

Incoherent Voices.

**The Basel Convention, Its Members and the
International Legislation of Hazardous Waste**

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Everything is Waste – A Foreword to Incoherent Voices

Simone M. Müller

All materials and all living things, irrespective of their value, eventually die, deteriorate or become obsolete. Then, they need to be removed to *somewhere* else where they can be buried, burned, reused or recycled. Everything is eventually trash. Solely the timing of when which material enters the waste slope is different.

Waste generally is foremost a question of perspective. Dirt is “matter out of place,” as anthropologist Mary Douglas famously put it. Within social systems, waste represents the category of the “inappropriate,” the “rejected,” and the “excluded.” In economic systems, waste is the “externality” to the production process. Intersecting with markers such as race, class, gender, and age alongside their geographical position on this globe, people come to different conclusions regarding which material is “waste.” Waste owns a culturally, socially and economically determined “mutability.”¹

This poststructuralist reading of discarded materiality also holds true for hazardous waste material – strangely enough. One would assume that humanity accepted that the corrosiveness, flammability, or toxicity of certain material – the threats that it posed to human health and the environment – limited actors’ definitory power, particularly when *not* defining this very material as hazardous waste. Nevertheless, even today in our environmentalist day and age, we are far from it.

Hazardous waste is “waste that poses a threat to human health or the environment and therefore requires special care during transportation, storage, treatment, and disposal”.² Beyond this philosophical agreement and despite an international regulatory structure in place since 1995, the Basel Convention, the international community exerts little agreement on what exactly hazardous waste is. Instead, nation states enjoy much space for culturally, socially and primarily economically determined readings of hazardous waste. In fact, the international community speaks with *incoherent voices*.

The danger of such incoherence comes with wastes’ mobility across borders. Following the rise of environmental regimes in industrial countries in the global North in the 1970s, hazardous waste material had become much more mobile internationally. Stricter regulatory laws for the disposal of hazardous material in the industrial countries of the Global North, alongside increasing scarcity of waste sites had increased the costs for legal waste management in OECD countries exponentially.³ At the same time, the production of hazardous waste material continued unabated. Supply and demand

¹ Douglas, *Purity and Danger*, 2005; Thompson, *Rubbish Theory*, 1979; Fayet, *Reinigungen*, 2003.

² Rauscher, “International Trade in Hazardous Waste,” 2002.

³ Moyers, *Global Dumping Ground*, 1990, 7.

were increasingly out of balance.⁴ Unable and unwilling to manage exorbitantly rising toxic waste levels at any cost, the world's industrial nations increasingly fell prey to the politics of what critics called "garbage imperialism." They legally and illegally relocated remnants of their production and consumption, and the production itself, to poor countries.⁵

In 1992, the international community had put the Basel Convention in place to prevent the continuation of the trade in hazardous waste material across borders. One objective of the convention was on the one hand to induce national waste legislation and on the other hand to streamline the very same internationally (Article 3, Basel Convention). For this aim, member states had to report their definitory status each year to the secretariat. Most scholars agree, however, that the Basel Secretariat has had little success in doing so. Ambiguities and definitory vagueness alongside lacking instruments to enforce liability turned the Basel Convention into a paper tiger. The trade of hazardous waste material continued almost unaltered after 1992 – now re-labeled as 'recycling'.

Incoherent Voices tries to make sense of this waste cacophony as the United Nations concerts it through the Basel Convention on the Transboundary Movement of Hazardous Waste. Sophia Hörl, Anja Rieser and Ivan Vilovic, all interns for 3-4 months at the RCC in 2016 and 2017, worked their way through the different national waste literatures as assembled through the Basel Secretariat. They traced their meanings and their changes over time while also mapping the meanings of hazardous waste.

What they came up with is an important inventory for scholars of the global waste economy. So far, scholar have established that the lack in definitory coherence is key to Basel's failure. Incoherent voices add an important perspective to this scholarship by asking *why* there is national resistance to change hazardous waste regulations. The individual country studies they did give scholars assignment for more in-depth studies. Their mappings, finally, question the bad reputation Basel has gotten so far from scholarship. While the convention certainly did not stop the trade, it was an effective instrument to induce national environmental legislation.

Incoherent voices provide stimuli for more in-depth research rather than thoroughly answering all. Given the short duration of their internship alongside the fact that they also had other tasks at the RCC that kept them busy, I am very impressed by what they assembled. It has been a great pleasure to supervise them.

⁴ Rabe, *Beyond Nimby*, 1994.

⁵ Morris, "Garbage Imperialism Must Stop," 1987.

A Short Introduction to the Basel Convention

Anja Rieser

Basel Convention

Adopted in 22 March 1989

Came into Force 5 May 1992

Members 186 (including the European Union)

The Ban Amendment

Adopted 22 September 1995,

Comes into force with 66 ratified members of the present members in 1994.

60 out of 66 ratified members in 2017.

Liability Protocol

Adopted 10 December 1999

Comes into force with 20 ratified members

11 ratified members in 2017

What is the Basel Convention?

The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and its Disposal is an international treaty with the aim to protect human health and environment, through regulating and controlling the generation, management, transboundary movements and the disposal of hazardous wastes.⁶ It was adopted on the 22nd of March 1989, and came into force the 5th of May 1992. It has today 186 member states, including the European Union.⁷

The Convention has several objectives and goals, where the primary policy tool for the Convention is the use of trade bans on waste streams, making it one of few international environment agreements that use trade restrictions as a mechanism to achieve the Convention's goals.⁸ If a country has ratified the Convention it will implicate amongst others:

- that the country can impose import bans on hazardous waste into their country.⁹
- countries must prohibit exports into countries that have announced import bans.¹⁰
- all ratified countries must announce any hazardous waste or other waste shipments to the

⁶ Kummer, "The Basel convention: Ten years on", 1998.

⁷ The Basel Convention on the Control of Transboundary Movements of Hazardous Waste and Their Disposal, Text, available at www.basel.int (last reviewed 11.04.17).

⁸ Kellenberg & Levinson, "A Waste of Effort?", 2011.

⁹ Article 4, Section 1 (a), Basel Convention, available at www.basel.int (last reviewed 11.04.17).

¹⁰ Article 4, Section 1 (a), Basel Convention, available at www.basel.int (last reviewed 11.04.17).

importing country, and the importing country must approve the shipment in writing.¹¹

- ratified countries cannot export or import hazardous waste or other wastes to or from countries that have not ratified the Basel Convention (non-parties).¹²

The Conference of the Parties (COP) is the governing body of the Basel Convention, and consists of governments of the countries that have accepted, ratified, or acceded the Convention. The Convention has established two subsidiary bodies, the Open-ended Working Group and the Committee for Administering the Mechanism for Promoting Implementation and Compliance. The Basel Convention is funded through a Trust Fund and a Technical Cooperation Trust Fund, which has been established by the Executive Director of the United Nations Environment Program (UNEP) and is managed by the Executive Secretary. Both funds receive mandatory contributions from Parties of the Convention, and other contributions from States not parties to the Convention, governmental, intergovernmental and non-governmental organizations. In 2012 the Secretariat of the Basel Convention was merged with the secretariats of the Stockholm Convention on Persistent Organic Pollutants, and the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade. The synergy of the three Conventions is referred to as BRS, and was jointed to enhance cooperation and coordination, and to advance the goals and capabilities of the three conventions. The Executive Secretariat of these three conventions is administered by UNEP.¹³

Why a Convention on the Trade with Hazardous Wastes?

The Convention came into force as a result of several revealed records of shipments with hazardous waste from Western industrialized countries dumped in the Global South. The increase of shipments with hazardous waste to the Global South emerged after a surge of stringent environmental regulations in industrialized countries. These stringent regulations made the disposal of hazardous waste more difficult and expensive in the Western world, causing countries to look for more profitable and cheaper solutions. Western Industrialized countries started then to dump their hazardous waste externalities on countries less able to handle such wastes, and with fewer resources to withstand such shipments, having catastrophic effects on the environment and human health. Environmental NGOs and an outraged public demanded justice for these countries. They urged a

¹¹ Article 4, Section 1(c) and 2(f) and Article 5, Basel Convention, available at www.basel.int (last reviewed 11.04.17).

¹² Article 4, Section 5, Basel Convention, available at www.basel.int (last reviewed 11.04.17).

¹³ Synergies among the Basel, Rotterdam, Stockholm conventions, "History of Joint Managerial Functions for the Secretariats of the Basel, Rotterdam and Stockholm conventions" available at brsmeas.org (last reviewed 30.04.17); "Conference of the Parties" available at www.basel.int (last reviewed 30.04.17).

stop to a practice that they called toxic colonialism.¹⁴ The negotiations for the Basel Convention started in the late 1980s, and by 1989 the Convention was adapted and signed by 35 countries.¹⁵ The former UNEP Executive Director Mostafa Tolba stated then that the ultimate goal of the Convention “is to make the movement of hazardous wastes so costly and difficult that industry will find it more profitable to cut down on waste production and re-use and recycle what waste is produced.”¹⁶

Taking Issue with the Basel Convention

Though several actors are pleased that such a Convention came into place, the issue of hazardous waste is a highly political and complex issue, with many opposing interests and agendas.¹⁷ As more than twenty-five years have passed, several scholars have assessed the Convention, debating the contested knowledge and effects of the Convention. I will now go through some of the main concerns with the Convention. These include (1) the Convention’s weak definition of hazardous waste and the issues created from this, (2) the industries role and actions, and (3) the weak institutional framework within the Convention. There are several more concerns, which I will not manage to cover due to the multifaceted complexity of the hazardous waste issue.

(1) A main issue of the Basel Convention has been to define which wastes are *actually* hazardous. Paul Rosenfeld and Lydia Chang explain how there are three methods to define a waste as hazardous. The first is the philosophical but vague definition, stating that a waste is hazardous if it poses a substantial threat to human health and to the environment. The second is a characteristic definition that is based on the characters a waste exhibits, such as ignitable, corrosive, reactive or toxic. The third method is to cross-reference, that requires lists with wastes that are firmly stated as hazardous.¹⁸ For its general aim the Basel Convention uses a philosophical definition. In addition, the Convention also relies on two main annexes. A waste is considered hazardous if it displays any of the characteristics on Annex III, such as flammable and toxic, **and** if it is in any of the waste streams or has any of the constitutions listed in Annex I.¹⁹ Wastes can also be considered hazardous if a party of export, import or transit considers it hazardous through its domestic legislation²⁰, or if the waste is from either household waste or residues from incineration in household, which requires special

¹⁴Clapp, *Toxic exports*, 2001; Lucier and Gareau, “Obstacles to preserving precaution and equity in global hazardous waste regulation: an analysis of contested knowledge in the Basel Convention”, 2011.

¹⁵Full list of signatories available at www.basel.int.

¹⁶Quoted in Lucier & Gareau, *Obstacles to preserving precaution and equity in global hazardous waste regulation: an analysis of contested knowledge in the Basel Convention*, 2011, p. 6.

¹⁷Kempel, “The negotiations on the Basel convention on the transboundary movement of hazardous wastes and their disposal”, 1999; Lucier & Gareau, “Obstacles to preserving precaution and equity in global hazardous waste regulation: an analysis of contested knowledge in the Basel Convention”, 2011.

¹⁸Rosenfeld, Paul; Lydia Chang, *The Risks of Hazardous Waste*, 2011.

¹⁹Article 1, Section 1 (a), Basel Convention, available at www.basel.int (last reviewed 11.04.17)

²⁰Article 1, Section 1 (b), available at www.basel.int (last reviewed 11.04.17)

consideration.²¹ Radioactive wastes and wastes, such as discharge, that derive from normal operations of a ship are on the other hand covered by other international instruments. They are not covered by the Basel Convention.²² The Basel Convention defines waste as hazardous by relying on a combination of both the characteristic and cross-reference definitions. Although, the Convention implemented this definition with the intention of monitoring and controlling hazardous waste, instead, it has instead created a place where conflicting political sides can assert their power to define and interpret what is hazardous.

(2) Such weak definitions of hazardous waste have made room for the powerful industries from Western Industrialized countries to influence the (in) effectiveness of the Basel Convention. In the mid-1990s industries started to provide technical expertise in the Technical Working Groups (TWGs), meetings that were specifically set to define the Convention's definition of hazardousness more specific. These meetings became a place for industries and industrialized western countries to lobby for definitions that suited their economic and political interests. The meetings had an uneven number of countries attending from the Western Industrialized countries and the Global South. This was due to the limited resources of the Global South countries to send delegates, and to the fact that meetings were often held in English without translation.²³ There was also an uneven ratio of industries present compared to NGOs, giving the industries more space to influence. Here the industries pushed for an “intrinsic” definition of hazardous waste, versus the “risk management” view of the NGOs and countries from the Global South. The intrinsic view claimed waste should be classified as hazardous due to its inherent qualities and out from a technical viewpoint. The risk management perspective on the other hand meant one had to consider the health and management of the workplace to state whether a waste is hazardous, meaning to inquire whether the conditions for disposal would pose risks when handling the waste. The industries however got their intrinsic view institutionalized in the Basel Convention, which resulted in Annex IX, where specific wastes could be listed as non-hazardous and therefore not covered under the Convention. Lead scrap was put on Annex IX in 1996, even though lead scrap, as many metal materials, if not handled in proper management can pose risks to humans and environment.²⁴ This is a specific example that shows how the power of the industry could define a waste as non-hazardous. Several quotes from delegates attending these meetings underline how their first priority is the safety of developing countries from hazardous waste. In spite of this they also underlined how they have a responsibility to make sure that the Basel Convention avoids infringement on free trade, economic growth and businesses

²¹ Article 1, Section 2, Basel Convention, available at www.basel.int (last reviewed 11.04.17).

²² Article 1, Section 3 & 4, Basel Convention, available at www.basel.int (last reviewed 11.04.17).

²³ Lucier and Gareau, “Obstacles to preserving precaution and equity in global hazardous waste regulation: an analysis of contested knowledge in the Basel Convention”, 2011.

²⁴ Ibid.

activities.²⁵ This reveals how industries define wastes according to the waste's characteristics as integral to profitable free trade instead of the defining wastes for features harmful to human health and the environment.

Industries have also used loopholes in the Convention, such as recycling loopholes.²⁶ This is waste streams that claim to be destined for reuse or recycling, but is either *sham recycling*, waste not meant to be recycled and is only dumped or burned, or *dirty recycling* where the recycling process imposes great risk for the environment and the workers.²⁷ Krueger (1999) strengthens this argument with statistics from 1990 to 1993 that waste destined for final disposal from OECD decreased from 53.1 to 41.6 %, while waste destined for reuse or recycling increased from 46.9 to 58.4 % in the same years.²⁸ This type of falsely claimed export of waste destined for recycling has increasingly become more electric waste (e-waste), which has many substances that imposes great hazardous risks, intensifying the many issues of hazardous waste transfers.²⁹

The lack of incentives for industries and countries to decrease their generation of hazardous waste has according to scholars also greatly contributed to the failure to reach the Convention's ultimate goal of reducing generation of hazardous waste.³⁰ NGOs and scholars already feared before the adaptation of the Convention, that the Basel Convention does not make transboundary movements more expensive or tedious. Rather, it has created a framework that legitimizes transboundary movements of hazardous waste between ratified country-members.³¹ This statement has nevertheless been hard to prove due to little and unreliable data showing hazardous waste streams before and after the adoption of the Basel Convention. The Convention does require annually reports from members, but even the Basel Convention's Secretariat advises against using only this data, due to countries lack of reporting.³² It is also difficult to assess hazardous waste streams due the vague and interpretative definitions of hazardous waste mentioned earlier. But in 2011 Kellenberg and Levinson created a comprehensive panel dataset on international trade of waste to analyze the effectiveness of the Basel Convention. * According to them when two countries are both ratified members, bilateral waste trade between them increases with 22 percent.³³ This strengthens the statement that the Convention legitimizes transboundary movements of hazardous waste.

²⁵ Ibid.

²⁶ Andrews, "Beyond the Ban", 2009; Clapp, *Toxic exports*, 2001.

²⁷ Basel Action Network, "Hazardous Waste Recycling", 2007

²⁸ Krueger, "International Trade and the Basel Convention", 1999, pp. 44.

²⁹ Andrews, "Beyond the Ban", 2009.

³⁰ Clapp, *Toxic exports*, 2001

³¹ Ibid.

³² Ibid.

³³ Kellenberg & Levinson, "A Waste of Effort?", 2011. Kellenberg and Levinson make it clear that this dataset also includes wastes that are not considered hazardous under the Basel Convention, but since the language of the Convention includes transboundary shipments of "hazardous wastes and other wastes", Kellenberg and Levinson means their analysis still shows the effectiveness of the Basel Convention.

(3) Another issue within the Convention is the failed obligation of Prior Informed Consent (PIC). The PIC demands that both the importer and exporter to ensure the availability of adequate facilities of disposal in the importing country. However, there are no clear guidelines of this process, making it difficult for the exporting country to accurately verify competent management in the importing country. There are often several issues that can occur in the transfer of waste from an industrialized country to a country in the Global South. First is the lack of capacity in the developing country to make an accurate assessment of risk by a particular shipment. Secondly there are corrupt officials often in the authorities who verify the adequacy in favor of revenues for themselves. In addition this form of self-verification ignores how economic decisions are made in developing countries, where importation of hazardous waste is perceived as much needed foreign revenue.³⁴ The global ship breaking industry is one example of countries competing with each other to secure foreign contracts to import ships to dismantle, where the ships often contain high levels of hazardous wastes.³⁵ Andrews (2009) argues this PIC procedure ignores and cannot prevent authorities from deliberately overstating their capacity in wish for economic incentives.

The lack of technical capacity in the Global South is also present in the issue of promoting Environmentally Sound Management (ESM), which is one of the main aims of the Basel Convention. Clapp (2001) argues that the aim of ESM has directed the focus away from rather transferring clean production technology to the Global South. The focus of ESM can be seen as a result of the Western countries pushing deliberately in the negotiations for a regulatory framework instead of a development and transfer discourse.³⁶ This has resulted in hazardous waste streams continuing to increase, and made industries rather invest in cleanup technologies to clean up after hazardous spills in the Global South, instead of transferring knowledge on clean production technology.³⁷ The Basel Convention actually obliges parties to establish regional centers for training and technology transfer.³⁸ However they failed to create a regular and mandatory funding mechanism, meaning these centers in the Global South lack major resources, and are not able to facilitate technology transfer, nor enhance the capacity to deal with hazardous waste.³⁹

Amendments to the Basel Convention

In an effort to deal with the several weaknesses and issues of the Basel Convention, two important amendments have been pushed for. First is the Ban Amendment that was adopted at the COP3 in

³⁴ Andrews, "Beyond the Ban, 2009.

³⁵ Ibid

³⁶ Kempel, "The negotiations on the Basel convention on the transboundary movement of hazardous wastes and their disposal", 1999.

³⁷ Clapp, *Toxic exports*, 2001, p 148.

