_looney.aspx](http://www.brookings.edu/opinions/2011/0506_jobs_greenstone_looney.aspx)
- Gupta, A., & Asher, M. (1998). *Environment and the developing world*. Chichester, United Kingdom: Wiley.
- Hartshorn, G. (1991). Key environmental issues for developing countries. *Journal of International Affairs*, 44 (2), 393-402.
- James, B. (2002, August 28). *International Judges: Environment Laws Not Enforced*. Retrieved October 22, 2011, from [http://news.nationalgeographic.com/news/2002/08/0828\\_020828\\_summit4\\_2.html](http://news.nationalgeographic.com/news/2002/08/0828_020828_summit4_2.html)
- Kaul, I., Grunberg, I., & Stern, M. (1999). *Global Public Goods: International Cooperation in the twetieth-first century*. New York, NY: Oxford University Press.
- Kennan, G. F. (1970). To prevent a world of wasteland: A proposal. *Foreign Affairs*, 48 (3), 401-413.
- Kettl, D. F. (n.d.). *Environmental Policy: The Next Generation*. Retrieved October 23, 2011, from [http://www.brookings.edu/papers/1998/10environment\\_kettl.aspx](http://www.brookings.edu/papers/1998/10environment_kettl.aspx)
- Millennium Ecosystem Assessment. (2005). *Ecosystems and Human Well-being: Biodiversity Systems*. Washington D.C.: World Resources Institute.
- Miller, M. A. (1995). *The Third World in Global Environmental Politics*. Boulder and London: Lynne Rienner.
- Najam, A. (2005). Developing Countries and Global Environmental Governance: From Contestation to Participation to Engagement. *International Environmental Agreements: Politics, Law and Economics*, 5 (3), 303-321.
- National Geographic. (2011). *Air Pollution*. Retrieved October 22, 2011, from <http://environment.nationalgeographic.com/environment/global-warming/pollution-overview/>
- Newzealand.govt. (2011). What is ozone? Retrieved October 22, 2011, from <http://www.mfe.govt.nz/environmental-reporting/atmosphere/ozone.html>
- OECD. (2001, November). *Transboundary Pollution*. Retrieved October 22, 2011, from <http://stats.oecd.org/glossary/detail.asp?ID=2754>



- O'Neill, K. (2009). *The Environment and International Relations*. Cambridge, United Kingdom: Cambridge University Press.
- Redgwell, C. (2003). International Environmental Law. In M. E. (Ed.), *"International Law"* (pp. 657 - 688). New York: Oxford University Press.
- Safe Water. (2007). Transboundary Pollution. Retrieved October 21, 2011, from [http://www.safewater.org/PDFS/resourcesknowthefacts/Transboundary\\_Pollution\\_Fact\\_07.pdf](http://www.safewater.org/PDFS/resourcesknowthefacts/Transboundary_Pollution_Fact_07.pdf)
- Scholastic Inc. (2011). *Transboundary Pollution*. Retrieved October 22, 2011, from [www.scholastic.com/teachers/article/transboundary-pollution](http://www.scholastic.com/teachers/article/transboundary-pollution)
- Scoop. (2010, September 15). *Whatever happened to the ozone hole?* Retrieved October 22, 2011, from <http://www.scoop.co.nz/stories/SC1009/S00023/whatever-happened-to-the-ozone-hole.htm>
- Seyfang, G. (2003). Environmental mega-conferences—from Stockholm to Johannesburg and beyond. *Global Environmental Change*, 13 (3), 223-228.
- Sick, D. (2009). Environment and Development. In P. Haslam, *International Development: Approaches, Actors and Issues* (pp. 305-322). Ontario, Canada: Oxford University Press.
- Steinberg, P. (2001). *Environmental Leadership in Developing Countries: Transnational Relations and Biodiversity Policy in Costa Rica and Bolivia*. Cambridge, MA: MIT Press.
- The World Bank. (2010). *World Development Indicators*. Retrieved 2010 йил 7-June from <http://data.worldbank.org/data-catalog/world-development-indicators/wdi-2010>
- UNCED, U. N. (1992 йил 3-14-June). *Rio Declaration on Environment and Development*. Retrieved 2010 йил 7-June from <http://www.un-documents.net/rio-dec.htm>
- UNCHE, U. N. (1972 йил 16-June). *Stockholm 1972 Declaration of the United Nations Conference on the Human Environment*. Retrieved 2010 йил 7-June from United Nations Environmental Programme: <http://www.unep.org/Documents.Multilingual/Default.asp?documentid=97&articleid=1503>
- UNECE. (2011). *Convention on Long-range Transboundary Air Pollution*. Retrieved October 21, 2011, from <http://unece.org/env/lrtap/>
- Williams, M. (2005). The Third World and Global Environmental Negotiations: Interests, Institutions and Ideas. *Global Environmental Politics*, 5 (3), 48-69.
- World Commission on Environment and Development. (1987). *Our Common Future (The Brundtland Report)*. Oxford: Oxford University Press.