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Environmental Crimes and Imprisonment: Does Prison Work to Prevent and Punish Environmental Criminals?

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PACE LAW SCHOOL
P A C E U N I V E R S I T Y

Environmental Crimes and Imprisonment:

Does prison work to prevent and
punish environmental criminals?

Doctor of Juridical Science (S.J.D.) in
Environmental Law Degree
S.J.D. Dissertation

Under the Supervision of
Professor David Nathan Cassuto

February 2016

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Dedication

I dedicate this work to my wife Manice F. R. Wolff for all the support.

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To the 4th Circuit Court (Tribunal Regional Federal da 4^a Região), for all the support.

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Introduction

Environmental degradation is a global problem. Humans need natural resources to survive and, as those resources are limited, humans' use of these resources should respect a sustainable pace established by law. There are many approaches to addressing environmental degradation that do not honor the legal limitations and one of them is through criminal law. The question that is posed in this thesis is whether imprisonment, one of the most severe methods of punishment, is a suitable option to repress and prevent environmental crimes.

The importance of this question is demonstrated by the headlines of any newspaper. It is near impossible to find a single day where the media does not highlight the global worries about climate change, species' extinction, pollution or other forms of degradation. In these articles (this thesis will provide examples hereinafter), the subtle message is that something must be done soon, because the impacts are already present.

The legislature has tried to answer these worries not only by enacting statutes that establish civil liabilities and administrative fees, but also by incriminating certain environmentally degrading activities. It is clear that the legislature has good intentions. However, environmental criminal law remains an underdeveloped area of study with a stark lack of specific data, making it more difficult to determine when prosecution of environmental criminals is worthwhile.

Using data available from a variety of crimes, this thesis discusses the ability of imprisonment to punish and prevent environmental crimes, reflecting the advantages and disadvantages of this option. The intention is to aide both the legislature and judges when

deciding which punishment to choose, in making an informed and efficient decision on punishment and prevention of environmental offenses.

When criminalizing conduct that degrades or potentially harms the environment, legislatures intend to both punish and prevent new crimes, as it will be explained in the second chapter. The prevention can happen in many forms: first by incapacitating the offender; second by rehabilitating him; and, finally, by deterring the offender and others from performing crimes again. In theory, it seems very effective and reasonable.

In this case, however, theory and reality are far from each other. High recidivism rates prove that both rehabilitation and deterrence are relative attributes of imprisonment. Prison can rehabilitate and deter, but the numbers prove that the effects are modest. Considering the high costs of imprisonment, society should expect more. Even the preventative effects of incapacitation are relative. While the inmate cannot perform new crimes outside prison, his know-how could be used from inside. Further, criminal organizations reconstruct themselves very easily, especially when the segregated member is a mule that transports pesticides or wildlife from one country to another, and not the ring leader. While there is no doubt that imprisonment has the ability to make an offender suffer through isolation from the outside world, segregating a criminal may have harmful effects on society and the offender's family. Similarly, imprisonment is not the only way to punish. For instance, home imprisonment is a limitation that can provide punishment without placing costs on the family, society, and the administration.

The budgetary effect of a policy decision should be discussed and considered when the topic is environmental crimes or any other offense. If the main intent of legislators is to prevent crimes involving degradation, it should be realized that, despite the high costs of segregating criminals, this investment has done little to prevent crime. It also should be discussed that

imprisonment is not the only way to prevent crime, nor is it the most cost-effective way to punish. While this thesis focuses on segregation as an answer to environmental crimes, alternatives for imprisonment will also be provided to showing that there is a choice to be made. With options on the table, it is possible to analyze when imprisonment is cost efficient and it is not. This is especially important in the United States of America, a country that is struggling with the effects of mass incarceration and provides this thesis with a huge source of data and experiences about prisons.¹