³⁸ Article 14, Basel Convention, available at www.basel.int (last reviewed 11.04.17)

³⁹ Andrews, "Beyond the Ban", 2009.

1995. The Ban Amendment prohibits exports for disposal **and** recovery/recycling of hazardous waste from countries listed in the Basel Convention's Annex VII, (which includes all OECD countries, European Union countries and Liechtenstein) to non-Annex VII countries. The second amendment is the Liability Protocol that was adopted in 1999 after years of discussion. The Liability Protocol tries to establish a framework for liability and compensation for damages resulting from transboundary movements of hazardous waste. Both amendments have not come into force due to the lack of ratifications, a result of great disagreement among the members. The Liability Protocol would impose very strict liability against the exporter or generator for any damage in the importing country, but it does not suit the industrialized countries nor the countries in the Global South. For the industrialized western countries the Protocol is considered to impose liability unrealistically high and becomes too strict for the exporter and generator. The countries in the Global South on the other hand see apparent loopholes, such as that no liability is imposed on the exporter after the importer has accepted the shipping. This would mean the Liability Protocol undermines the responsibility of the exporting country to ensure that there is adequate management in the importing countries. This implies that exporters would not be liable for damages occurring many years after disposal, such as leaching of hazardous waste from inadequate containers. Without the Liability Protocol there is a critical element of the Basel Convention legal framework missing.

The Ban Amendment in contrast is arguably more important for the success of the Basel Convention and is now closer to come into force after many years of discussion. At COP9 in 2008 the members adopted a decision that urged the members to push for reaffirming the Ban's objectives and finding means for the Ban to be achieved. Switzerland and Indonesia launched together the Country Led Initiative (CLI) that amongst others pushed for the Basel Ban to come into force when $\frac{3}{4}$ of the parties of the Convention at the time the ban was adopted in 1994 has ratified the ban, instead of $\frac{3}{4}$ of the current parties of the Convention.⁴⁰ This CLI was surprisingly voted yes for at the COP10 in 2011, which means only 66 ratified parties out of 87 parties is needed for the Ban to come into force, and as for now only six countries are missing to achieve this.⁴¹ A ban would be more effectively in decreasing the transboundary movements of hazardous waste, as Clapp explains it would avoid especially loopholes, and would put an end to the toxic colonialism.⁴² In addition there is statistics from Kellenberg and Levinson extensive dataset that shows how Annex VII countries that have ratified the Ban reduced their overall waste exports to non- annex VII countries with 19,5 %, and as well reduced exports in 20 of the most hazardous categories by 52 percent. This suggests that the

⁴⁰ Lucier & Gareau, "Obstacles to preserving precaution and equity in global hazardous waste regulation: an analysis of contested knowledge in the Basel Convention", 2011.

⁴¹ Depository Letter 19.03.2013 reference number 1 TR/2013XXVII-3-a/1, retrieved at www.basel.int on 10.03.17

⁴² Lucier & Gareau, "Obstacles to preserving precaution and equity in global hazardous waste regulation: an analysis of contested knowledge in the Basel Convention", 2011.

ban is significantly more effective than the Convention itself.⁴³ The pressure against the Ban is nonetheless strong, and comes from industries and certain Western Industrialized countries, as well as certain developing countries. They believe that industrialization, production and trade is now happening within the Global South, arguing a ban needs to adapt to the changing globalized world. Another argument is that the Ban derives the Global South to receive valuable raw resources to use in their own production. These arguments have made countries and working groups within the Convention focus on a transition from a ban between Annex VII and non-Annex VII countries, to a ban to countries that do not fulfill the requirements for ESM of hazardous wastes.⁴⁴ Delegates from several of countries have said the reason they want the ban to come into force is so they can start to amend the ban immediately to an ESM-based ban.⁴⁵ To the contrary such an altered version of the ban might be a way for the industrialized countries to put attention on the “failed” capabilities of the Global South, enforcing a perspective that these countries’ lack of management is the fault of the waste crisis. This perspective pushes the focus and blame away from the Western world capitalist economy and the power dynamics of the world.⁴⁶

Conclusion

Twenty-five years after the adoption of the Basel Convention the problem of transboundary movements of hazardous waste has shown to be complex and dynamic. The convention has first of all lacked institutional and financial capacity, and has secondly ignored the drivers of economic development and how the global economy functions. The Convention has put focus rather on the states as primary actors, with less regard to the power of non-state actors, such as industries. When certain regulations and policies have been implemented, often new paths for transferring the hazardous waste has emerged due to either weak regulations or lack of commitments from state and non-state actors.⁴⁷ To solve the problem, not only are there many needed solutions several issues, but one also needs solutions that are flexible to adapt to the emerging flows of hazardous trade. In 2001 Clapp suggested several important steps to achieve solutions, amongst other stronger commitment from the parties of the Convention, greater importance put on international policy initiatives, regulations on regional, national and international levels and set guidelines, transparency and criteria demanded of the industries. She also stressed the importance of the ultimate goal to minimize hazardous waste, because obviously with less waste, there will be less transboundary movements of hazardous waste, arguing for a great push towards implementing clean production

⁴³ Kellenberg & Levinson, “A Waste of Effort?”, 2011, p. 22.

⁴⁴ Lucier & Gareau, “Obstacles to preserving precaution and equity in global hazardous waste regulation: an analysis of contested knowledge in the Basel Convention”, 2011.

⁴⁵ Ibid.

⁴⁶ Goldman quoted in Lucier & Gareau, “Obstacles to preserving precaution and equity in global hazardous waste regulation: an analysis of contested knowledge in the Basel Convention”, 2011, p. 15/16.

⁴⁷ Clapp, *Toxic exports*, 2001

worldwide. As Clapp and several scholars, NGOs and states have attempted to find solutions of this problem, there are many questions on whether the Basel Convention has improved these complex issues of hazardous waste, and how it has affected its parties in moving towards more clean production and more safe trade with hazardous waste. Due to the lack of assessment of the Basel Convention, our database tries to see the effect of the Convention on its parties' policies and law regulations throughout the years.

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The Database: How it Works

This database aims at analyzing the impact of the Basel Convention on its signatory members since its adaptation. We hope to assess the Convention's effect on countries policies and law regulations. The work on the database started in September 2016.

We set out with three clusters of questions:

a) What is the national definition of hazardous waste of the different member countries? Did this national definition change and evolve over time? If so, can we presume that the Basel Convention pushed for environmental legislation and the creation of increasing awareness concerning the management of hazardous waste? Or were these processes already existing and well-established in these countries?

b) What is the national disposal system of hazardous wastes? Did the management and disposal system of hazardous waste change since 1994/95 (or the countries respective date of ratification of the Basel Convention)?

c) How do member countries themselves evaluate the Basel Convention? Were they content with the legislative and definitional framework or did they push for more agreements other than the Basel, such as bilateral/multilateral agreements?

Our starting point to answer these questions was to use the countries own national reports. Members of the Basel Convention sent these reports annually to the Basel Convention's Secretariat. In these national reports, member countries answer a list of questions concerning their management of hazardous waste. Analyzing these national reports, we chose three years as our reference of time, to track the progress. The first year is 1994/95, as this was the year of the first reports. The reports from 1994/95 were retrieved from the UN Geneva Archives, as they are not digitalized as the succeeding reports. The second year of reference is 2001, to see possible important changes after the 2000 millennium and at the completion of the MDGs. The third and last year of reference is 2012, with regards to the effects around the Rio+20 Conference. We put the countries answers into a database with the most relevant info, specifically looking at countries' national definitions, and whether they had other bilateral and multilateral agreements including the Basel Convention.

In a first step, we then searched for patterns and created a typology to be able to group the countries. We created four groups:

1.1 No definition: Member states that have no national definition of hazardous waste.

2 Countries that have a definition

2.1 In the process of elaborating/ reevaluating a definition.

2.2 Have a definitions which is “in accordance with the Basel Convention”

2.3 Have a “better” definition than the Basel Convention’s definition.

We have created three maps, using the website mapchart.net to visually illustrate the changes in the composition of countries in these different groups.

In a second step, we identified countries from each of these groups that were to be investigated in more depth with respect to the above questions. By creating these four groups we were able to avoid investigating each and every individual country, and rather able to research one or two countries from each group, to analyze the country’s and its groups’ progress.

We have analyzed and written facts sheet about Croatia, Ecuador, Peru and Czech Republic from the four different groups. These country fact sheets give a descriptive introduction to the country, its facts and data from our three years of reference, and an analysis of the country’s relation to the Convention, where we conclude with our own open questions and thoughts to consider.

Definition of the Criteria used in the Maps

In the maps, we proposed six different categories. The categorization is based almost exclusively on the national definitions of hazardous waste. In some specific cases; however, additional categories were considered, for example, Canada's list of additional wastes that the country considers hazardous.

The maps are only indicative, and not meant to be binding. Therefore, it is important to look closely at individual states in order to obtain more information about their specific role in the Basel Convention. We have done this by writing specific country-fact-sheets; however, while creating the maps, we made necessary simplifications. Thus, the reader should be skeptical about our conclusions. It is; however, very difficult to build valid conclusions based only on national definitions. Hence, the maps are designed in order to give an overview to the specific changes in Basel.

The categories are:

Non-responsive member states: countries that are part of the Basel Convention, but did not send the report for the interested year.

No-definition: countries that are a part of the Basel Convention, but state that they do not have a national definition of hazardous waste.

Definition in accordance with the Basel Convention: countries that are a part of the Basel agreement, and satisfy the basic standards imposed by the Basel Convention. By signing the agreement, every country is bound by international law to respect the Convention's decisions regarding the management of hazardous waste.

In the process of re-evaluating/elaborating a definition: countries that are part of the Basel agreement that also state their will to re-evaluate/elaborate their national definition of hazardous waste.

Definition stricter than the Basel Convention: countries that are part of the Basel agreement, but show a stricter legislation. This includes:

1. All the member states of the EU (the European legislation is stricter than Basel's).
2. Countries that in their definition cite at least Annex I and Annex III and list additional wastes that are considered as hazardous (most notably radioactive waste).
3. If they have in general a broader and stricter list of wastes than Basel. Non-members: countries that did not sign or ratified the Basel Convention.

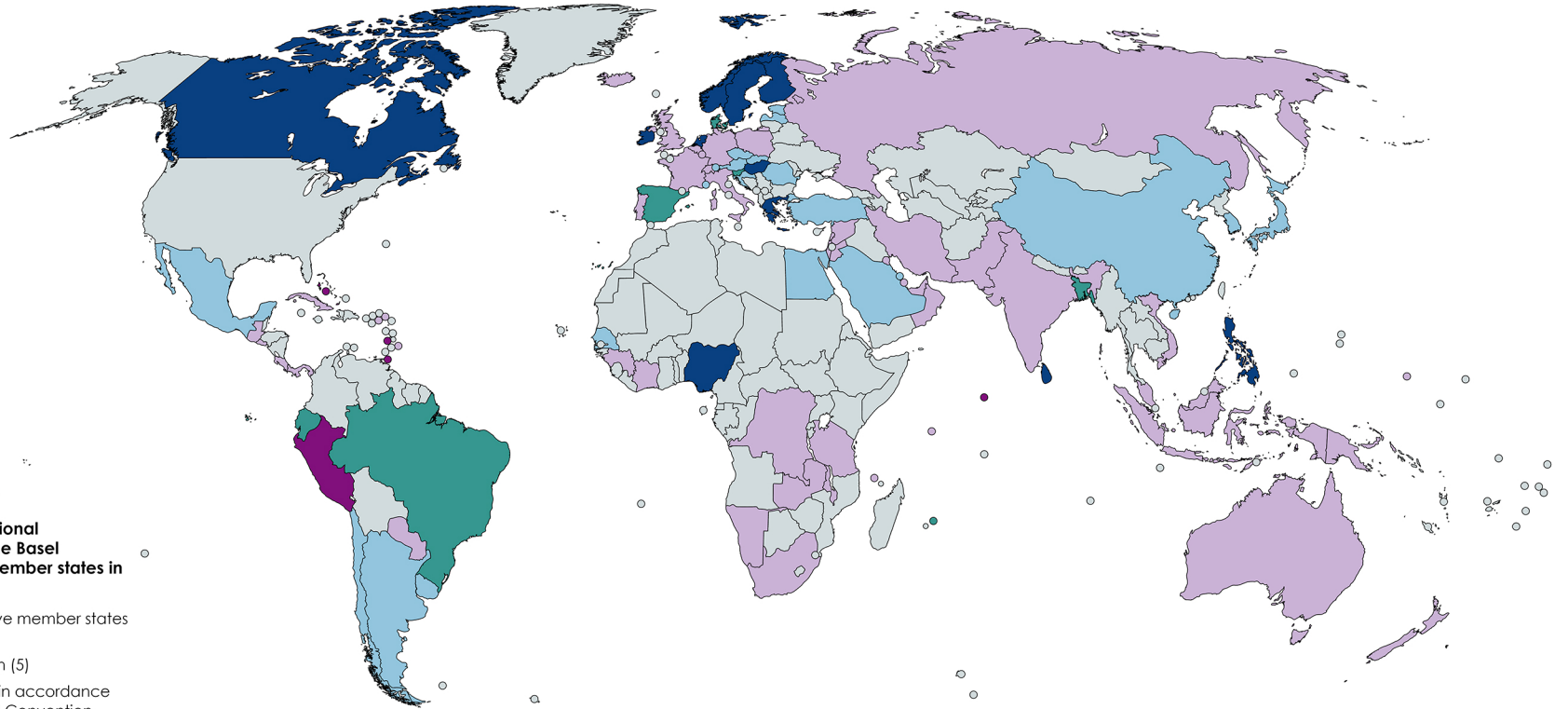
Typology of national definitions by Basel Convention's member states in 1995 (94 member states)

Non-Responsive member states (45)	1. No definition	2. Have a definition		
	1.1 No definition (5)	2.1 Definition in accordance with the Basel Convention (25)	2.2 In the process of reevaluating/ elaborating a definition(7)	2.3 Definition stricter than the Basel Convention (11)
Australia	Bahamas	Argentina	Brazil	Finland
Barbados	Maldives	Bahrain	Denmark	Greece
Belgium	Peru	Bangladesh	Ecuador	Hungary
Comoros	Saint Lucia	Chile	Mauritius	Ireland
Costa Rica	Trinidad & Tobago	China	Slovenia	Netherlands
Cuba		Croatia	Spain	Nigeria
DRC		Cyprus		Norway
El Salvador		Czech Republic		Philippines
France		Egypt		Sri Lanka
Germany		Estonia		Sweden
Guatemala		Japan		
Guinea		Iran		
Iceland		Latvia		
India		Liechtenstein		
Indonesia		Malaysia		
Israel		Mexico		
Italy		Monaco		
Ivory Coast		Romania		
Jordan		Saudi Arabia		
Kuwait		Senegal		
Lebanon		South Korea		
Luxembourg		Slovak republic		
Malawi		Turkey		
Micronesia		Uruguay		
Namibia				
New Zealand				
Oman				
Pakistan				

Non-Responsive member states (45)	1. No definition	2. Have a definition		
	1.1 No definition (5)	2.1 Definition in accordance with the Basel Convention (25)	2.2 In the process of reevaluating/ elaborating a definition(7)	2.3 Definition stricter than the Basel Convention (11)
Panama				
Papua New Guinea				
Paraguay				
Poland				
Portugal				
Qatar				
Russian Federation				
Saint Kitts and Nevis				
Seychelles				
South Africa				
Switzerland				
Syria				
United Arab Emirates				
United Kingdom				
Tanzania				
Viet Nam				
Zambia				

Typology of national definitions by the Basel Convention's member states in 1995 (94)

- Non-responsive member states (45)
- 1 No definition (5)
- 2.1 Definition in accordance with the Basel Convention (25)
- 2.2 In the process of re-evaluating/elaborating a definition (7)
- 2.3 Definition stricter than the Basel Convention (11)
- 3 Non-members



Typology of national definitions by Basel Convention's member states in 2001 (169 member states)

*countries that have sent a report in 1994/1995

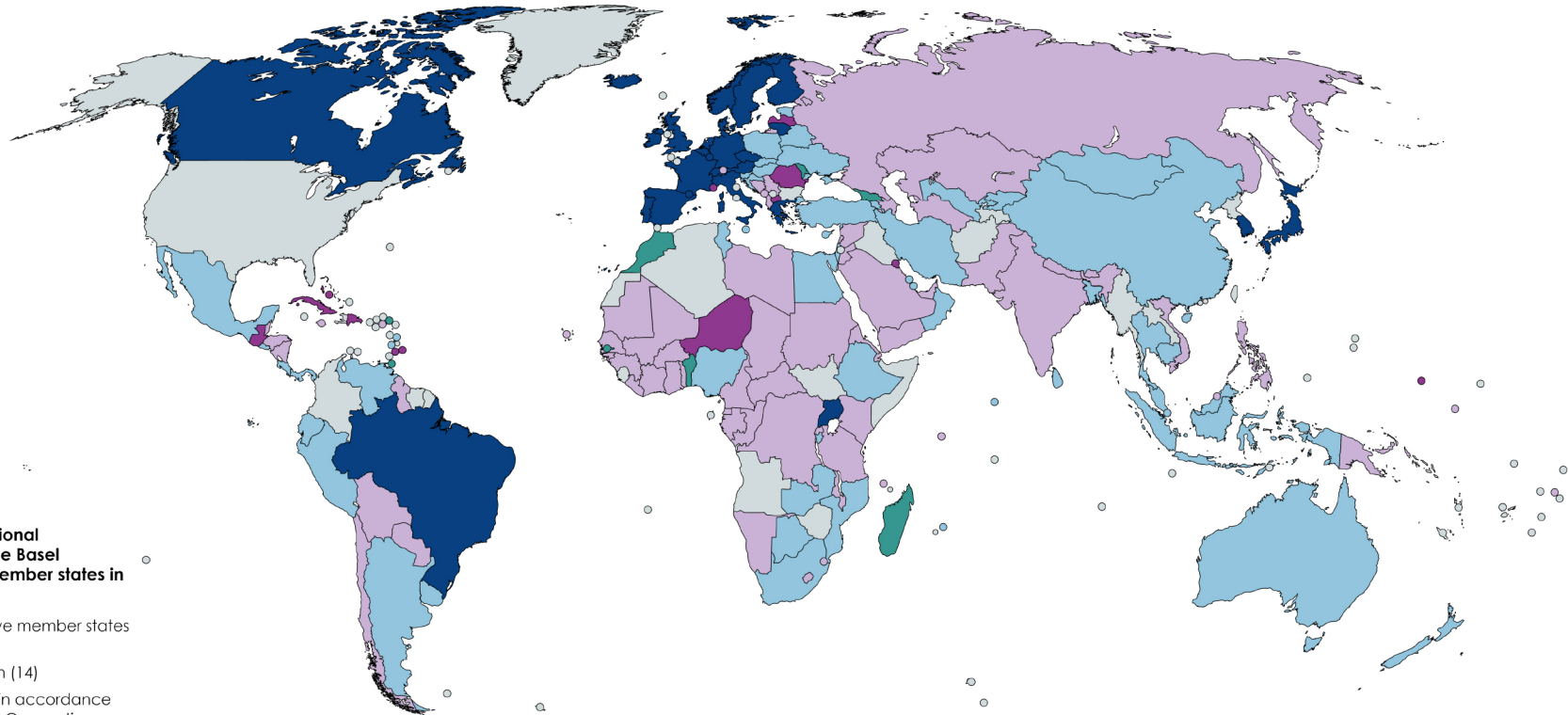
Non-Responsive member states (68)	1. No definition	2. Have a definition		
	1.1 No definition (14)	2.1 Definition in accordance with the Basel Convention (51)	2.2 In the process of reevaluating/ elaborating a definition(8)	2.3 Definition stricter than the Basel Convention (28)
Albania	Andorra	Australia	Antigua and Barbuda	Austria
Azerbaijan	Bahamas	Argentina	Benin	Belgium
Belize	Barbados	Armenia	Gambia	Brazil
Bhutan	Cuba	Bangladesh	Georgia	Canada
Bolivia	Dominican Republic	Bahrein	Madagascar	Czech Republic
Bosnia Herzegovina	Guatemala	Belarus	Moldova	Denmark
Brunei Darussalam	Kuwait	Botswana	Morocco	Finland
Burkina Faso	Latvia	Bulgaria	Trinidad and Tobago	France
Cameroon	FYROM	Burundi		Germany
Cape Verde	Micronesia	Cambodia		Greece
Chad	Monaco	China		Iceland
Central African Republic	Niger	Costa Rica		Ireland
Chile	Romania	Croatia		Italy
Comoros	Saint Vincent and the Grenadines	Cyprus		Japan
Congo (Republic of the)		Dominica		Lithuania
Cook Islands		Ecuador		Luxemburg
DRC		Egypt		Netherlands
Dibjouti		El Salvador		Norway
Equatorial Guinea		Estonia		Portugal
Eritrea		Ethiopia		South Korea
Gabon		Hungary		Spain
Ghana		Iran		Sweden
Guinea		Indonesia		Switzerland
Guinea-Bissau		Israel		Uganda
Guyana		Kyrgyzstan		Uganda
Honduras		Malayasia		United Kingdom
India		Maldive		

Non-Responsive member states (68)	1. No definition	2. Have a definition		
	1.1 No definition (14)	2.1 Definition in accordance with the Basel Convention (51)	2.2 In the process of reevaluating/ elaborating a definition(8)	2.3 Definition stricter than the Basel Convention (28)
Ivory Coast		Malta		
Jamaica		Mauritius		
Jordan		Mexico		
Kazakhstan		Mongolia		
Kenya		Mozambique		
Kiribati		New Zealand		
Lebanon		Nigeria		
Lesotho		Oman		
Liberia		Panama		
Libya		Peru		
Liechtenstein		Poland		
Malawi		Qatar		
Mali		Saint Lucia		
Marshall Islands		Singapore		
Mauritania		Slovakia		
Montenegro		Slovenia		
Namibia		South Africa		
Nauru		Sri Lanka		
Nepal		Thailand		
Nicaragua		Tunisia		
Pakistan		Turkey		
Papa New Guinea		Ukraine		
Paraguay		Uruguay		
Phillipines		Uzbekistan		
Russian Federation		Venezuela		
Rwanda		Zambia		
Saint Kitts and Nevis				
Samoa				
Saudia Arabia				

Non-Responsive member states (68)	1. No definition	2. Have a definition		
	1.1 No definition (14)	2.1 Definition in accordance with the Basel Convention (51)	2.2 In the process of reevaluating/ elaborating a definition(8)	2.3 Definition stricter than the Basel Convention (28)
Senegal				
Serbia				
Seychelles				
Sudan				
Swaziland				
Syria				
Tanzania				
Togo				
Turkmenistan				
United Arab Emirates				
Tanzania				
Viet Nam				
Yemen				

Typology of national definitions by the Basel Convention's member states in 2001 (169)

- Non-responsive member states (68)
- 1 No definition (14)
- 2.1 Definition in accordance with the Basel Convention (53)
- 2.2 In the process of re-evaluating/elaborating a definition (8)
- 2.3 Definition stricter than the Basel Convention (26)
- 3 Non-members



Typology of national definitions by Basel Convention's member states in 2012 (172 member states)

*countries that have sent a report in 2001

Non-Responsive member states (89)	1. No definition	2. Have a definition		
	1.1 No definition (0)	2.1 Definition in accordance with the Basel Convention (40)	2.2 In the process of reevaluating/ elaborating a definition (6)	2.3 Definition stricter than the Basel Convention (37)
Antigua and Barbados		Albania	Barbados	Andorra
Bahamas		Algeria	Cape Verde	Argentina
Belarus		Australia	Congo, Republic of the	Austria
Belize		Azerbaijan	Eritrea	Bahrain
Benin		Bolivia	Georgia	Bangladesh
Bhutan		China	Nepal	Belgium
Botswana		Colombia		Bulgaria
Bosnia and Herzegovina		Cuba		Canada
Brazil		Ivory Coast		Croatia
Burkina Faso		Dominican Republic		Cyprus
Burundi		DRC		Czech Republic
Cambodia		Egypt		Denmark
Cameroon		Guatemala		Estonia
Central African Republic		Guinea Bissau		Finland
Chad		Honduras		Germany
Chile		Iran		Greece
Comoros		Jamaica		Guyana
Cook Islands		Kyrgyzstan		Hungary
Costa Rica		Latvia		Ireland
Djibouti		Libya		Japan
Dominica		Madagascar		Lithuania
Ecuador		Malaysia		Luxemburg
El Salvador		Montenegro		Malta
Equatorial Guinea		Morocco		Netherlands
Ethiopia		New Zealand		Norway
France		Nigeria		Pakistan
Gabon		Panama		Paraguay

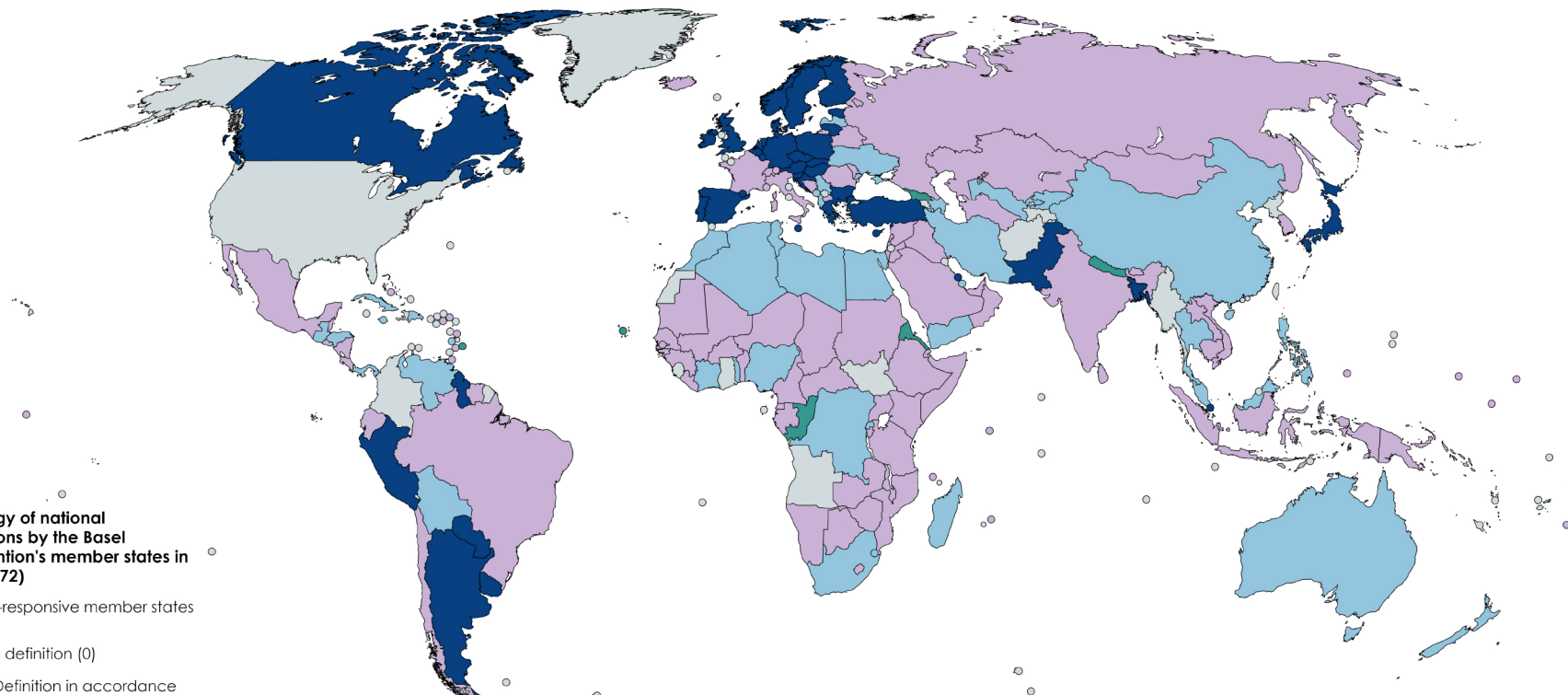
Non-Responsive member states (89)	1. No definition	2. Have a definition		
	1.1 No definition (0)	2.1 Definition in accordance with the Basel Convention (40)	2.2 In the process of reevaluating/ elaborating a definition (6)	2.3 Definition stricter than the Basel Convention (37)
Gambia		Phillipines		Peru
Ghana		Qatar		Poland
Guinea		Rwanda		Portugal
Guinea-Bissau		Santa Lucia		Singapore
Iceland		Serbia		Slovakia
India		Soth Africa		Slovenia
Indonesia		Swasiland		Spain
Iraq		Thailand		Sweden
Israel		Togo		Turkey
Italy		Tunisia		United Kingdom
Jordan		Ukraine		Uruguay
Kazakhstan		Uzbekistan		
Kenia		Venezuela		
Kiribati		Yemen		
Korea, Republic of				
Kuwait				
Laos				
Lebanon				
Lesotho				
Liberia				
Liechtenstein				
Malawi				
Maldives				
Mali				
Marshall Islands				
Mauritania				
Mauritius				
Mexico				
Micronesia				

Non-Responsive member states (89)	1. No definition	2. Have a definition		
	1.1 No definition (0)	2.1 Definition in accordance with the Basel Convention (40)	2.2 In the process of reevaluating/ elaborating a definition (6)	2.3 Definition stricter than the Basel Convention (37)
Moldova				
Monaca				
Mongolia				
Mozambique				
Namibia				
Nauru				
Nicaragua				
Niger				
Oman				
Paulau				
Papua New Guinea				
Romania				
Russian Federation				
Saint Kitts and Nevis				
Saint Vicents and the Grenadines				
Samoa				
Saudi Arabia				
Senegal				
Seychelles				
Somalia				
Sri Lanka				
Sudan				
Suriname				
Switzerland				
Syria				
FYROM				
Tonga				
Trinidad and Tobago				

Non-Responsive member states (68)	1. No definition	2. Have a definition		
	1.1 No definition (14)	2.1 Definition in accordance with the Basel Convention (51)	2.2 In the process of reevaluating/ elaborating a definition (8)	2.3 Definition stricter than the Basel Convention (28)
Turkmenistan				
Uganda				
UAE				
Tanzania				
Vietnam				
Zambia				
Zimbabwe				

Typology of national definitions by the Basel Convention's member states in 2012 (172)

- Non-responsive member states (89)
- 1 No definition (0)
- 2.1 Definition in accordance with the Basel Convention (38)
- 2.2 In the process of re-evaluating/elaborating a definition (6)
- 2.3 Definition stricter than the Basel Convention (37)
- 3 Non-members



Croatia



Figure 1 Google Maps

<https://www.google.de/maps/place/Kroatien/@44.4494146,14.2262483,7z/data=!3m1!4b1!4m5!3m4!1s0x133441080add95ed:0xa0f3c024e1661b7f18m2!3d45.1!4d15.2> (Retrieved on Feb. 16th, 2017)

Basic Facts

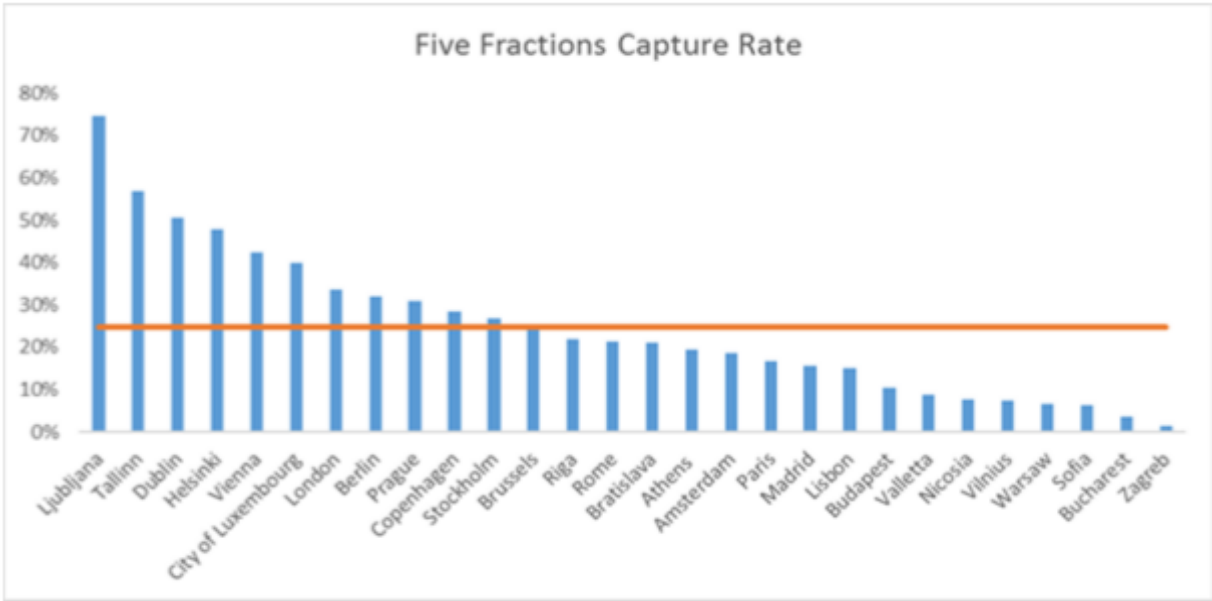
Croatia declared independence in 1991 after the collapse of the former socialist state of Yugoslavia. Located in Southeastern Europe (commonly identified as the “Balkan peninsula”), the country covers a surface area of 56,540km².¹ Croatia is bordered by Slovenia, Hungary, Serbia, Bosnia and Herzegovina and Montenegro and shares the border on the Adriatic Sea with Italy. From 1991 to 1995, Croatia experienced a four-year-long war with Serbia, which some historians consider a civil war.² The conflict left deep wounds in the country’s economy and society. Following the path of

¹ World Data Bank <http://databank.worldbank.org/data/reports.aspx?source=2&country=HRV> (16.02.2017.)

² The debate is extremely political. Although the conflict had all the features of a civil war, it is largely considered (especially from the right-winged civil society) that such a definition would diminish the role of the Serb aggression in 1991. However, the war had many layers and Croatia also played an embarrassing role in the offensive towards Bosnia and Herzegovina. Here is a nice example how two different media (one from the extreme right, the other from the extreme left) perceive the same question. “Klasic krivotvori povijest”, *Dnevno.hr* <http://www.dnevno.hr/vijesti/hrvatska/klasic-krivotvori-povijest-domovinski-rat-je-gradanski-pobunjeni-srbi-su-bili-hrvatski-gradani-tito-je-bio-antifasist-ne-diktator/> (16.02.2017). “Razgovor s Hrvojem Klasicem”, *Lupiga* <http://lupiga.com/intervjui/razgovor-s-hrvojem-klasicem-i-dio-hocemo-li-djecu-uciti-i-da-su-ubijani-srpski-civili> (16.02.2017). In the first article, historian Hrvoje Klasic is perceived as a filo-Serb, Yugo-nostalgic and traitor for supporting the “civil war” interpretation. In the second one, his words are taken as a bright example of progressive intellectualism.

other former socialist states, most of Croatia’s national properties have been privatized: a large number of Yugoslavian state companies that were reasonably successful under communist rule (oil industry, shipbuilding and ship transport) disappeared in a short period of time. In the 25 years of its existence, the right wing party, Croatian Democratic Union (HDZ), home party of the first president Franjo Tuđman, governed Croatia.³ The party never had any particular “green” agenda, and environmental issues were not among its top priorities. In general, Croatia is still missing a basic infrastructure: in Dalmatia (the southernmost region), it is almost impossible to recycle simple waste.⁴

Official data from the EU (2015) shows that, among the 28 capitals of the Union, Zagreb is in last place in recycling by far. The data stated, [t]he highest collection rate is 189 kg/cap (Luxembourg) including all five fractions, while the lowest is 5 kg/cap (Zagreb). However, these absolute numbers are influenced by the level of waste generation. Ljubljana, Luxembourg, Rome, Stockholm, Tallinn and Vienna perform very well in terms of quantity collected, with annual amounts exceeding 160 kg/cap for the five fractions.



⁵ Figure 2 Assessment of separate collection schemes in the 28 capitals of the EU.

http://ec.europa.eu/environment/waste/studies/pdf/Separate%20collection_Final%20Report.pdf (16.02.2017)

The waste disposal in Croatia is decentralized: local communities have to organize the disposal by themselves.⁶ The following image shows the number of waste collection facilities (recycling centers) in Croatia.

³ For more information about former governments visit the official website of the Croatian Government: <https://vlada.gov.hr/previous-governments-16138/16138> (16.02.2017)

⁴ This assertion is made on the personal experience of the writer.