Finally, environmental criminality crosses many sectors. It encompasses corporate crime, such as when corporations disrespect the law and provoke degradation to achieve more profits. It also involves criminal organizations that perform environmental crimes. Those kinds of crimes are often punished less seriously as compared with other crimes performed by criminal rings (e.g., drug and arms related offenses), but still have high revenues. These scenarios involve different kinds of offenders and different sentencing is expected if the intent is to punish and prevent crimes. In the organized crime example, there are the leaders and the executioners (like the mule) and they cannot be treated the same way. In the corporate crime example, the CEO, motivated by profits, cannot be treated the same way as the employee that personally pollutes a river following orders and intending to keep his job. In all cases the offenders should be punished, because they voluntarily decided to pollute, even though they knew it was against the law. However, if punishments are determined according to culpability and issued in order to prevent new crimes, different offenders, moved by distinct motives, cannot be treated in the same formula.

¹ The American experience with crime and incarceration, as well as the incredible amount of data and studies about those questions, is one of the reasons why this thesis is a comparative study between Brazil and the United States of America.

Even if environmental crime cannot be synthesized in the two examples above, those examples are enough to demonstrate that understanding how imprisonment functions is essential to concluding when imprisonment will be cost efficient and when it will not. With this data in their hands, legislatures can better decide which investment is worthwhile to avoid crime. Correspondingly, judges can better decide which mean of punishment should be chosen considering the intent to repress and prevent crime.

In a way of fulfilling that goal, this thesis is divided in three chapters. The first chapter discusses why environmental crimes are relevant. It also explores why the conversation about imprisonment as a way of preventing and repressing those crimes is current and important. Through examples on illegal fishing, wildlife, and forest trade, chapter I demonstrates the harmful effects of environmental degradation – effects both in nature and throughout many levels of society (economy, health, governability, among others). The examples demonstrate why this topic should be addressed through criminal law, which allows the retribution and prevention of crime through one of the most serious means of punishment: imprisonment. However, particular examples from the United States of America and Brazil are presented to prove that imprisonment is not presently the norm when sentencing environmental crimes in both countries. As imprisonment was the option adopted by both countries to address another relevant and urgent challenge (drug crimes), the question posed is whether this option should also be used for environmental crimes. The urgency on preventing environmental degradation proves that the subject is current; the fact that imprisonment was used previously when a similar challenge faced the authorities, without a clear success, demonstrates that the discussion about its use in environmental crimes is imperative.

The second chapter provides the foundations to answer whether imprisonment is an efficient answer to environmental crimes. It starts with the study of the philosophical aspects of the different theories of punishment, which suggest that prison is used to punish (retribution), prevent, or to achieve both. Keeping the comparative study between Brazil and the United States of America in mind, this section concludes that both countries use imprisonment to punish (retribution) and to prevent. Subsequently, the discussion asks whether imprisonment is effective, seeking to determine if it would work on environmental offenses. This section concludes that prison works for the purposes of retribution, but is less effective with respect to prevention. Based on the material researched, chapter II ends with a discussion of the costs and benefits of prison. Considering the elevated costs of imprisonment, as well as the fact that retribution and prevention could be delivered by other means, imprisonment should be used only in exceptional cases, those in which more severe retribution is needed so as to justify the investment.

The third chapter discusses the applicability of imprisonment to punish and prevent environmental offenses. However, as environmental crime is a broad phenomenon, this work analyzes different scenarios, with different kinds of offenders, to conclude in which cases imprisonment forms a good option to repress and prevent environmental crime. This chapter shows that imprisonment is only justified in extreme cases as terrorism against natural resources, in which lives are taken or menaced, or in those cases in which other ways of imprisonment did not work before (recidivism). For most other cases, there are other investments that could better prevent.

The reflections made throughout this thesis are revisited in the last chapter, in which the reasons not to trust in imprisonment as the main solution for punishing and preventing environmental crimes are summarized. The author wishes the readers a pleasant journey.

1. Environmental Crimes

Chapter one introduces the reader to the phenomenon of environmental crime. The first question raised is whether the governmental concerns about environmental degradation are justified. Three examples are used to prove that the answer is positive: illegal fishing, wildlife and forest trade. The second question posed is why criminal law is being used in those cases and how it is being used in Brazil and in the United States of America. The third question is whether criminal law is fulfilling its purposes.