⁵ Nicole Seyring et al., *Assessment of separate collection schemes in the 28 capitals of the EU* (BIPRO/CRI: 2015), 14. http://ec.europa.eu/environment/waste/studies/pdf/Separate%20collection_Final%20Report.pdf (16.02.2017)



Figure 3. Objekti i sustavi gospodarenja otpadom”, *Plan gospodarenja otpadom Republike Hrvatske 2015.-2021.* (Ministarstvo zaštita okoliša i prirode, 2014), 26.
http://www.mzoip.hr/doc/nacrt_plana_gospodarenja_otpadom_republike_hrvatske_za_razdoblje_2015-2021.pdf (16.02.2017)

This image clearly shows a huge disproportion between the northern and the southern part of the country. On Croatia’s territory, there are also two incineration plants (on the map represented by a star):

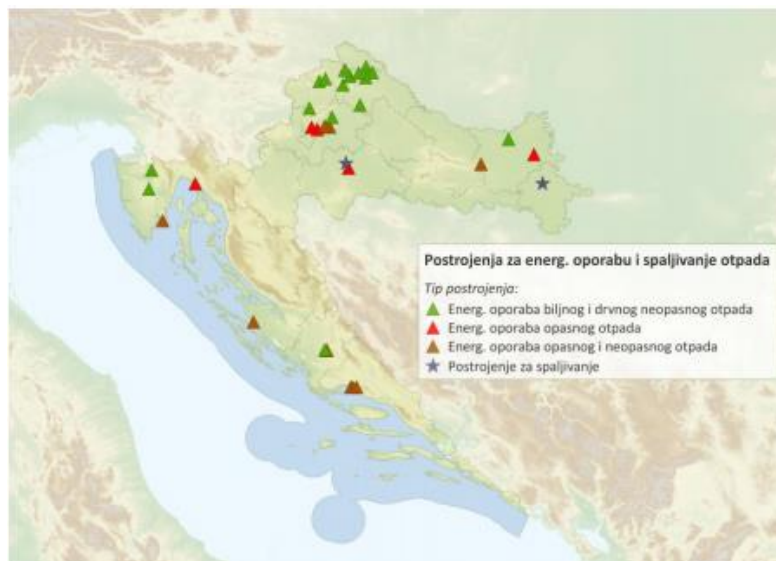


Figure 4. Ibid, 27.

⁶ More information on the official site of the Ministry of Environment and Energy
<http://www.mzoip.hr/hr/otpad/otpadxx.html> (16.02.2017).

There is, however, a very bright example from the island of Krk, the largest of the Croatian islands. A self-efficient recycling system has been implemented on the island that proves to be very successful. The EU financed a majority of the project.⁷

During the war, Croatia suffered a significant population loss. Many citizens also left the country as refugees. As data from the World Bank shows, after population numbers plummeted during the 1990s, the population showed a slight growth in the first decade of the 2000s. Additionally, the big economic crisis of 2008 has deeply affected Croatia's fragile economy, which is still recovering. As one of the most visible results, a large number of young people are leaving the country. Subsequently, Croatia's population is predicted to decrease steadily in the next 50 years.⁸

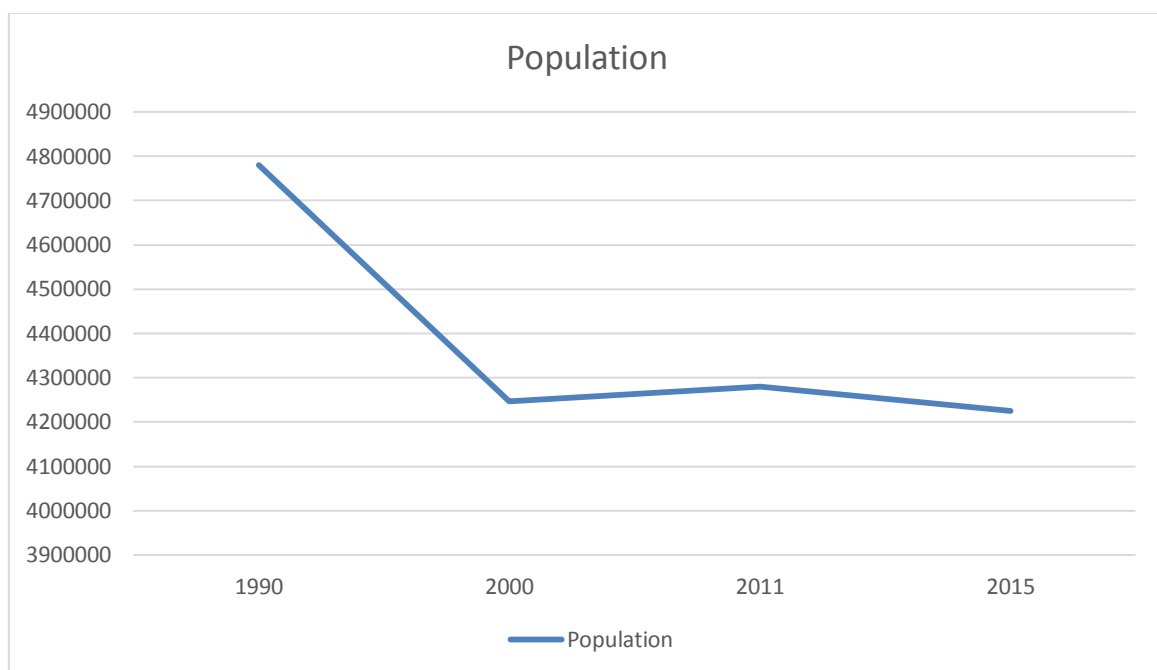


Figure 5. World Data Bank <http://databank.worldbank.org/data/reports.aspx?source=2&country=HRV>
(16.02.2017.)

The economy was severely weakened during and after the war. Beginning at the start of the new millennium, it showed optimistic improvement, with a maximal annual growth of 5.2% in 2007. After the 2008 crisis, the GDP plunged and did not have a registered growth until 2015 when it increased by 1.6%. This was due to the overall economic advancement in Europe, rather than a real growth of the country itself.

⁷ For more information visit <http://www.ekootokrk.hr/reciklazna-dvorista> (16.02.2017)

⁸ "Croatia Population in 2017", *World Population Review* <http://worldpopulationreview.com/countries/croatia-population/>
(16.02.2017). Data are based on global demographic estimates and projections by the United Nation.

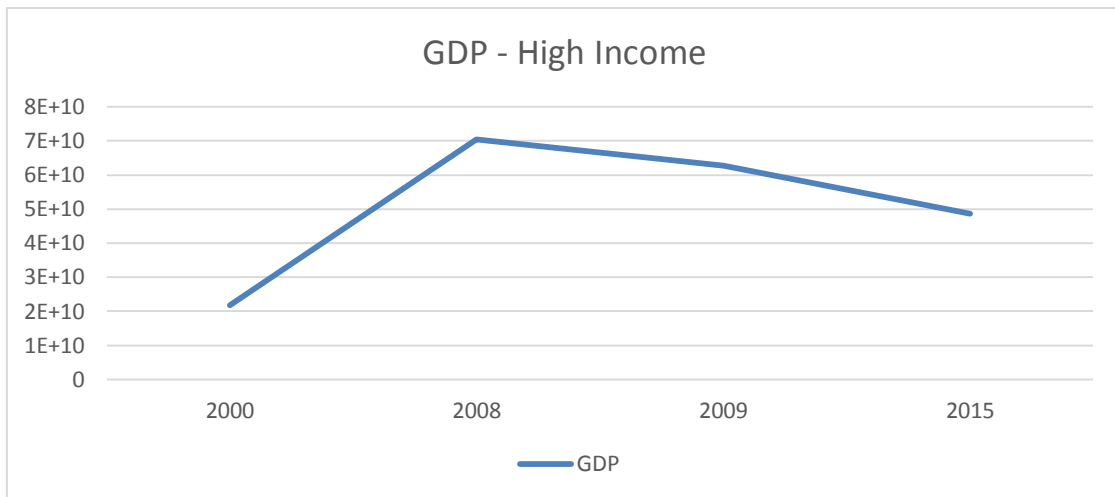


Figure 6. Ibid (16.02.2017)

The company with the most revenue is INA Group (oil company), which is co-owned by the state and by the Hungarian company MOL Group.⁹ Prirodni plin is also part of INA and deals with the distribution of natural gas. Croatia, however, does not have a strong industrial market. In fact, among the top companies, none of them are a big industrial player. Hrvatska Elektroprivreda (HEP) is another state owned company¹⁰ that produces and provides electricity. Until two years ago, it had a complete monopoly on the market, (private and foreign companies were not allowed to enter the market). Konzum is the biggest grocery distributor and super-market chain in Croatia, and is owned by the company Agrokor. The industrial production is almost entirely concentrated in the Eastern part of country (Slavonija).¹¹

Croatia and Basel¹²

In 2013 Croatia became part of the EU—currently, the last country to join the Union. This proved to be a big event, and especially important for a better implementation of the Basel convention (since Croatia had to adapt its legislation in order to be accepted to the EU).

The designed Competent Authority to the Basel Convention is the Ministry of Environmental Protection, Physical Planning and Construction. Croatia formally joined the Basel Convention on May

⁹ The oil company was sold in an “intriguing” crime story full of corrupted politicians and unscrupulous businessmen.

¹⁰ The new government (HDZ-MOST) is planning to sell 20% or more of the company in order to buy back INA from MOL. *Telegram.hr* <http://www.telegram.hr/politika-kriminal/svi-vec-danima-pricaju-o-kupnji-ine-prodajom-hep-a-izvukli-smo-stvari-koje-o-ovome-morate-znati/> (16.02.2017)

¹¹ “Major Companies” *Croatia.eu* <http://croatia.eu/article.php?lang=2&id=33> (16.02.2017)

¹² When not stated differently, all the information has been taken from the official Basel Convention National Reports.

9, 1994.¹³ It is important to note that in 1994 the war was still ongoing. It can be interpreted as Croatia's political goal to be increasingly recognized as a self-sufficient and independent state. Therefore, it is difficult to argue that the disposal of hazardous waste was among the top priorities of the country during that movement.

Croatia is part of the group of countries that gave a definition in the first report which (following our categorization) was in accordance only with the Basel Convention. However, this analysis shows development in the country's reports from 1994 to 2015.

Starting with the first report in 1994 (which refers to the first Basel convention of 1992/1993), the country has given no detailed definition of hazardous waste. It has only been said that the *National definition of hazardous wastes is in accordance with the Annex I and II of the Basel Convention*.¹⁴

The report from 2001, provides an "empirical" definition: an elaborate definition given that there are different characteristics listed that define the hazardousness of wastes. The national definition of waste stated:

*Official Gazette - International Agreements, No. 3/94 states that hazardous waste is identified by Appendices I, II, and III of the Law on Ratification of the Convention on Control of Transboundary Movement of Hazardous Waste and Its Disposal. It contains the substances exhibiting one of the following characteristics: explosiveness, reactivity, ignitability, corrosiveness, irritability, harmfulness, toxicity, infectivity, carcinogenicity, mutagenicity, teratogenicity, ecotoxicity, and the characteristic of releasing toxic gases by chemical reactions, or biological decomposition. Municipal and industrial waste is classified as hazardous waste if they contain substances exhibiting one of the characteristics listed above. National definition of hazardous wastes is in accordance with the Annexes I and II of the Basel Convention.*¹⁵

Croatia has not listed any other hazardous wastes outside of the Basel convention.

Additionally, the guidelines to the management of hazardous waste stated:

avoiding and minimizing the generation of waste, and minimizing the hazardous nature of waste whose generation cannot be prevented;- prevention of uncontrolled waste management;- recovery of valuable substances for material purposes and energy recovery, and their treatment prior to

¹³ "Parties the Basel Convention" *Basel Convention*

<http://www.basel.int/Countries/StatusofRatifications/PartiesSignatories/tabid/4499/Default.aspx> (17.02.2017)

¹⁴ "Croatia", *Compilation of country fact sheets* (Geneva: SBC, 1996), 23.

¹⁵ "Croatia", *Basel Convention National Reports – Year 2001* <http://ers.basel.int/ERS-Extended/FeedbackServer/fsadmin.aspx?fscontrol=respondentReport&surveyid=59&voterid=40962&readonly=1&nomenu=1> (16.02.2017)

*disposal;- waste disposal onto landfills; and- remediation of waste contaminated areas.*¹⁶

Since Croatia was joining the EU in 2013, the report from 2012 contains additional changes to the country's definition of hazardous waste. This definition contained fewer details, although it refers to the "Council Directive" of 1991. It is not clear to which Council they are referring, however; most likely, it is one from the EU because it would be in line with Croatia's goal to follow EU's legislation. In fact, the Council Regulation of the European Economic Community (EEC)¹⁷ is also mentioned in the report.

*The national definition of hazardous waste is in accordance with article 3 of the Regulation categories, types and classification of waste with a waste catalogue and list of hazardous waste (Official Gazette, No. 50/05, 39/09). This Regulation establishes categories, types and classification of waste depending on its properties and place of origin, and determines the waste catalogue, list of hazardous waste and list of waste in transboundary transport. Pursuant to this Regulation, hazardous waste is waste determined by categories (generic types) and composition, and it must contain one or more properties as determined in the List of hazardous waste which is compiled with Council Directive of 12 December 1991 on hazardous waste. Waste catalogue and list of waste in transboundary transport mentioned above are entirely harmonized with Council Regulation (EEC) No 259/93 on the supervision and control of shipments of waste within, into and out of the European Community.*¹⁸

The most important change between 2001 and 2012 was the large number of wastes that are regarded as hazardous added to Croatia's list which were not included in the Basel Convention.

For this Report (Table 6 and 8A), according Art. 1 (1)b of the Basel Convention, we report following EWC: 06 03 13, 06 05 02*, 06 10 02*, 08 05 01*, 09 01 01*, 09 01 02*, 10 01 04*, 10 01 22*, 10 03 15*, 10 10 15*, 11 01 98*, 11 02 07*, 13 07 01*, 13 07 02*, 13 07 03*, 14 06 01*, 15 01 10*, 16 01 21*, 16 02 11*, 16 02 13*, 16 05 04*, 16 07 09*, 16 08 07*, 16 09 03*, 16 09 04*, 16 10 01*, 16 11 05*, 17 02 04*, 17 04 09*, 17 05 03*, 17 05 05*, 17 05 07*, 17 06 03*, 17 09 03*, 18 01 06*, 20 01 23*, 20 01 29*, 20 01 37*.*

¹⁶ Ibid.

¹⁷ After 1993 (Treaty of Maastricht) the EEC was succeeded by the European Community and then by the European Union. For more information visit the official site of the European Union https://europa.eu/european-union/about-eu/eu-in-brief_en (16.02.2017)

¹⁸ "Croatia", *Basel Convention National Reports – Year 2012* <http://ers.basel.int/ERS-Extended/FeedbackServer/fsadmin.aspx?fscontrol=respondentReport&surveyid=63&voterid=45039&readonly=1&nomenu=1> (16.02.2017)

For defining Y codes we used book *Praxishandbuch zur grenzüberschreitenden (sic) Abfallverbringung* (Wuttke/Baehr, 2008).¹⁹

This is what we found in the book (we are going to refer just to the definitions):

06 03 13: feste Salze und Lösungen, die Schwermetalle enthalten

06 05 02: Schlämme aus der betriebseigenen Abwasserbehandlung mit Ausnahme derjenigen, die gefährliche Stoffe enthalten

06 10 02 Abfälle, die gefährliche Stoffe enthalten

08 05 01 Isocyanatabfälle

09 01 01 Entwickler und Aktivationslösungen auf Wasserbasis

09 01 02 Offsetdruckplatten-Entwicklerlösungen auf Wasserbasis

10 01 04 Filterstäube aus Kohlenfeuerung

10 01 22 wässrige Schlämme aus der Kesselreinigung, die gefährliche Stoffe enthalten

10 03 15 Abschaum, der entzündlich ist oder in Kontakt mit Wasser entzündliche Gase in gefährliche Menge abgibt

10 10 15 Abfälle aus rissanzeigenden Substanzen, die gefährlichen Stoffe enthalten

11 01 98 andere Abfälle, die gefährliche Stoffe enthalten

11 02 07 andere Abfälle, die gefährliche Stoffe enthalten

13 07 01 Heizöl und Diesel

13 07 02 Benzin

13 07 03 andere Brennstoffe (einschließlich Gemische)

14 06 01 Fluorchlorkohlenwasserstoffe, H-FCKW, H-FKW0

15 01 10 Verpackungen, die Rückstände gefährlicher Stoffe enthalten oder durch gefährliche Stoffe verunreinigt ist

¹⁹ Ibid.

16 01 21 gefährliche Bauteile mit Ausnahme derjenigen, die unter 16 01 07 bis 16 01 11, 16 01 13 und 16 01 14 fallen

16 02 13 gefährliche Bestandteile enthaltende gebrauchte Geräte mit Ausnahme derjenigen, die unter 16 02 09 bis 16 02 12 fallen

16 05 04 gefährliche Stoffe enthaltende Gase in Druckbehältern (einschließlich Halonen)

16 07 09 Abfälle, die sonstige gefährliche Stoffe enthalten

16 08 07 gebrauchte Katalysatoren, die durch gefährliche Stoffe verunreinigt sind

16 09 03 Peroxide, z.B. Wasserstoffperoxid

16 09 04 oxidierende Stoffe a. n. g.

16 10 01 wässrige flüssige Abfälle, die gefährliche Stoffe enthalten

16 11 05 Auskleidungen und feuerfeste Materialien aus nichtmetallurgischen Prozessen mit Ausnahme derjenigen, die gefährliche Stoffe enthalten

17 02 04 Zink

17 04 09 Metallabfälle, die durch gefährliche Stoffe verunreinigt sind

17 05 03 Boden und Stein, die gefährliche Stoffe enthalten

17 05 05 Baggergut, das gefährliche Stoffe enthält

17 05 07 Gleisschotter, der gefährliche Stoffe enthält

17 06 03 anderes Dämmmaterialien, das aus gefährlichen Stoffen besteht oder solche Stoffe enthält

17 09 03 sonstige Bau- und Abbruchabfälle (einschließlich gemischte Abfälle), die gefährliche Stoffe enthalten

18 01 06 Chemikalien, die aus gefährlichen Stoffen bestehen oder solche enthalten

20 01 23 gebrauchte Geräte, die Fluorchlorkohlenwasserstoffe enthalten

20 01 29 Reinigungsmittel, die gefährliche Stoffe enthalten

20 01 37 Holz, das gefährliche Stoffe enthält²⁰

²⁰ Wuttke, Joachim. *Praxishandbuch für grenzüberschreitenden Abfallverbringung* (Berlin: Schmidt, 2008)

This could be a sign of new policies before joining the EU. First, the EU legislation is stricter than Basel's (as it will be seen in the text regarding Czech Republic). Moreover, it stressed that Croatia had to adapt its legislation in order to be accepted to the EU, however; it is difficult to give the reasons behind the new policy without a more detailed research. We could say the same thing regarding other questions, such as the relationship between Basel and the EU etc.

Nevertheless, it is useful to note that a left-winged government ruled Croatia in 2012. For the first year, the Minister of Environment was Mirela Holy, but had to leave this position after a small scandal. Later on, she founded the first and only green party in Croatia (ORaH). Could this be a reason behind the new development? Perhaps, but we can only guess. Although, the previous two terms were served by the HDZ, and they were the ones who did all the negotiations with the EU.

The strategy for fighting hazardous waste is formulated much more in detail than in the previous report. It stated the following:

The National strategy on waste (OG No. 130/05), contains instruments for:

- avoiding and reducing the generation of waste and reducing the hazardous properties of waste at source (cleaner production),*
- developing and establishing programs (sic) of systematic education on waste,*
- recovering the valuable properties of waste for material or energy purposes*

The National Plan on waste (OG No. 85/07, 126/10, 31/11) on the basis of National Strategy on waste. It contains instruments for:

- avoiding the generation of waste (apply measures which aim is to decrease amount of waste)*
- education and communication with administrative structures, experts and public*
- separate collection of waste at the source of production*
- avoiding and reduce of waste which (sic) is generated in production processes (develop different technological (sic) and logistical solutions in production processes; systematic control of all phases in processes where waste is produced; apply technological processes (sic) which produce the smallest amount of waste - cleaner production)²¹*

The last submission date was on December 29, 2016, and refers to the year 2015. The list is somehow shorter. Only Annex III is cited as a category that defines waste.

²¹ "Croatia", *Basel Convention National Reports – Year 2012* <http://ers.basel.int/ERS-Extended/FeedbackServer/fsadmin.aspx?fscontrol=respondentReport&surveyid=63&voterid=45039&readonly=1&nomenu=1> (16.02.2017)

*The national definition of hazardous waste is in accordance with article Paragraph 1, point 33 of the Act on Sustainable Waste Management. Pursuant to it, hazardous waste means waste which displays one or more of the hazardous properties set out in Annex III to the present Act. Annex III to the present Act is in line with Annex III of the Directive 2008/98/EC.*²²

In this case there are also additional types of waste regarded as hazardous. The list; however, is strikingly shorter than in the report from 2012. What happened to the list?

*B1090, B4030, all types of batteries are considered hazardous waste in Croatia according to Ordinance on the waste catalogue (Official Gazette no. 90/15).*²³

Some additional aspects could be mentioned. The first is the question regarding disposal and/or recovery facilities. In the 2001 report, none of them are actually visible. A decade later, however, it clearly stated that Croatia's authorized facilities treat hazardous wastes generated only in the territory of Croatia. The following list is related to the 2012 report:

[Croatia Part I 2014 \(COMPANIES WHICH HAVE PERMITS FOR RECOVERY ANDOR DISPOSAL\).docx](#)

A similar list is repeated in the last report.

[Croatia Part I 2015 \(COMPANIES WHICH HAVE PERMITS FOR RECOVERY ANDOR DISPOSAL\).docx](#)

There is no information about bilateral / multilateral agreements in any of the above-considered reports. This is unusual, especially when we consider that Croatia is a member state of the EU.²⁴

²² "Croatia", *Basel Convention National Reports – Year 2015* <http://ers.basel.int/ERS-Extended/FeedbackServer/fsadmin.aspx?fscontrol=respondentReport&surveyid=66&voterid=48306&readonly=1&nomenu=1> (16.02.2017)

²³ Ibid.

²⁴ In fact, in the case of Czech Republic the EU is listed in this group.

Conclusion

Finally, there are some points that should be emphasized and further analysis would be interesting for future studies.

1. We were able to detect an actual change in the phrasing used in the different reports. This is especially true for the definitions of hazardous waste given by the country.
2. We could argue that the “road-to-EU” has played an important role in the transformation of Croatia’s involvement in Basel. However, it is still an open question of how much does this really reflect an effective involvement of Croatia in the right management of hazardous waste.
3. Thus, it is important to understand whether Croatia is a state with enough political strength in order to operate with effectiveness and following Basel’s guidelines.
4. Although Croatia was considered a country in 1992 (officially in 1994) as showing the accordance with Basel, we were able to monitor some improvements, i.e. further aspects that were not previously considered.
5. From the report of 2012 we can also see that Croatia implemented a few recycle and recover facilities inside its territory, with a specified number of companies that are allowed to operate in that field.
6. What happened to the list of additional wastes regarded as hazardous (from the report of 2012)? Did someone lobby against the government? Or are those wastes already included in the EU regulation?
7. According to the reports, it did not seem that Croatia had signed any other bilateral / multilateral agreement; however, we would expect to see an agreement with the EU.
8. For further research, it would be interesting to investigate the movement of hazardous waste during the war. A civil war such as the one that affected former Yugoslavia could have generated numerous illegal activities that are yet to be discovered. This also affects the period *post bellum*.
9. Considering that Croatia’s economy relies heavily on tourism, which represents its biggest source of income (around 7 billion dollars per year), it would be very interesting to analyze the overall impact of tourism on the environment and especially on the production/movement of hazardous waste.

Further readings

Major Croatian companies - Official site of the Croatian government:

<http://croatia.eu/article.php?lang=2&id=33>

Ministry of Ministry of Environmental Protection, Physical Planning and Construction:

<http://www.mzoip.hr/en/>

Assessment of separate collection schemes in the 28 capitals of the European Union – Final Report:

http://ec.europa.eu/environment/waste/studies/pdf/Separate%20collection_Final%20Report.pdf

Plan for waste management (2015-2021) – in Croatian:

http://www.mzoip.hr/doc/nacrt_plana_gospodarenja_otpadom_republike_hrvatske_za_razdoblje_2015-2021.pdf

Recycling on Krk Island – in Croatian:

<http://www.ekootokkrk.hr/reciklazna-dvorista>

Czech Republic



Figure 3 Google Maps

https://www.google.de/maps?rlz=1C1CHXU_deDE580DE580&espv=2&q=czech+republic&bav=on.2,or.&bvm=bv.147448319,d.bGg&biw=1680&bih=920&dpr=1&ion=1&sns=1&um=1&ie=UTF-8&sa=X&sqi=2&ved=0ahUKEwj3oJbRIJfSAhWEvhQKHeOCDMEQ_AUIBigB (17.02.2017)

Basic Facts

Czech Republic was formerly part of the Republic of Czechoslovakia, the socialist state that dissolved in 1993. Located in Central Europe, the country covers a surface area of 78,870 km² and is bordered by Germany, Poland, Slovakia and Austria.²⁵ Historically, it contains the three provinces of Bohemia, Moravia and part of Silesia. From the sixteenth century, the lands of the Bohemian Crown have been part of the Habsburg Monarchy, gaining their independence only after the Great War (1918). Following the Nazi invasion (1938-1945), the country of Czechoslovakia implemented a socialist form of government with a predominant role of the state and the Communist party.

²⁵ World Data Bank <http://databank.worldbank.org/data/reports.aspx?source=2&country=CZE> (17.02.2017)

From the beginning of the Industrial Revolution in the Habsburg Monarchy (from 1867 Austro-Hungary), the region of Bohemia has been highly industrialized (standing for almost 70% of the monarchy's machine and mining production).²⁶ Bohemia's high industrialization, together with its large quantities of natural resources, was arguably one of Hitler's primary reasons of interest in Czechoslovakia. During the country's socialist period following World War II, Czechoslovakia continued to be a strong industrial producer (primarily in machine engineering and mining). In 1955, it joined the Warsaw Pact, a military defense treaty among the Soviet Union and seven of its satellite countries. The country's role inside the Warsaw Pact, however, was far from easy. In the summer of 1968, Warsaw Pact troops invaded the country and the capital Prague. The military intervention successfully stopped Alexander Dubcek's Prague Spring liberalization reforms that had aimed for stronger democratization and de-centralization of the country. While the military intervention reinstated the authority of the authoritarian wing of the Communist Party of Czechoslovakia, it also gave rise to an underground dissident movement, whose leader, Václav Havel, became the first president of a non-communist Czechoslovakia after the fall of the Berlin Wall in 1989.

In 1993, Czechoslovakia dissolved from Slovakia and the modern nation-state of the Czech Republic was inaugurated.²⁷ In 2004, Czech Republic joined the EU, an event that brought a great boost to its economy and cultural integration to Western Europe. In the last years, Prague has become one of the most attractive touristic destinations in Europe. Although right now it has a social-democratic government, Czech Republic together with Slovakia, Poland and Hungary are among the strongest opponents to the EU's migrant policy.

There have not been dramatic changes in the overall population of Czech Republic (the difference is in roughly +/- 200.000 citizens). The graphic shows that there has been a slight decline in the 1990s, followed by a steady growth.

²⁶ Ivana Jenerálová, "Main pillars of Czech industry", *Hello Czech Republic* <http://www.czech.cz/en/Business/Economic-facts/Main-pillars-of-Czech-industry> (17.02.2017)

²⁷ "Czech Republic", *Encyclopedia Britannica* <https://www.britannica.com/place/Czech-Republic> (06.03.2017).

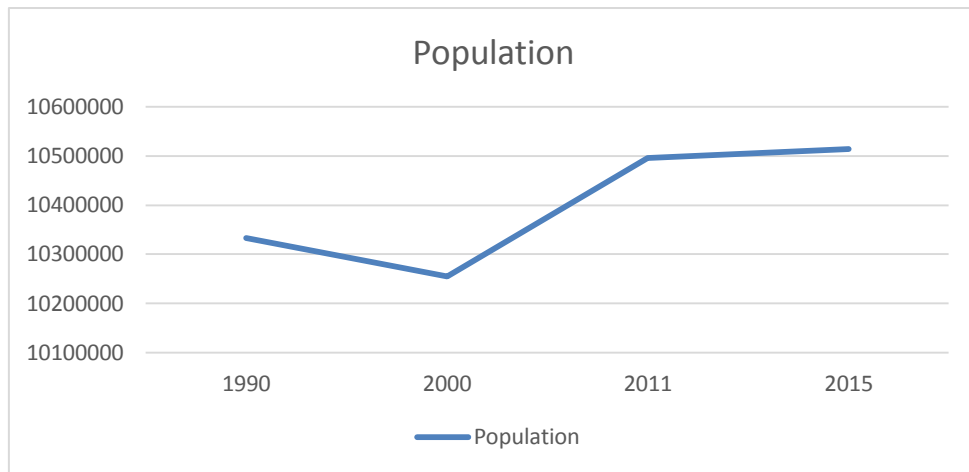


Figure 2 World Data Bank <http://databank.worldbank.org/data/reports.aspx?source=2&country=CZE>
(17.02.2017)

The country has a strong industry in machine and automotive engineering, mining, chemical and foodstuff. Official data shows that industry stands at 35% of the whole percentage share (62.3% services, 2.8% agriculture) and that over 40% of all economically active citizens' work in the industrial sector. The engineering sector is especially important because the automotive industry, which also has a competitive export. In 2010, according to the Czech Statistical Office, 54.2% of export was from products of the automotive industry (Skoda).²⁸

The World Bank lists Czech Republic among the countries with high GDP income. The country enjoyed an economic boom after becoming an independent state. The growth has been particularly sharp in the early 2000's. As in most countries of the developed world, the economic crisis of 2008 left deep wounds in their economy, which started to recover in the last two years. In 2015, it had registered a stable annual growth of 4.2%.²⁹

²⁸ Ivana Jenerálová, "Main pillars of Czech industry", *Hello Czech Republic* <http://www.czech.cz/en/Business/Economic-facts/Main-pillars-of-Czech-industry> (17.02.2017)

²⁹ World Data Bank <http://databank.worldbank.org/data/reports.aspx?source=2&country=CZE> (17.02.2017)

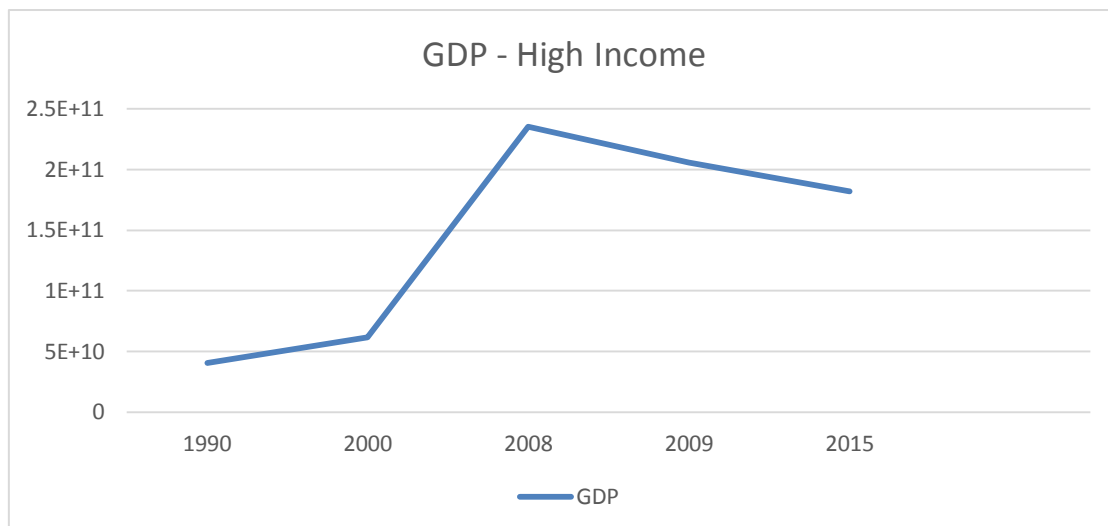


Figure 3 Czech Republic joined the EU in 2004 (together with Latvia, Lithuania, Malta, Poland, Slovakia and Slovenia).³⁰

Czech Republic and Basel³¹

Private companies under the supervision of Regional authorities administer waste management in Czech Republic.³² In 2002, the country produced most of its waste in the industrial sector (9,601 tons p.a.) followed by the energy production sector (6,382 tons p.a.).³³ Official data from the EU (2015) showed that the capital Prague is above EU's average in the percentage of waste recycled. The following figure shows the overall recycling rate of five different wastes (1) paper/cardboard, 2) glass, 3) plastic, 4) metal, and 5) bio-waste) using the combination of five collection systems. These five fractions are 1) door-to-door collection, 2) single-stream door-to-door collection, 3) co-mingled door-to-door collection, 4) bring-point system, 5) civic amenity sites.³⁴ Around 30% of all the waste produced in the city of Prague is successfully collected and then recycled:

³⁰ "Further Expansion", *European Union* https://europa.eu/european-union/about-eu/history/2000-2009_en (17.02.2017)

³¹ When not stated differently, all the information has been taken from the official Basel Convention National Reports.

³² For more information visit the official Waste Act of the Czech Republic

[http://www.mzp.cz/C125750E003B698B/en/waste_management/\\$FILE/Waste%20Act_1852001.pdf](http://www.mzp.cz/C125750E003B698B/en/waste_management/$FILE/Waste%20Act_1852001.pdf) (17.02.2017)

³³ *Waste Management Plan (2003-2013)*, 8.

[http://www.mzp.cz/C125750E003B698B/en/waste/\\$FILE/waste_management_plan.pdf](http://www.mzp.cz/C125750E003B698B/en/waste/$FILE/waste_management_plan.pdf) (20.02.2017) Unfortunately, statistics are not very recent and we do not have data from the period after 2002.

³⁴ *Assessment of Separate Collection Schemes in the 28 Capitals of the EU. Final Report.*, 11-12.

http://ec.europa.eu/environment/waste/studies/pdf/Separate%20collection_Final%20Report.pdf (06.03.2017)

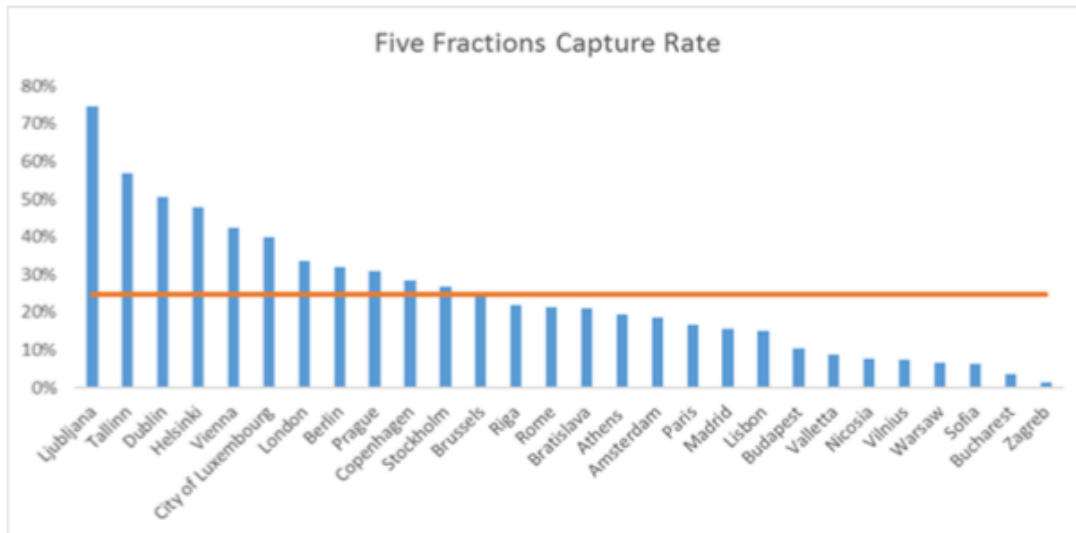


Figure 4 Assessment of separate collection schemes in the 28 capitals of the EU.

http://ec.europa.eu/environment/waste/studies/pdf/Separate%20collection_Final%20Report.pdf (16.02.2017)

Czech Republic formally accessed the Basel Convention on September 30, 1993.³⁵

The designed competent authority to the Basel Convention is the Ministry of Environment—Waste Management Department. We listed Czech Republic among the countries that, from the beginning, had a definition which was in accordance with the Basel Convention. The first report stated:

*The categorization of wastes is performed in accordance with the measure of the Federal Committee of the Environment Promulgating the Categorization and Catalogue of Wastes, Volume 69/1991 S.B. Wastes are classified as "special" and "other". Special waste, which is a pollutant or which has significantly hazardous properties (sic) for human beings, or for the environment, can also be classified as "hazardous" waste. There is no full conformity among hazardous waste in the Czech catalogue and the Basel Convention (Annexes I and II). Therefore, whenever required, a transfer table is used.*³⁶

In 2001, we can see the definition has evolved in accordance to the directives of the EU (although the Czech Republic was not yet an EU member). As observed in the case of Croatia, this is due to the strict role of the EU legislation in order to become a member state.

Act on Waste No. 185/2001 Coll., Decree of the Ministry of the Environment No. 381/2001 Coll. Hazardous waste means waste featured on the List of hazardous waste and any other waste displaying one or more hazardous characteristics. List of hazardous wastes and the hazardous characteristics corresponds to the respective EU legislation. The above-mentioned definition is used

³⁵ "Parties to the Basel Convention", *Basel Convention*
<http://www.basel.int/Countries/StatusofRatifications/PartiesSignatories/tabid/4499/Default.aspx> (17.02.2017)

³⁶ "Czech Republic", *Compilation of country fact sheets* (Geneva: SBC, 1996), 27.

for the purposes of implementing the Basel Convention amendment (ban on export for recovery to countries to which the OECD Decision does not apply). The control procedures for other transboundary movements of waste are not based on the definition of hazardous waste, but on the system established by the respective EU legislation (Council Regulation 259/93).³⁷

The report also showed that Czech Republic considers additional wastes as hazardous that are not recognized by the Basel agreement. Those wastes; however, are not listed in the report.

Nevertheless, we can find the answer in the country's Waste Act from 2001 (still used in official reports). The question regarding hazardous wastes is discussed in elaborate detail. First, we learn that hazardous waste is defined in an "empirical" way. The proprieties that define hazardous waste are described in *Figure 5*.