1.1 Environmental Crime – Is there a reason for concern?

This subsection intends to explain why governments should concern about environmental crimes. As the United Nations for Environment Programme (UNEP) and the INTERPOL have recently uncovered, culprits from other criminal sectors are being attracted to environmental crime, among other factors, “because of a combination of high profits and low probability of getting caught and convicted.”² The estimated market of transnational organized environmental crime is between 70 to 213 billion dollars.³ Breaking down the numbers, the market is divided between: illegal logging and trade (US\$ 30-100 billion), illegal fisheries (US\$ 11-30 billion), illegal extraction and trade of minerals (US\$ 12-48 billion), illegal trade and dumping of hazardous waste (US\$ 10-12 billion) and illegal trade and poaching of plants and wildlife (US\$ 7-23 billions).⁴ As organized crime does not perform all environmental crimes (some are performed by individuals or by corporations, for example), it is likely that the risks for natural

² *THE ENVIRONMENTAL CRIME CRISIS – THREATS TO SUSTAINABLE DEVELOPMENT FROM ILLEGAL EXPLOITATION AND TRADE IN WILDLIFE AND FOREST RESOURCES*, UNITED NATIONS ENVIRONMENT PROGRAMME (UNEP) AND INTERPOL, 18 (2014), available at <http://www.unep.org/unea/docs/rracrimccrisis.pdf> [hereinafter “UNEP Report”].

³ *Id.* at 19.

⁴ *Id.*

resources are in fact greater than reported. However, the numbers are eloquent on demonstrating the risks this black market generates to the environment.

In fact, the severe effects of the degradation of the ecosystem, which will be discussed shortly (oceans depletion, climate change, and other effects will be soon addressed), are enough to prove that the topic deserves close attention. Nevertheless, environmental crimes should be a concern of the international community not just because of the risks of “eco-system collapse,”⁵ but also due to its connections with other criminal activities such as terrorism⁶ and human trafficking.⁷ The presence of organized crimes maximizes the risk not just for the environment,⁸ but also for all human beings.

This work will explain briefly some of the risks created by those conducts that are seen as criminal in countries like Brazil and the United States of America.⁹ First, consider fishing crimes. Those who are not aware of that criminal activity should be feeling its economic consequences soon, as fish become more scarce and, consequently, more expensive. Further, the scarcity of fish will impact those species that depend on them and ultimately, the whole ecosystem, which is itself enough reason for concern.

⁵ THE GLOBAL RESPONSE TO TRANSNATIONAL ORGANIZED ENVIRONMENTAL CRIME, THE GLOBAL INITIATIVE AGAINST TRANSNATIONAL ORGANIZED CRIME, 1 (2014), *available at* <http://www.globalinitiative.net/organized-environmental-crime-act-now-or-we-will-lose/> [hereinafter “Global Initiative Report”].

⁶ UNEP Report, *supra* note 1, at 48. According to the report, “Al Qaeda and the Haqqani network have been accused of raising funds through timber exploitation and trade.”

⁷ TRANSNATIONAL ORGANIZED CRIME IN THE FISHING INDUSTRY, UNITED NATIONS OFFICE ON DRUGS AND CRIME, 52-54 (2011), *available at* <https://www.unodc.org/unodc/en/human-trafficking/2011/issue-paper-transnational-organized-crime-in-the-fishing-industry.html>.

⁸ Global Initiative Report, *supra* note 4.

⁹ *See infra* § 1.3.

1.1.1 Illegal Fishing

In this subsection, it will be shown why illegal fishing should receive special attention from government. The first and most used example is overfishing, the non-sustainable use of the waters, where fish are harvested beyond the fishery's ability to sustain.¹⁰ Overfishing is not new. As National Geographic reported, "[...] the earliest overfishing occurred in the early 1800s when humans, seeking blubber for lamp oil, decimated the whale population."¹¹ The research also showed that "[...] Atlantic cod and herring and California's sardines, were also harvested to the brink of extinction by the mid-1900s."¹² However, "[...] these isolated, regional depletions became global and catastrophic by the late 20th century."¹³ Unfortunately, overfishing is not just part of history; it is still a concern today.