Code	Hazardous property of waste
H1	Explosiveness
H2	Oxidative ability
H3-A	High inflammability
H3-B	Inflammability
H4	Iritability
H5	Harmfulness to human health
H6	Toxicity
H7	Carcinogenicity
H8	Corrosiveness
H9	Infectiousity
H10	Teratogenity
H11	Mutagenity
H12	Ability to release very toxic or toxic gases in contact with water, air, or acids
H13	Ability to release hazardous substances in the environment during or after disposal
H14	Ecotoxicity

Figure 4 Waste Act, 74

[http://www.mzp.cz/C125750E003B698B/en/waste_management/\\$FILE/Waste%20Act_1852001.pdf](http://www.mzp.cz/C125750E003B698B/en/waste_management/$FILE/Waste%20Act_1852001.pdf) (17.02.2017)

³⁷ "Czech Republic", *Basel Convention National Reports – Year 2001* <http://ers.basel.int/ERS-Extended/FeedbackServer/fsadmin.aspx?fscontrol=respondentReport&surveyid=59&voterid=40965&readonly=1&nomenu=1> (17.02.2017)

Additionally, specific chemical components are listed that define the hazardousness of waste.

Code	Component rendering waste hazardous pursuant to this Act
C1	beryllium; beryllium compounds
C2	vanadium compounds
C3	hexavalent chromium compounds (VI)
C4	cobalt compounds
C5	nickel compounds
C6	copper compounds
C7	zinc compounds
C8	arsenic; arsenic compounds
C9	selenium; selenium compounds
C10	silver compounds
C11	cadmium; cadmium compounds
C12	tin compounds
C13	antimony; antimony compounds
C14	tellurium; tellurium compounds
C15	barium compounds, except for barium sulphate
C16	mercury; mercury compounds
C17	thallium; thallium compounds
C18	lead; lead compounds
C19	inorganic sulphides
C20	inorganic fluorine compounds, except for calcium fluoride
C21	inorganic cyanides
C22	the following alkaline metals and alkaline earth metals: lithium, sodium, potassium, calcium, magnesium in uncombined form
C23	acidic solutions or acids in solid form
C24	basic solutions or bases in solid form
C25	asbestos (dust and fibres)
C26	phosphorus; phosphorus compounds, except for mineral phosphates
C27	metal carbonyls
C28	Peroxides
C29	Chlorates
C30	Perchlorates
C31	Azides
C32	PCBs and/or PCTs
C33	pharmaceutical or veterinary preparations
C34	biocides and phyto-pharmaceutical preparations (e.g. pesticides, etc.)
C35	infectious substances
C36	Creosotes
C37	isocyanates; thiocyanates
C38	organic cyanides (e.g. nitriles, etc.)
C39	phenols; phenol compounds
C40	halogenated solvents
C41	organic solvents, except for halogenated solvents
C42	organohalogen compounds, except for inert polymerized materials and other substances included in this Annex
C43	aromatic compounds; polycyclic and heterocyclic organic compounds
C44	aliphatic amines
C45	aromatic amines
C46	Ethers
C47	substances of explosive nature, except for substances included elsewhere in this Annex
C48	organic sulphur compounds
C49	any polychlorinated dibenzo-furan congener
C50	any polychlorinated dibenzo-p-dioxine congener
C51	hydrocarbons and their compounds with oxygen, nitrogen and/or sulphur, unless specified elsewhere in this Annex

Figure 5 Ibid., 77-78.

It is clear that the sectors of energy production, as well as industry and waste production, are the main sources of Czech Republic’s hazardous waste. Here are two charts; the first one displays the overall production of hazardous waste divided by sectors; the second one shows the main groups of industrial hazardous waste.

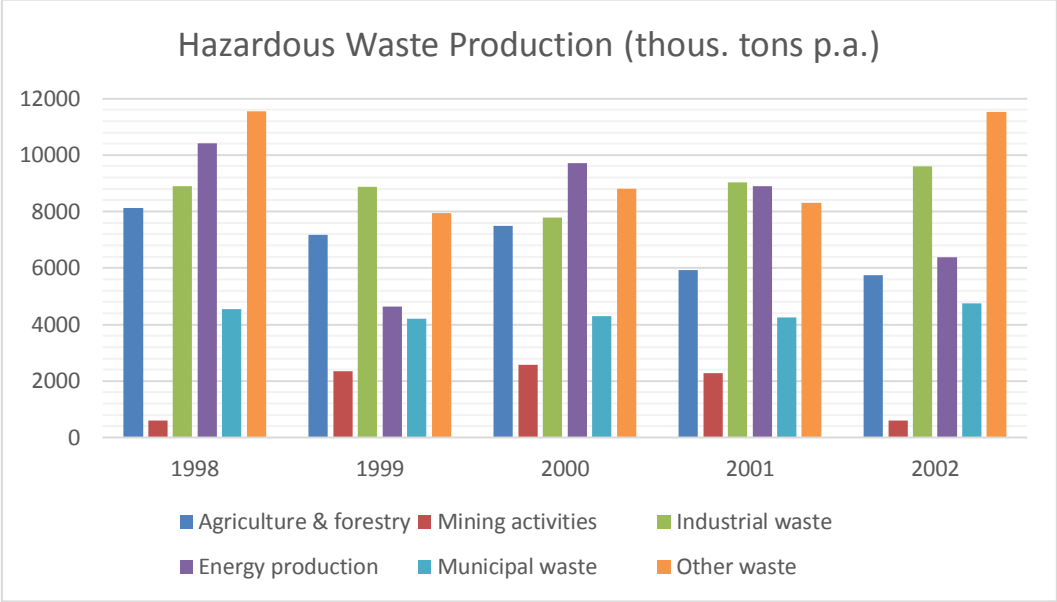


Figure 6 Waste Management Plan

[http://www.mzp.cz/C125750E003B698B/en/waste/\\$FILE/waste_management_plan.pdf](http://www.mzp.cz/C125750E003B698B/en/waste/$FILE/waste_management_plan.pdf) (17.02.2017).

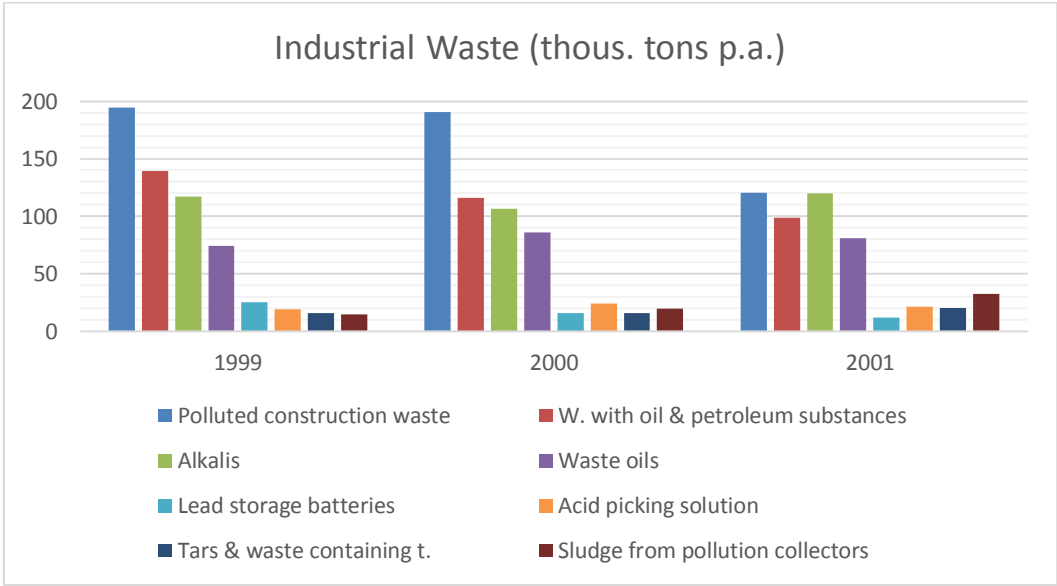


Figure 7 Ibid., 9

After joining the EU, the report's text was reformulated. This is shown in the report from 2012 which clearly refers to both Basel's and EU's regulations.

Act on Waste No. 185/2001 Coll., as amended, Decrees of the Ministry of the Environment No. 376/2001 Coll. and 381/2001 Coll., as amended.

Hazardous waste means waste which displays one or more of the hazardous properties listed in Annex 2 to the Act. Annex 2 to the Act is identical with Annex III of Directive 2008/98/EC of the European Parliament and of the Council on waste.

The control procedures for other transboundary movements of wastes destined for recovery are not based on the definition of hazardous waste, but on a specific listing system established by EU Regulation (EC) 1013/2006 on shipments of waste. The listing system consists of two lists of waste. The first one (Annex III to the EU Regulation 1013/2006 - Green listed waste) containing wastes not requiring notification and prior consent consists of wastes listed in Annex IX to the Basel Convention supplemented by several other non-hazardous wastes. The second one (Annex IV to the EU Regulation 1013/2006 - Amber listed waste) containing wastes requiring notification and prior consent consists of wastes listed in Annex VIII and II to the Basel Convention supplemented by several other not necessarily hazardous wastes. Transboundary movements of all wastes (both hazardous and non-hazardous) destined for final disposal are either prohibited or subject to notification and prior consent.³⁸

The list of the other wastes regarded as hazardous follows the legislation of the EU, which is stricter than Basel's.

Hazardous wastes in the EU are governed by Directive 2008/98/EC of the European Parliament and of the Council on waste.

The EU list of properties of wastes which render them hazardous is broader than the list of hazardous characteristics contained in Annex III to the Basel Convention. It contains e.g. irritant, harmful, teratogenic or mutagenic wastes.

By the EU definition of hazardous waste more wastes is covered in comparison with wastes covered by Article 1(1)a of the Basel Convention. Consequently transboundary movements of additional wastes are regulated.

³⁸ "Czech Republic", *Basel Convention National Reports – Year 2012* <http://ers.basel.int/ERS-Extended/FeedbackServer/fsadmin.aspx?fscontrol=respondentReport&surveyid=63&voterid=45042&readonly=1&nomenu=1> (17.02.2017)

*All the wastes subject to control under Regulation (EC) No. 1013/2006 of the European Parliament and of the Council of 14 June 2006 on shipments of waste (applicable from 12 July 2007) are controlled.*³⁹

In the last report from 2015, all of the information was copied and pasted. There is no change from the report of 2012.

Both the reports from 2001 and 2012 also list the specific measurements for the reduction and/or elimination of hazardous waste.

(i) National strategies/policies

State Environmental Policy 2012-2020; National Environmental Management Programme; National Eco-labelling Programme; and National Programme of Cleaner Production; Green public procurement; the Czech Republic Strategy for Sustainable Development.

(ii) Legislation, regulations and guidelines

Act on Waste No. 185/2001 Coll. as amended.

Waste Management Plan of the Czech Republic (Government Decree No. 197/2003 Coll. as amended).

Regional Waste Management Plans for all 14 regions of the Czech Republic.

National Implementation Plan of the Stockholm Convention on Persistent Organic Pollutants.

(iii) Economic instruments/initiatives

Support of waste management projects from the public budget within various programmes.

Support from the funds of the European Union within various programmes of the European Commission.

Fee for landfill of waste (basic component of fee – for depositing of waste, risk component of fee – for depositing of hazardous waste).

Financial reserve for reclamation of landfills.

(iv) Measures taken by industries/waste generators

Implementation of cleaner production projects.

Implementation of environmental management systems (EMS/EMAS).

³⁹ Ibid.

*Implementation of the National Eco-labelling Programme.*⁴⁰

Moreover, in the report from 2012 we can read an additional measurement, listed as:

(v) Others:

Voluntary agreements between Ministry of the Environment of the Czech Republic and the following partners:

Confederation of Industry of the Czech Republic and Czech Business Council for Sustainable Development

Association of Entrepreneurs in Building Industries and Association for Eco-building

Economic Chamber (common section for the environment at the economic chamber)

*Union of Towns and Municipalities of the Czech Republic.*⁴¹

Unfortunately, no list of disposal facilities is provided. Instead, it suggests visiting the Statistical Environmental Yearbooks of the Czech Republic (however, it contains data only from year 2005 and it is not very easy to consult). A comprehension of why more practical information was not provided would be a significant addition to this study. ?

Regarding bilateral/multilateral agreements in 2001, the documents mentioned the OECD (Organisation for Economic Co-operation and Development) with the *OECD Decision C(92)39/FINAL on the Control of Transfrontier Movements of Wastes Destined for Recovery Operations (30 March 1992)*.

In the report from 2012 the agreement with other EU countries is also listed, as well as the *Regulation 1013/2006 on shipments of waste.*⁴²

⁴⁰ Ibid.

⁴¹ Ibid.

⁴² Ibid.

Conclusion

Finally, there are some points that should be emphasized and would be interesting for further analysis.

1. Czech Republic's reports have evolved since 1994, and have become more and more detailed; however, since 2012, the reports have been copied and pasted. Does this mean that after they joined the EU there is no further incentive to change?
2. It is clear that the country refers much more to the EU rather than Basel. The EU's regulations are far stricter than Basel's.
3. It remains unclear why Czech Republic has not offered a list of disposal facilities inside its territory. It might not have significance; however, does create some unwanted shadows behind their reports.
4. An interesting point for further research would be to compare the regulations of the EU and Basel. This would give a clearer understanding about the country's involvement in the process of correct hazardous waste disposal.
5. Since Czech Republic has such a strong industrial output, it is crucial to investigate the role of industry in the overall production of hazardous waste. This means, for example, to describe both the typology of waste that is produced, and its amount throughout the years, in more detail.
6. Thus, we would be able to understand (at least to theorize) if anyone lobbied against the introduction of specific regulations.
7. As it has been the case for Croatia, it would be interesting to learn more about the immediate period after the dissolution of Czechoslovakia. A political vacuum can always lead to illegal activities.

Further readings

Main pillars of Czech economy

<http://www.czech.cz/en/Business/Economic-facts/Main-pillars-of-Czech-industry>

Waste Act

[http://www.mzp.cz/C125750E003B698B/en/waste_management/\\$FILE/Waste%20Act_1852001.pdf](http://www.mzp.cz/C125750E003B698B/en/waste_management/$FILE/Waste%20Act_1852001.pdf)

Waste Management Plan (2003-2013)

[http://www.mzp.cz/C125750E003B698B/en/waste/\\$FILE/waste_management_plan.pdf](http://www.mzp.cz/C125750E003B698B/en/waste/$FILE/waste_management_plan.pdf)

Ministry of the Environment <http://www.mzp.cz/en>

Ministry of the Environment – Waste Management http://www.mzp.cz/en/waste_management

Assessment of separate collection schemes in the 28 capitals of the European Union – Final Report:

http://ec.europa.eu/environment/waste/studies/pdf/Separate%20collection_Final%20Report.pdf

Peru



Figure 1: Map of Peru, from Google Maps

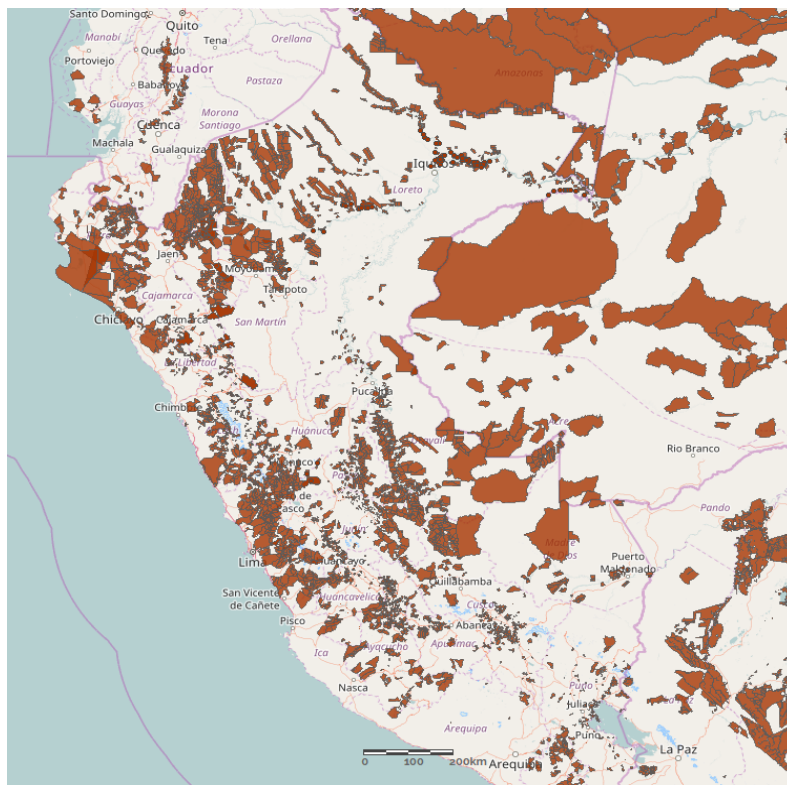


Figure 2: Landmark, Global Platform of Indigenous and Community lands, Formal Documentation of Indigenous and Community Lands

Basic Facts and History

From 1990 onwards: the Fujimori Era until today

Peru, the third-largest country in South America, is located in the western part of the continent and borders Ecuador and Colombia to the north, Brazil to the east, Bolivia to the southeast, and Chile to the south, and the west of the country borders the Pacific Ocean. Peru has a surface area of 1,285,215.60 km².⁴³ There are three distinct geographical regions: the *Costa*, a narrow coastal strip, the *Sierra*, the wide Andean mountain range, and the *Selva*, the Amazon rainforest (which covers 55.7% of the country).⁴⁴ The coastal strip is mainly deserted. Peru consists of 25 departments. In the departments of Apurimac, Ayacucho, Cuzco, Huancavelica, and Puno, all situated in the Andes, indigenous Peruvians make up the majority of the population.⁴⁵

The 51 indigenous groups, including the Achuar, Aguaruna, Aymara, Ashaninka, Shipibo, Huambisa, Quechua (total of 8 Mio. to be found in several countries in South America), and Aymara, make up 45% of the Peruvian population. Minorities such as Afro-Peruvians, Chinese Peruvians, and Japanese Peruvians, comprise 3%.⁴⁶

In 1990, Peru faced new elections after years of inflation, a violent guerilla war launched by the insurgent organization Shining Path, and problems associated with the international illegal drug trade. Neoliberal agricultural engineer Alberto Fujimori gained power, defeating the Democratic Front movement, and began his controversial, arguably dictatorial rule. During his presidency, Peru faced severe austerity and increasing privatization as inflation reached 400%.⁴⁷ In 1992, Fujimori staged a self-coup and dissolved the government. Consequently, a new constitution was drafted a year later. Although the government was successful in rescuing the Peruvian economy, it became known for corruption, treason, and human rights abuses. Fujimori “reduced the status of the international treaties concerning human rights and rolled back indigenous land rights by removing the inalienability and indivisibility of indigenous communal lands. Seeking to encourage foreign investment and increase the exploitation of Peru's natural resources, he granted a large number of licenses to forestry and oil companies, which have had a particularly negative impact on indigenous

⁴³ “The World Bank.” 2016 The World Bank Group, accessed 31 March 2017, <http://data.worldbank.org/indicator/AG.SRF.TOTL.K2?locations=PE>.