Indeed, the Food and Agriculture Organization of the United Nations (FAO) recently reported how much the high seas are suffering due to overfishing. According to FAO, most baleen whales (with the exception of the Minke whale) and sperm whales are extremely overfished or depleted.¹⁴ Tuna stocks are a problem too. The Atlantic Bluefin Tuna population, the largest and most endangered of the tuna, has dropped 85% due to sushi and sashimi in Asia.¹⁵

The Atlantic Cod, one of the most lucrative products in the American colonial era, which almost achieved the commercial collapse in the mid-1990 and still has not recovered, is another

¹⁰ WHAT IS OVERFISHING, OVERFISHING.ORG, http://overfishing.org/pages/what_is_overfishing.php (last visited Feb. 1, 2014). This concept can also be applied to rivers.

¹¹ OVERFISHING, NATIONALGEOGRAPHIC.COM, <http://ocean.nationalgeographic.com/ocean/critical-issues-overfishing> (last visited Feb. 1, 2014).

¹² *Id.*

¹³ *Id.*

¹⁴ HIGH SEA RESOURCES, FAO, <http://www.fao.org/fishery/topic/1859/en> (last visited Feb. 1, 2014).

¹⁵ BLUEFIN TUNA, WORLD WILDLIFE FUND, <http://www.worldwildlife.org/species/bluefin-tuna> (last visited Mar. 3, 2015). According to the website, one of these fish, which can grow as large as 1,500 pounds, has been sold for approximately \$1.75 million.

example of how overfishing can affect the ecosystem and the economy.¹⁶ The National Oceanic and Atmospheric Administration (NOAA) needed to reduce cod's fishing quotas in 2013 from 61% in Georges Bank to 80% in the Gulf of Maine to avoid more stock depletion.¹⁷ The reason for that worry was not just economic. According to the NOAA, "Atlantic cod are top predators in the bottom ocean community, feeding on a variety of invertebrates and fish."¹⁸ Therefore, the consequences to the cod depletion would certainly affect more species that depend on cod for population control. Additionally, as cod live on the ocean's floor, the use of gillnets, for example, will affect the habitat of other species and cause the unnecessary catching of other fish.¹⁹

Salmon is also another "high-migratory" species that deserves special attention. Many families depend on that species for living, as its fishing generates \$370 million to the U.S. commercial industry.²⁰ Furthermore, the impact of overfishing on shark populations is another a reason to be worried. The International Union for Conservation of Nature (IUCN) reported in 2009 that one third of open-ocean sharks are threatened with extinction.²¹ The extraction of

¹⁶ ATLANTIC COD, NATIONAL OCEANIC AND ATMOSPHERICAL ADMINISTRATION, http://www.fishwatch.gov/seafood_profiles/species/cod/species_pages/atlantic_cod.htm (last visited Jun. 22 2015).

¹⁷ *Id.*

¹⁸ *Id.*

¹⁹ *Id.*

²⁰ CONSERVING SALMON ON HIGH SEAS, DIPNOTE – THE OFFICIAL BLOG OF THE US DEPARTMENT OF STATE, <http://blogs.state.gov/stories/2012/12/04/conserving-salmon-high-seas> (last visited Feb. 1, 2014).

²¹ THIRD OF OPEN OCEAN SHARKS THREATENED WITH EXTINCTION, IUCN, <http://www.iucn.org/?3362/Third-of-open-ocean-sharks-threatened-with-extinction> (last visited Feb. 1, 2014).

shark's fin (also known as *finning*) is related to the killing of an estimated amount of 10,000 dolphins per year in Peru to be used as bait to catch sharks.²²

The list of high seas species menaced by overfishing is huge. Unfortunately, the scenario is not favorable to improvement. Currently, “[...] 90 percent of the world’s fish stocks are overfished or fully fished.”²³ It can get even worse as “[a]bout 1 in 5 fish caught in the wild is taken illegally or in unreported fisheries.”²⁴ According to the journal *Science*, if fishing rates continue in the same pace, the world’s fisheries will collapse by the year 2048.²⁵ With the scarcity of large-fish populations, fishing fleets are going deeper in the ocean, which is menacing to the delicate balance of the seas considering the interdependency of species.²⁶ Targeting top predators like billfish, sharks and tuna results in increases in the number of small marine animals in the oceans, which in turn impacts the marine ecosystem through increasing algae’s growth and threats to the health of coral reefs.²⁷

The attentive reader should have noted that the last pages did not mention the word “crime.” That is because overfishing is caused by legal and illegal depletion, by supervised and unsupervised fishing activities. That is the reason why international organs like Food and

²² DOLPHINS KILLED FOR SHARK BAIT IN PERU, CNN, <http://www.cnn.com/2013/10/22/world/americas/dolphins-killed-peru> (last visited Feb. 18, 2014).

²³ GLOBAL OCEAN LEGACY, THE PEW TRUST <http://www.pewtrusts.org/en/research-and-analysis/fact-sheets/2015/06/global-ocean-legacy-working-together-to-create-worlds-first-generation-great-parks-in-sea> (last visited Jun. 30, 2015)

²⁴ *Id.*

²⁵ Boris Worn et al., *Impacts of Biodiversity Loss on Ocean Ecosystem Services*, SCIENCE, Nov. 3, 2006, at 787.

²⁶ WHAT IS OVERFISHING, *supra* note 9.

²⁷ OVERFISHING: IMPACTS, WORLD WILDLIFE FUND, <http://www.worldwildlife.org/threats/overfishing#impacts> (last visited Jun. 23, 2015).

Agricultural Administration of the United Nations are using the expression Illegal, Unreported and Unregulated Fishing (IUU) in their reports.²⁸

²⁸ See INTERNATIONAL PLAN OF ACTIONS TO PREVENT, DETER AND ELIMINATE ILLEGAL, UNREPORTED AND UNREGULATED FISHING, FAO, <http://www.fao.org/docrep/003/y1224e/y1224e00.htm> (last visited Aug. 15, 2014). In this report, IUU was defined as:

3.1 Illegal fishing refers to activities:

3.1.1 conducted by national or foreign vessels in waters under the jurisdiction of a State, without the permission of that State, or in contravention of its laws and regulations;

3.1.2 conducted by vessels flying the flag of States that are parties to a relevant regional fisheries management organization but operate in contravention of the conservation and management measures adopted by that organization and by which the States are bound, or relevant provisions of the applicable international law; or

3.1.3 in violation of national laws or international obligations, including those undertaken by cooperating States to a relevant regional fisheries management organization.

3.2 Unreported fishing refers to fishing activities:

3.2.1 which have not been reported, or have been misreported, to the relevant national authority, in contravention of national laws and regulations; or

3.2.2 undertaken in the area of competence of a relevant regional fisheries management organization which have not been reported or have been misreported, in contravention of the reporting procedures of that organization.

3.3 Unregulated fishing refers to fishing activities:

3.3.1 in the area of application of a relevant regional fisheries management organization that are conducted by vessels without nationality, or by those flying the flag of a State not party to that organization, or by a fishing entity, in a manner that is not consistent with or contravenes the conservation and management measures of that organization; or

3.3.2 in areas or for fish stocks in relation to which there are no applicable conservation or management measures and where such fishing activities are

IUU fishing practices can be sanctioned using criminal law. According to recent statistics, 20% of global fishing is projected to be illegal.²⁹ To make it worse, the illegal market “[...] is facilitated by the fact that once fish have been landed it is almost impossible to determine their origin, making it easy to place illegally caught fish in the regular market.”³⁰ It is not possible, for example, for a costumer in a store to be sure that species sold there are legal. Unless the commerce of a species is illegal, there is some difficulty for the costumer and even for the police to know if this product was fished in a forbidden place or time, or even in a quantity beyond that amount legally authorized for the fishing company. Also, the oceans are vast and difficult to patrol. The criminals are, therefore, rewarded by geography.