⁴⁴ Beatriz De La Vega, “Peru’s oil & gas investment guide 2015/2016.” EY. Peru (February 2015): 11.

⁴⁵ “Refworld, World Directory of Minorities and Indigenous Peoples - Peru,” Minority Rights Group International, UNHCR 2017, <http://www.refworld.org/docid/4954ce0b2.html>.

⁴⁶ Ibid. and “The World Factbook,” CIA, accessed 31 March 2017, <https://www.cia.gov/library/publications/the-world-factbook/geos/pe.html>.

⁴⁷ Javier Pulgar-Vidal, John Preston Moore, “Peru,” Encyclopedia Britannica, Encyclopedia Britannica, inc., Dec. 22 2016, accessed 31 March 2017, <https://www.britannica.com/place/Peru/The-second-junta>.

communities living in the Amazon basin.”⁴⁸ Fujimori’s presidency ended in late 2000 when he had to flee the country.

In 1998, Peru agreed on a border with Ecuador, resolving a longstanding territorial dispute.

The year 2001 brought change. Alejandro Toledo became the first democratically elected president of indigenous descent (Quechua). Despite his popularity amongst the Peruvian people, the country still had to face economic and political difficulties. A state of emergency was declared in 2002.⁴⁹

In 2009, indigenous people protested against land ownership laws that opened up oil and gas resources to foreign companies. Prime Minister Yehude Simon resigned due to the violent protests.⁵⁰

In 2012, a state of emergency was declared in the northern provinces to subdue violent protests against the Conga mine project, which opponents argued would cause pollution and destroy water supplies. The state of emergency was allowed to lapse in September but security forces remained on alert.⁵¹

On 10 August 2016, Peru approved the Minamata Convention Implementation Plan and implemented its requirements on 19 January 2017, in order “to protect the human health and the environment from anthropogenic emissions and releases of mercury and mercury compounds.”⁵²

On 1 December 2016, a return system for used plastic containers, cans, and cartons was proposed in Peru.⁵³

On 4 January 2017, Peru introduced a comprehensive new solid waste law.⁵⁴ At present, Peru wants to transform its waste sector. Since 2012, 85% of municipal solid waste has been collected in the country. There are currently 10 landfills operating in Peru and the disposal rate in landfills is approximately 42% for non-recoverable waste. Peru is actively seeking to create additional landfill capacity to meet basic disposal requirements and has set a goal of 100% adequate treatment of waste via the 3Rs (Reduce, Recycling, Reuse) and sanitary landfills by 2021. As far as existing

⁴⁸“Refworld, World Directory of Minorities and Indigenous Peoples - Peru.”

⁴⁹Christine Hunefeldt, “New Structures and Fujimori (1990–2003),” in *A Brief History of Peru* (New York, NY: Lexington Associates, 2004), 251–66.

⁵⁰“Peru History Timeline,” worldatlas.com, accessed 31 March 2017, <http://www.worldatlas.com/webimage/countrys/samerica/peru/petimeline.htm#page>.

⁵¹ “Peru profile - Timeline,” BBC, 28 December 2016, <http://www.bbc.com/news/world-latin-america-19928907>.

⁵² “Minamata Convention Mercury,” UNEP, accessed 31 March 2017, <http://mercuryconvention.org>.

⁵³ “Latin American Environmental Regulatory Tracker, Beveridge & Diamond PC,” 2016–2017 Globe Business Media Group, December 1 2016, accessed 31 March 2017, <http://www.lexology.com/library/detail.aspx?g=2a136e9e-af8d-4c6e-b0ed-e1ec35968c42>.

⁵⁴ “Environmental Intelligence Analysis, Regulatory Alerts,” HIS, inc., 2014, accessed 31 March 2017, http://www.eiatrack.org/search/search-site.php?q_e=Peru.

alternative treatment across the country is concerned, approximately 14% of recyclable waste is actually recycled (via both formal and informal methods). Therefore, only 14% of waste capable of being recycled (i.e., plastic, glass, paper, etc.) is recovered, equivalent to 2.5% of total solid waste. Additionally, 53% of the nation's municipal solid waste (MSW) is organic, but less than 1% of total MSW is treated with composting operations, most of which are associated with municipal nursery operations.⁵⁵

Economy

The Peruvian Miracle: from 1991 to today

Over the last 10 years, the accumulated growth of GDP per capita has been the strongest since 1990. Because of this, the term “the Peruvian miracle” has been coined to describe Peru's extraordinary economic performance. Moreover, this phenomenon has also occurred across the whole continent of South America. Hence, there is a “South American miracle” as well.⁵⁶ Peru's economy faced several significant changes, such as free market reforms (legalization of parts of the informal sector; privatization in the mining and electricity industries). As a result of the fact that Peru experienced a growth spurt from 1994 to 1997 due to high levels of foreign investment and the cooperation between the Fujimori government and the International Monetary Fund and World Bank, inflation could be diminished at the same time. In 1998 and 1999, El Niño's impact on agriculture, the financial crisis in Asia, and instability in Brazilian markets was a new backlash to Peru's economic growth.

In 2006, the government had enacted measures that allowed the economy to improve through increasing investments, expanding production and exports. Half of the exports being raw materials and agro-industrial products and the other half being non-traditional exports like clothing, electronics or machinery. It is expected that by the end of the decade, investment in the mining industry will make up a total of US\$65 billion, US\$20 billion in energy and petroleum, US\$12 billion for commerce, US\$18 billion for agricultural industries, and US\$15 billion for tourism.⁵⁷

⁵⁵According to “Peru Solid Waste NAMA - Program for supporting up-scaled mitigation action in Peru's solid waste sector, Concept Note,” Ministerio del Ambiente Perú, 16 January 2014, https://www.nefco.org/sites/defco.org/files/pdf-files/7_peru_solid_waste_nama_concept_note.pdf.

⁵⁶Waldo Mendoza Bellido, “Peruvian Miracle: Good Luck or Good Policies?,” Departamento de Economía – Pontificia Universidad Católica del Perú, December 2013.

⁵⁷“Economy of Peru,” Wikipedia, last modified on 29 March 2017, accessed 31 March 2017, https://en.wikipedia.org/wiki/Economy_of_Peru#1991_-_TODAY._The_Peruvian_Miracle.

Peru's development model has not changed whatsoever since 1990. Alejandro Toledo, Alan Garcia, and Ollanta Humala have not altered the “neoliberal” pro-market development model enacted by Alberto Fujimori.⁵⁸

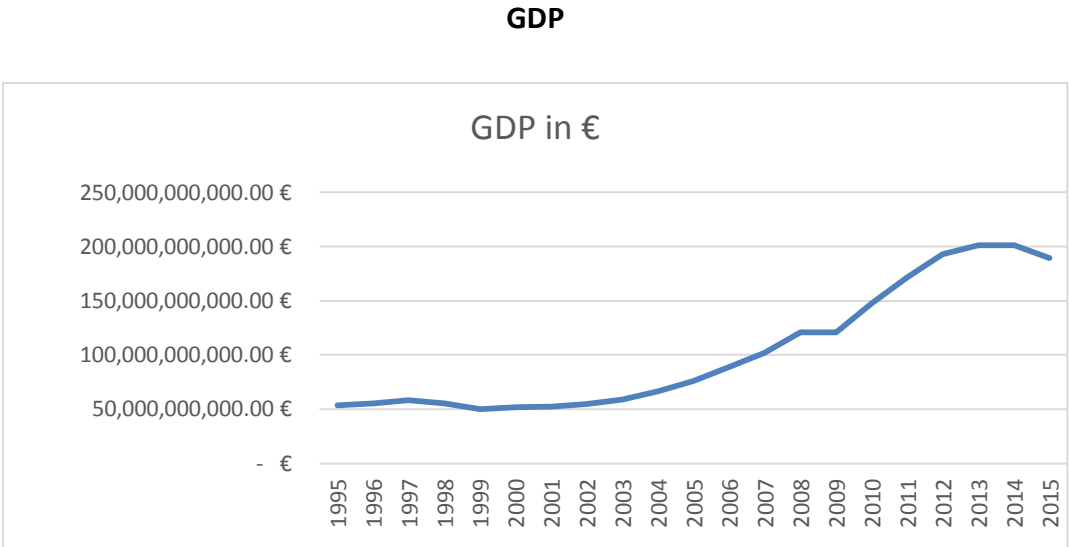


Table 1 Peru’s GDP in euros, data from World Bank Group⁵⁹“*The Peruvian economy for 2015 is expected to be the first fastest growing economy in Latin America. This is driven principally by private consumption (3.5% for 2016), public investment (10.9% for 2016) improved employment indicators, and the recovery of total exports. At the same time, the growth of fixed private investment in 2017 is expected to be situated at 4.0.*”⁶⁰

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⁵⁸ “Peruvian Miracle: Good Luck or Good Policies?”

⁵⁹ “The World Bank.” 2016 The World Bank Group, accessed 31 March 2017, <http://data.worldbank.org/indicator/NY.GDP.MKTP.CD?end=2015&locations=PE&start=1995>.

⁶⁰ “Peru’s oil & gas investment guide 2015/2016.”

⁶¹ “Peru’s oil & gas investment guide 2015/2016.”

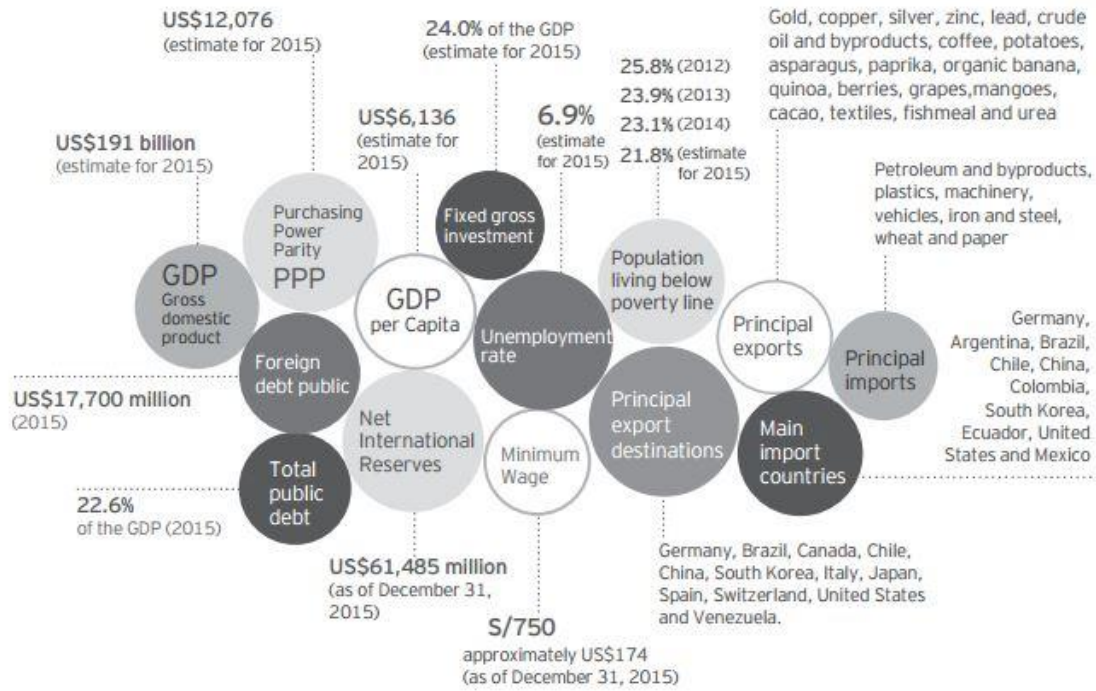


Figure 3 Peru's economic overview, from EY Peru's Oil & Gas Investment Guide 2015/2016

Industries:

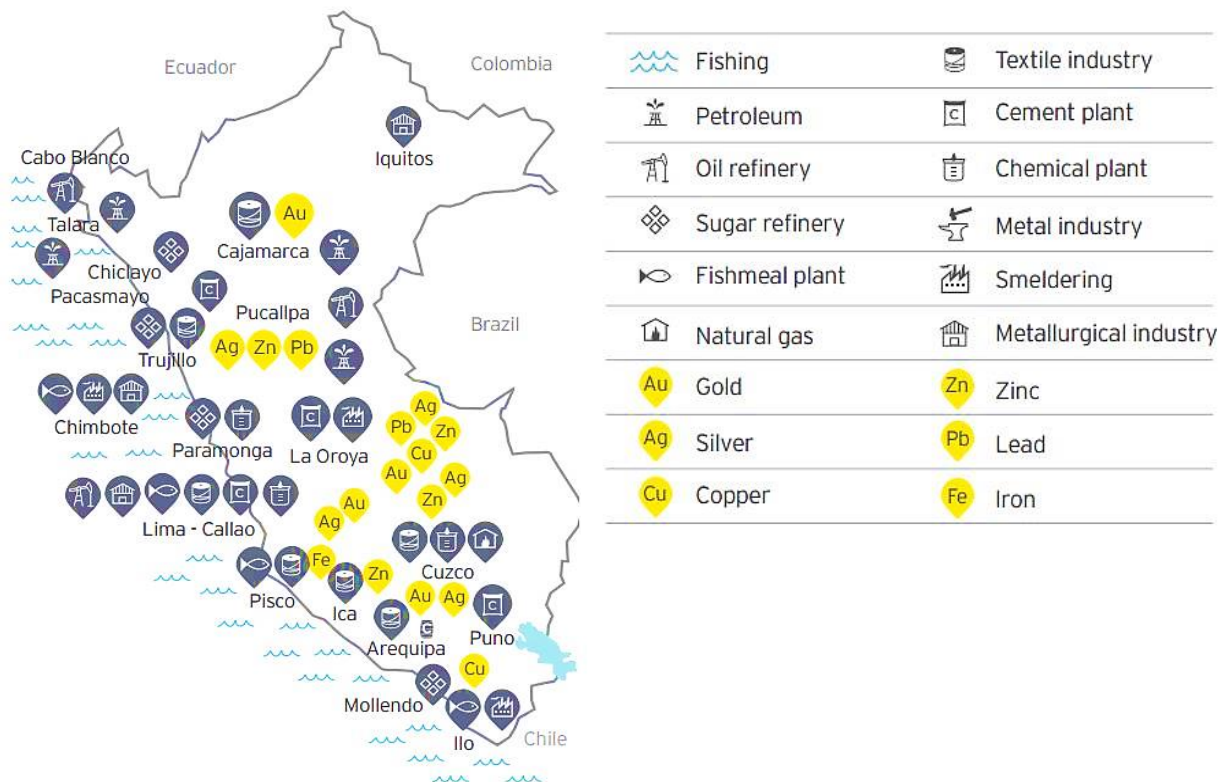


Figure 4 Peru's main economic activities, from EY Peru's Oil & Gas Investment Guide / University of Texas⁶²

⁶² Ibid.

- Mining and the refining of minerals, as well as fishing and fish processing, are Peru's major industries, followed by tourism and manufacturing. Other significant industries are steel, metal fabrication, petroleum extraction and refining, natural gas and natural gas liquefaction, cement, glass, textiles, clothing, food and drink processing, rubber, and machinery.⁶³
- Imported materials to Peru are petroleum, chemicals, plastics, machinery, vehicles, telecommunication equipment, iron, steel, paper, cotton, medicines, wheat, corn, and soybean products.
- Exported materials are chiefly copper, silver, and gold, as well as fish and other agricultural products. Other exports are timber, iron ore, coal, phosphate, potash, and natural gas.
- Natural Resources Reserve: Oil: 700 million bbl (1 January 2016 es); Natural Gas: 414.1 billion cu m (1 January 2016 es)⁶⁴

Foreign investment legislation:

"The Peruvian government is committed to pursuing an investor-friendly policy climate. It actively seeks to attract both foreign and domestic investment in all sectors of the economy. It has therefore taken the necessary steps to establish a consistent investment policy, which eliminates all obstacles for foreign investors, with the result that now Peru is considered to have one of the most open investment regimes in the world."⁶⁵

Hazardous Waste Disposal Companies:

- For Oil and refinery (Peruvian and international):⁶⁶

Spectro Scientific / Cirrus Research plc / Tanknology Inc. / OSEI - Oil Spill Eater International, Corp. (Texas) / 3E Company (California) / Anguil Environmental Systems, Inc. (Wisconsin) / ANDRITZ Separation - a division of the Andritz Group (Austria) / Solids Control Services (UK) / econ industries GmbH (Germany) / Carus Corporation (Illinois) / Focus Environmental, Inc. (Tennessee) / SCFI Group Limited (Ireland) / ERG (Air Pollution Control) Ltd (UK) / WIH Resource Group (Arizona) / Genesis

⁶³ "Major Industries of Peru," 2017 Pitlane Magazine, accessed 31 March 2017, <http://www.pitlanemagazine.com/cultures/major-industries-of-peru.html>.

⁶⁴ "The World Factbook," CIA, accessed 31 March 2017, <https://www.cia.gov/library/publications/the-world-factbook/geos/pe.html>.

⁶⁵ According to "Peru's oil & gas investment guide 2015/2016."

⁶⁶ "Hazardous Waste disposal companies in Peru," Environmental XPRT, accessed 31 March 2017, <https://www.environmental-expert.com/companies/keyword-hazardous-waste-disposal-1591/location-peru>.

Water Technologies, Inc. (Florida) / SAS Environmental Services Ltd (UK) / Inland Technology (Washington) / Progressive Technical Services Ltd (UK) / SpillFix - by American Green Ventures (North Carolina) / RLC Technologies, Inc. (Virginia) / Crowcon Detection Instruments Ltd - a Halma company (UK) / Terragon Environmental Technologies Inc. (Canada) / Oy Operative Recovery Solutions JMR Ltd (Finland)/ etc.

- For Chemicals:

Metrohm AG / Aerzener Maschinenfabrik GmbH / Spectro Scientific / Cirrus Research plc / 3E Company / Anguil Environmental Systems, Inc. / ANDRITZ Separation - a division of the the Andritz Group / Solids Control Services / econ industries GmbH / Carus Corporation / etc.

Oil companies:

Chevron Overseas Petroleum, Texaco ("Peru Accepts Chevron Bid to Explore 1.77-Million Acre Tract")⁶⁷ / Repsol (*White Book of Hydrocarbons: wish list of changes to Peru's national environmental laws in favor of the oil and gas industry, going against indigenous communities*)⁶⁸ / Perenco⁶⁹

Oil blocks in the Western Amazon:

"The oil and gas industry in Peru has evolved from an industry in decline to a major contributor to the economic growth in Peru. From 1995 to 2014, investment in the sector increased from \$147 million to \$1,190 million, which mean an increase of 800%. For years 2017/2018, it is expected that US\$2,898 million will be invested in around 15 oil and gas projects, which represents 14,2% of all the investments obtained in the sector in 2016 by 5%. [...] Currently, Peru has a hydrocarbon potential of 10,000 million barrels of oil across the country."⁷⁰ Yet the consequences of the constantly increasing exploitation of oil and natural gas in the country is a threat to the environment and its inhabitants as the following map shows:

⁶⁷ "Chevron," accessed 4 June 2017, <https://www.chevron.com/stories/peru-accepts-chevron-bid-to-explore-1-77million-acre-tract>.