The “low risk of detection,” along with the “high profitability,” has paved a pleasant road for organized crime to enter the fishing industry.³¹ The high profitability is explained by the fact that the overexploitation made the remaining specimens more valuable.³² For example, the price of single Bluefin tuna reached a record of US\$ 396,700 in January of 2011.³³ This is not the only example. A case presented before the Cape High Court, in South Africa, concerned a container of abalone worth next to US\$ 1.6 million.³⁴ The high value of the abalone is one of the reasons organized crime was interested in this business. According to the UNDOC, organized crime in South Africa exchanged abalone for methamphetamine ingredients with Asian criminal

conducted in a manner inconsistent with State responsibilities for the conservation of living marine resources under international law.

²⁹ Global Initiative Report, *supra* note 4, at 7. *See also* GLOBAL OCEAN LEGACY, *supra* note 22.

³⁰ *Id.* at 6.

³¹ TRANSNATIONAL ORGANIZED CRIME IN THE FISHING INDUSTRY, *supra* note 6, at 110.

³² *Id.*

³³ *Id.*

³⁴ *Id.* at 100.

organizations.³⁵ The criminal enterprise involving abalone is also present in Australia and New Zealand.³⁶ The illegal fishing of Patagonian toothfish, also known as Chilean SeaBass, in the Southern Ocean is just another example of involvement of organized crime in the fishing industry. A study from the United Nations indicates that fisheries often use ships registered to States that are either incapable or unwilling to supervise it and possess commercial structures that do not allow identification of the ship's real owner (companies in "financial havens," for instance).³⁷ It is thus clear that organized crime is already using its know-how to perform crimes in high scale with smaller risks of detection. But the risks for the environment and for society as a whole are bigger than the depletion of species, as will be shown in the next subsection.

1.1.1.1 Impacts of illegal fishing

Illegal fishing has serious ecological, economical, and social effects.³⁸ Those effects can be methodologically divided into direct or indirect. For example, the direct ecological effect of fishing crimes is the depletion of the species; the indirect effect is the imbalance in the environment created by the lack of those species. Economically, the direct effect of the depletion is the loss of a valuable asset; the loss of taxes and the impoverishment of the natives is the indirect effect. Socially, the main effect is the exploitation of the natives; the indirect effect is the weakening of the State, especially when organized crime is involved.

An indirect effect is not the same as an unimportant or irrelevant one. The indirect social effects of illegal fishing are extremely serious. According to the United Nations, "[p]rofitteering criminals prey on poor and unstable States and exploit their weaknesses, such as weak

³⁵ *Id.* at 86-87.

³⁶ *Id.*

³⁷ TRANSNATIONAL ORGANIZED CRIME IN THE FISHING INDUSTRY, *supra* note 6, at 104-108.

³⁸ *Id.* at 97.

governance and lack of transparency.”³⁹ This is highlighted by the fact that organized crimes are frequently linked with corruption and money laundering.⁴⁰

Laundering money is the only way to transform illegal money into apparently legitimate income. However, this activity has a high cost that can affect the market in many ways. According to the International Monetary Fund, “[t]hese activities generate financial flows that involve the diversion of resources away from economically- and socially-productive uses—and these diversions can have negative impacts on the financial sector and external stability of member states.”⁴¹ As an example, it is possible to imagine a criminal group establishing restaurants in order to make money that appear legal but originate from illegal fishing. As the “legal company” has to declare the selling of hundreds of meals per month, in order to justify the incoming illegally obtained money, the group may decide to sell extremely cheap meals so that the business always looks crowded. This act will certainly have economic consequences, such as the closing of legal businesses that cannot compete with the façade restaurants. Once the criminal organization is uncovered, however, the legal business will be weaker (or gone) and legal laborers will have lost their jobs, with more impact in the larger population.

Corruption often permits criminal groups to avoid law enforcement (from the sea extraction to the exportation to another country) or to enable fishing boats to perform legal activities in cases in which they should not.⁴² Those activities have further social consequences, undermining governance and transparency, ultimately hurting the community’s trust in its

³⁹ *Id.*

⁴⁰ *Id.*

⁴¹ ANTI-MONEY LAUNDERING/COMBATING THE FINANCING OF TERRORISM (AML/CFT), INTERNATIONAL MONETARY FUND, <https://www.imf.org/external/np/leg/amlcft/eng/> (last visited Oct. 9, 2014).

⁴² Maíra Martini, *Illegal, Unregulated and Unreported Fishing and Corruption*, 4 (2013), available at <http://www.u4.no/publications/illegal-unreported-and-unregulated-fishing-and-corruption/> (last visited Jun. 23, 2015).

government. Corruption also allows bigger companies to prevail over small-scale companies that cannot afford the “costs”.⁴³ This is negative both for sustainability and economically. It affects the jobs of artisanal, small-scale fishers, who need to fish to survive. It also affects the environment, because artisanal fishermen usually extract at a rate not higher than nature’s capacity to reproduce, whereas high-scale fisheries extract far faster.

Unfortunately, the social effects of illegal fishing do not end here. They are maximized by the fact that the fishing crimes are connected with other criminal activities, such as human trafficking, human smuggling, drug trafficking, terrorism, and corruption.⁴⁴ The links between illegal fishing and human trafficking can be explained by the fact that the fishing industry is a labor-intensive activity: less expense in human resources (free labor from trafficked humans) will result in more profits for the illegal fishing organization.⁴⁵ In fact, illegal fisheries and labor

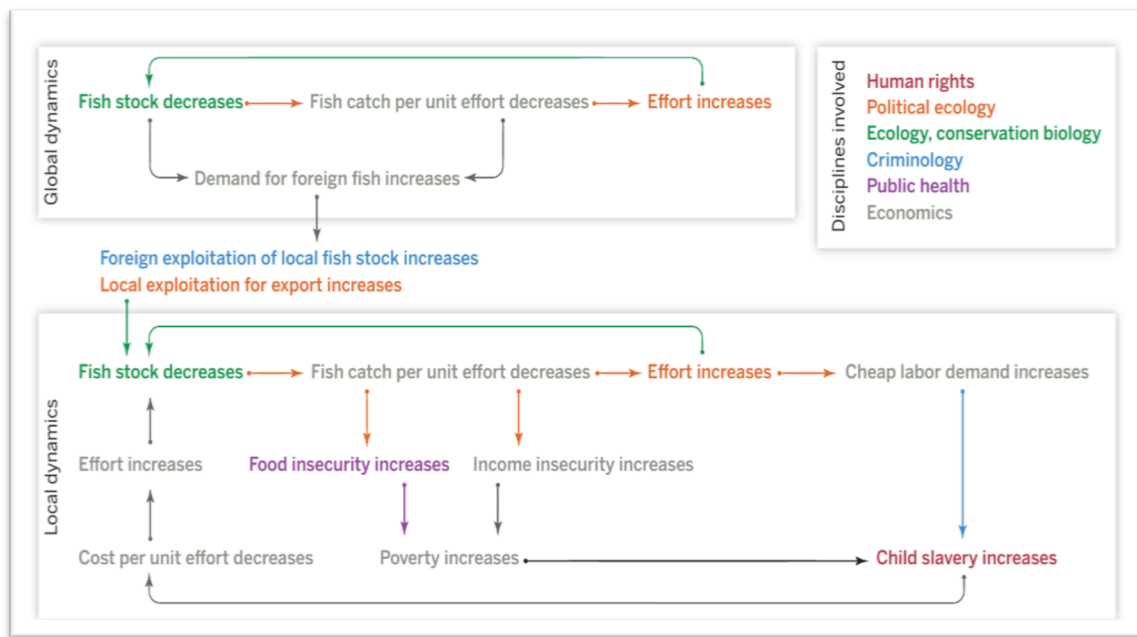
⁴³ *Id.* at 1.