⁶⁸ "Corporate Conquistadores," accessed 4 June 2017, http://democracyctr.org/dc_old/wp-content/uploads/2014/12/Corporate_Conquistadors-EN-webFINAL.pdf.

⁶⁹ "Perenco-Peru," accessed 31 March 2017, <http://www.perenco-peru.com>.

⁷⁰ Beatriz De LaVega, "Peru's Oil and Gas Investment Guide 2017 / 2018." EY. Peru. (2017): About.

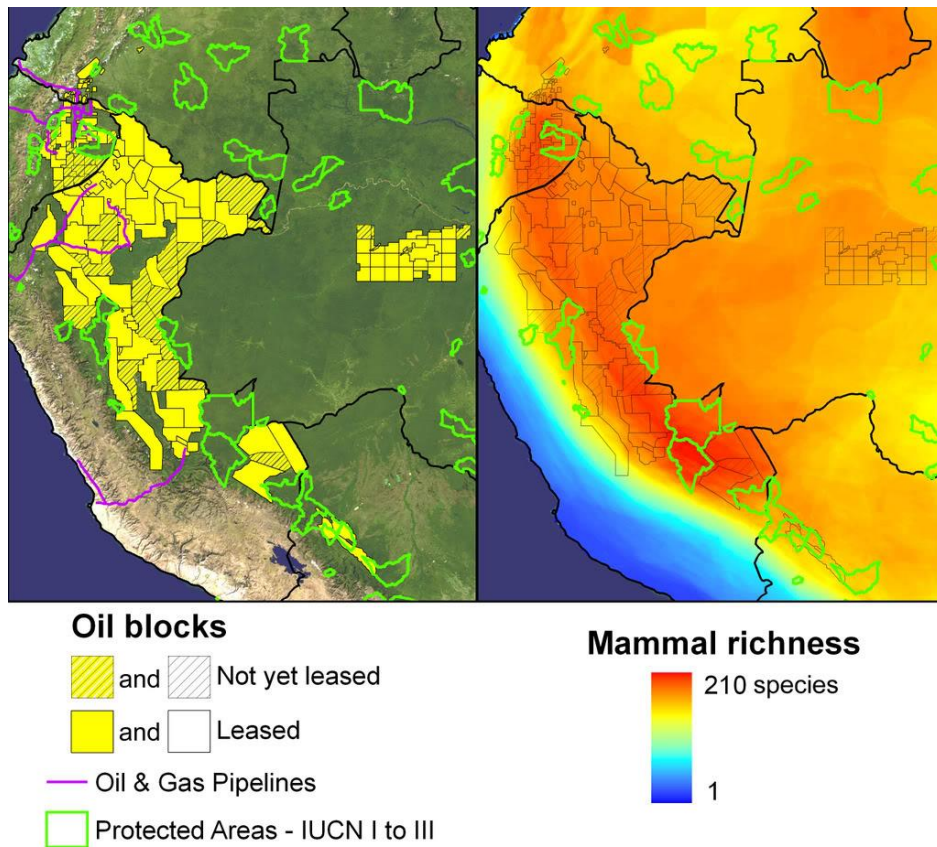


Figure 8 2017 Photobucket

Waste Disposal and Recycling:

The 1990 report “Attempt to Conduct an Industrial Wastes Inventory in Lima, Peru” makes the country’s position at the start of the 1990s clear, as far as the treatment and the disposal of hazardous waste are concerned. In 1987, Peru received its first proposal to import hazardous waste from the United States. As a consequence, the hitherto inexperienced country prohibited the importation of hazardous waste, as there were no laws whatsoever to control the entry of hazardous wastes into Peru at that time. Yet the handling and effects of hazardous substances remained problematic.

In 1988, the Toxic Substances Control Program (TSCP) and its Industrial Waste Inventory were established in order to “create sets of regulations to control toxic substances during all phases of handling and disposal,”⁷¹ as it was unclear how toxic wastes were handled in Peru. With only a few

⁷¹ Livia Benavides, “Attempt to conduct an industrial waste inventory in Lima, Peru,” Waste Management &

regulations controlling chemical substances, due to both political will and institutional budget, there was a general lack of environmental consciousness at that point in time. To form new legislation for a stricter treatment of hazardous waste, an exact analysis of Peru's situation was necessary. Hence, a survey carried out by environmental health technicians asked the 148 largest producers of hazardous waste in Peru to provide accurate information about their dynamics of industrial processes and waste handling. This proved problematic due to the questionable reliability of the data gathered from participating companies and the lack of competent observation by the surveyors. Yet, the survey revealed some problems that had to be tackled and it was therefore recommended that a "hazardous waste management program must be designed based on the analysis of the survey data."⁷²

In "LatinLawyer," the business law resource for Latin America "Environment 2012 – Peru,"⁷³ Lorenzo de la Puente and Renzo Castagnino clarify and answer in depth how far environmental regulations are embedded in the Peruvian jurisdiction and its constitution, and to what extent environmental issues are dealt with:

1. Article 2.22 of the constitution: "All persons have the right to benefit from an environment that is suitable for the development of their life." Natural resources are the country's wealth.
2. Article 67: "The government establishes the national environmental policy. It promotes sustainable use of its natural resources."
3. Article 66 to 68 establish that the use of natural resources (classified as renewable and non-renewable) by individuals and private companies has to be regulated by law.
4. Primary Environmental Statutes:
 - 1997: Natural Resources Sustainable Use Act, Health Act
 - 2000: Solid Waste Act
 - 2005: Environmental General Act: comprehensive regulatory structure plus general rules and principles of environmental policy that shall be considered as minimum standards for all activities; based on this act, each ministry enacts environmental regulations applicable to activities under its jurisdiction (such as mining, oil and gas, manufacturing industries, and fisheries)
 - 2009: Water Act

Research, Sage Journals, Vol. 8, issue 1, Peru, Brazil, 1990: pp. 158–60.

⁷² Ibid.

⁷³ Delapiente Abogados, "Environment 2012 - Peru," LatinLawyer, 2012, accessed 31 March 2017, <http://www.delapiente.com.pe/admin/recursos/informes/LatinLawyer2012.pdf>.

5. Environmental treaties and conventions:

- Basel Convention on the control of trans-border movements of hazardous wastes and their deposits
- RAMSAR Convention on Wetlands
- UNESCO Convention of Paris
- Convention for the Protection of Flora, Fauna, and Natural Scenic Beauty in the American Countries
- Antarctic Treaty
- Convention on Biological Diversity
- Vienna Convention for the Protection of the Ozone Layer and Montreal Protocol

6. There is no private ownership of oil, gas, and minerals in Peru. Mineral concessions are granted based on administrative procedures. Oil and gas rights to explore and exploit are granted through a license contract or a service contract signed by Perupetro (a state-owned company that promotes, negotiates, signs, and supervises exploration and production contracts, on behalf of the Peruvian state). The approved Environmental Impact Assessment is the main requirement that must be complied with.

7. Environmental Permit Process: environmental impact statement (EIS) must be submitted to and approved by the relevant ministry before starting construction.

8. The national environmental enforcement agency, OEFA (Organismo de Evaluación y Fiscalización Ambiental, created in 2008), or regional government enforces environmental laws and regulations.

9. Environmental contamination of soil, surface water, and groundwater: civil liability is covered through the Civil Code rules of non-contractual liability.

10. Chemicals or products that are subject to special environmental requirements: the 2011 Law 29662 has restricted asbestos; however, PCB substances (polychlorinated biphenyls meaning organic chemicals consisting of hydrogen, carbon, and chlorine atoms) are not subject to environmental regulations. Agrochemicals are also restricted and controlled.

11. Legal protection of patrimony or cultural heritage and environmentally sensitive areas: National System for Protected Natural Areas covers almost 17% of Peru's territory. Depending on the category of the area, industry access may be restricted or banned. In terms of flora and fauna, Peru has listed those species considered in danger or threatened. Therefore, fishing, hunting, or collecting them is prohibited.

12. Landfills/Waste disposal: Only a few exist, mostly in the Lima area.

13. Public access to official documents: all citizens have access.
14. Noteworthy case: the Constitutional Tribunal granted an injunction order ordering three oil companies to stop activities until the five-year program of a protected natural area was finished and approved.
15. Current trends:
 - Due to the lack of trust on a couple of major projects' environmental impact assessments, changes to the EIA Peruvian system are expected.
 - A 2011 law implements the ILO Convention 169 that requires that indigenous and tribal peoples are consulted on issues that affect them, which is the main regulatory change.

Is Peruvian legislation on hazardous waste a mere national initiative or can it be set in a Pan-American context? And how far are changes in legislation related to the Basel Convention?

The Basel Convention Regional Center for South America (Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Paraguay, Peru, Uruguay, and Venezuela), established in 2005, indicates collaboration in a Pan-American context to a certain degree. It has coordinated, for example, the implementation of the project "Best Practices in PCB Management in the Mining Industry in South America" in Chile and Peru. Valuable assessments are being produced in this context, as well as reference documents for the region and changes that will be conducive to the application of best practices and the introduction of the best technologies available in this sphere. This effort has been made with the aid of the Global Environment Facility (GEF) and UNEP's Division of Technology, Industry and Economics (DTIE).⁷⁴

Indigenous Protest

It is only in recent years, with the beginning of Alejandro Toledo's presidency and his "Neo-Incaic indigenismo,"⁷⁵ that Peruvian indigenous (protest) movements have emerged after their apparent non-existence in the course of history. Additionally, there is a new focus on class identity among peasant communities.

⁷⁴ Basel Convention Regional Center for South America Republic of Argentina – BCRC 2014–2015 Business Plan

⁷⁵ Shane Greene, "Getting over the Andes: The Geo-Eco Politics of Indigenous Movements in Peru's Twenty-First-Century Inca Empire," *Journal of Latin American Studies* 38, no. 2 (2006): 327–54.

Native leaders in the Amazon established ethnic federations in the 1970s (Aguaruna, Huambisa, Ashaninka, Shipibo-Conibo, Amuesha, and Cocama-Cocamilla communities). Their primary focus is the protest against the invasion of oil companies and the demand for government recognition of their territorial rights. Indeed, communities like the Aguaruna were able to successfully reclaim their land that had been invaded for the sake of industrial production.

Since 1999, the Peruvian indigenous rights organization Coordinadora Nacional de Comunidades Afectados por la Minería (CONACAMI), for example, an association of highland organizations, works in defense of the territory and the natural resources and focuses on defending the rights of indigenous peoples living in communities that are close to (future) large-scale mining projects.⁷⁶

In addition, umbrella organizations such as the Conferencia Permanente de los Pueblos Indígenas del Perú (COPPIP) have been established to unite Andean and Amazonian interests, just as the Instituto Nacional de Desarrollo de los Pueblos Andinos, Amazónicos y Afro-Peruanos (INDEPA).⁷⁷ In contrast to national and pan-national indigenous movements in Ecuador, indigenous activism appears to be less visible in Peru, but it is no less present and manifests itself in multiple ways.⁷⁸

Indigenous claims to reject interventions of oil and mining companies on their lands have often failed because of contradictions in the Peruvian legal system. While the subsoil currently belongs to Peru's national heritage, which the Peruvian state can grant transnational corporations access to for the purposes of extracting oil and minerals, peasant communities hold legal rights to the surface layer and therefore the right to restrict outside access to this land. The Peruvian state has recently dismissed indigenous claims to prevent foreign interventions, stating that they are not applicable in such cases. In Peru, royalty payments made by transnational corporations to benefit nearby communities affected by their mining activities are negotiated at around 1–3 percent, while some larger mining companies have negotiated to pay no royalties at all. These figures fall below international standards.⁷⁹

Peru and the Basel Convention

Status of Ratification: 23.11.1993

Entry into Force: 21.02.1994

⁷⁶ “Confederación Nacional de Comunidades del Perú Afectadas por la Minería”, accessed 31 March 2017, <http://www.conacami.org/>.

⁷⁷ “Getting over the Andes.”

⁷⁸ “Refworld, World Directory of Minorities and Indigenous Peoples - Peru.”

⁷⁹ *Ibid.*

Definition:

National definition of hazardous waste used for the purpose of transboundary movements of waste exists in Peru.

The definition of hazardous waste is in accordance with the Basel Convention. Furthermore, the General Solid Wastes Act, Act No 27314, states:

Article 22 - Definition of hazardous solid wastes

22.1 - Hazardous solid wastes are those that by its characteristics or management could represent a significant risk for the health or environment.

22.2 - Without prejudice of the international standard in force for the country, hazardous solid wastes are those with the following characteristics: self-combustible, explosive, corrosive, reactive, toxic, radioactive, or pathogenic.

There are no wastes defined as or considered hazardous wastes by national legislation in accordance with Art. 1, para 1(b) of the Basel Convention.

In Peru, there are no wastes other than those pursuant to Art. 1 (1)a and/or Art. 1 (1)b of the Basel Convention that require special consideration when subjected to transboundary movement. The import of all types of waste is controlled and those which have been shown not to be hazardous are admitted.⁸⁰

Are indigenous territorial rights about to be weakened by the Peruvian government for the sake of large-scale investment in natural resources?

Multiple drafts of laws by the government have tried to weaken protections for Peruvian indigenous peoples' rights to their territory. For example, the draft law 1770 aimed to establish of a temporary and extraordinary four-year system in which rural plots, peasant and native communities were meant to be formalized. Approval of this law would leave important regulations protecting communal rights in a state of uncertainty, such as Law 22175 on native communities and Law 24657 on the Demarcation and Titling of Peasant Community Lands. It would replace the property titles of communities registered in the Community Lands Register and revise the community property titles

⁸⁰ "Basel Convention Country Fact Sheet - Peru," Office of the Director General for Environmental Health, Lima, Peru.

according to the new law. Another draft, law 1900 of the Peruvian Aprista Party (Partido Aprista Peruano), the party of government in power, aims to authorize the Institution for the Formalization of Informal Ownership (Organismo de Formalización de la Propiedad Informal - Cofopri) to return lands not cultivated by the communities (eriazas) to the state for public auction to the highest private bidder.⁸¹

The relationship between Peru and the Basel Convention appears to have become conform in terms of definition and corresponding legislation ever since its ratification in 1993, which is also reflected in Peru's rather advanced and strict laws concerning hazardous waste management/treatment for the sake of the Peruvian indigenous people and environment. Yet, due to current circumstances, one must raise the question whether, with increasing interest in Peru's oil and mining industry, these factors will be troubling elements in the future and how far the Peruvian government is willing to further pursue this legislation.

Conclusion:

After some thorough research into Peru's treatment of hazardous waste, various factors offer a starting point for further investigation:

1. Several sources claim that there is a historical lack of indigenous movements in Peru when compared to South American neighbor countries like Ecuador. Others claim the contrary. It could be of interest to dig deeper into this matter.
2. Another issue that requires further research is Repsol's "*White Book of Hydrocarbons*," a wish list of changes to Peru's national environmental laws in favor of the oil and gas industry, *directed against indigenous communities. The company's transparency could be problematic as far as the possibility of gathering concrete and reliable information is concerned.*
3. *Looking at the historical development of the treatment and management of hazardous waste, it would be interesting to explore how far the government pushes non-change in environmental / indigenous legislation nowadays.*
4. *The questions arises if there are any further Pan-American similarities/connections as far as indigenous legislation and disposal are concerned.*
5. *And finally, where does the waste go location-wise? Is it conflicting with indigenous territory and environmental justice?*

⁸¹ Kathrin Wessendorf, *The Indigenous World 2008* (Copenhagen: International Work Group for Indigenous Affairs, 2008), 157–69.

Concluding Thoughts

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This brief study proved to be very stimulating and challenging. From the beginning, our intention was not to produce a scientific paper, but rather a research proposal that could be used for further and more detailed analysis. Moreover, this portfolio will also be used as a foundation for future Rachel Carson Center interns' involvement in this project. Clearly, this research represents work-in-progress with only parts of all relevant material considered. Future inquiries should consider additional empirical data and look closer into the legislation of specific countries. The research and effort made for this project were clearly limited in time due to the necessary completion of other tasks required of the internship program. Consequently, many layers of this highly structured problem can only be truly understood with further and more in-depth analysis.

Nonetheless, we can confidently emphasize some conclusions because of our research:

1. The Basel Convention is an overall weak agreement that countries (both member states and non-member states) do not often feel obligated to observe.
2. There has been, however, an increase in different countries involvement with a significant rise in membership in the last 20 years.
3. Furthermore, some countries, such as the member states of the EU, have stricter regulations than the ones imposed by Basel. African countries are a specific target group, and are a part of a more complex dimension (Bamako Convention). The US, currently the second largest polluter in the world, never ratified the Basel Convention. This shows another side of the agreement's weakness.
4. The two countries that we closely analyzed in this study—Croatia and Czech Republic—showed a clear development of their legislation. We concluded that the EU legislation had a very important role in that process.
5. For a proper study, it is important to investigate the documents written in the official language of the considered country.

Many member countries of the Basel Convention did not send any report in the timeline considered by this study. Surprisingly, many member states of the EU were also not consistent with their answers (for example, countries such as Italy and France reported only in 2001). Finally, there are a few points that might be of interest for future research.

1. The first goal would be to continue with a closer analysis of the national reports, and to investigate specific cases such as the examples from this study: Croatia and Czech Republic.

These countries were chosen because they are both former socialist countries. It would also be interesting to analyze different case studies, ideally in a different parts of the world such as Africa, Asia or South America.

2. It is crucial to look closer into specific national and trans-national legislations. This means to make detailed comparisons between Basel and other parties starting with the entire EU, the Bamako Convention and the OECD (*Organisation for Economic Co-Operation and Development*).⁸² Why?
 - a. The EU claims to be better: is that true? And in what way can this be observed?
 - b. Bamako was created as a reaction to Basel and also claims to be better. African states tried to build an alternative route to Basel: were they successful?
 - c. Members of the OECD are very important countries of the developed world. It would be interesting to understand whether Australia and New Zealand could be considered, after all, they are countries that have better legislation than Basel. Additionally, the USA is also part of the OECD, a fact that is particularly noteworthy.

In conclusion, we are confident that this portfolio has brought the reader into a dynamic, complex and relevant case study. The Basel Convention symbolizes all the challenges that are between particular state interests and common goals for our future. The final results of the Basel Convention are yet to be understood. However, it is difficult not to look to the future with unpleasant skepticism.

⁸² "Guidance Manual for the Control of Transboundary Movements of Recoverable Waste", *OECD*
<https://www.oecd.org/env/waste/42262259.pdf> (27.02.2017).