⁴⁴ TRANSNATIONAL ORGANIZED CRIME IN THE FISHING INDUSTRY, *supra* note 6, at 3-4.

⁴⁵ *Id.* at 54. According to the publication:

There are a number of reasons why crews on board vessels engaged in marine living resource crimes are more at risk of human trafficking. First, fishing operators involved in marine living resource crimes are already involved in criminal enterprise, and display a commitment to profit seeking and lack of moral judgment. Second, vessels used for marine living resource crimes are often old and unsafe as they run the risk of forfeiture. This makes it harder and more expensive for fishing operators to hire qualified crew. Exploitation of forced labour is an option for unscrupulous fishing operators in these circumstances. Third, reports of illegal fishing operations often come from crews. Victims of human trafficking are less likely to produce this form of information to the authorities whilst in port due to strict control of their movements. Fourth, fishing vessels engaged in illegal fishing will conduct operations without the presence of a scientific observer on board. In many fisheries around the world, the presence of a scientific observer is compulsory. During consultations it was pointed out that these scientific observers have reservations regarding the safety and working conditions on board fishing vessels engaged in legal fishing. The point was made that the complete lack of oversight on board fishing vessels engaged in illegal fishing is likely to result in even worse practices. And finally, vessels engaged in marine living resource crime are often registered in States that are unable or

exploitation have a relationship of dependency, not just a connection. After all, “[w]ildlife declines often necessitate increased labor to maintain yields.”⁴⁶ The use of slaves, however, makes it easier and cheaper to increase the fishing efforts, which creates a “vicious cycle”.⁴⁷ The figure bellow well synthetizes the process:⁴⁸



Whereas those are sufficient reasons to ask for a strong answer to organized crime in the fishing industry,⁴⁹ it is also important to highlight that fishing crimes are not performed just by criminal organizations. The CEO of a fishing company accused of fishing beyond the license

unwilling to exercise their criminal law enforcement jurisdiction and that allows owners to hide behind front companies which considerably reduces the risk of detection. According to a fishers union in Chile, “[t]he crew on IUU fishing vessels often either do not have contracts or, if they do, the contracts are signed by fictitious companies which are impossible to find in cases where there are violations of labor or human rights, or in cases where crew are arrested or vessels sink.

⁴⁶ Justin S. Bachares et al., *Wildlife Decline and Social Conflict*, SCIENCE, Jul. 25, 2014 at 376.

⁴⁷ *Id.*

⁴⁸ *Id.* at 377.

⁴⁹ *Id.* at 376.

limits can also perform fishing crimes. An amateur fishing in a forbidden area can perform crimes too. The examples provided above, however, are explicative of why overfishing is properly a crime, and why its prosecution should continue to be a concern for law enforcement.

1.1.2 Wildlife Trade

Illegal fishing is just a portion of a criminal market dealing with wildlife species.⁵⁰ Now, this subsection discusses another portion: poaching and the international trade of terrestrial and aerial species. This subsection will discuss the harmful impacts of this market, which can be divided “into environmental, economic, human well-being and national security impact.”⁵¹ Rhinoceros and elephants, for example, are threatened by poaching in Africa.⁵²

But this is not just restricted to Africa. According to the World Bank, “[m]uch of the most popular groups of species for trade in Southeast Asia have been collected to the point where they are so scarce that this is no longer commercially viable to try to find them in the wild.”⁵³ South America also has its problems. In Brazil, 45,000 animals were sent to rehabilitation centers after being seized in 2002.⁵⁴ From those, 37,000 were birds.⁵⁵ To make thing worse, it is estimated that only 5% of the trafficked animals are seized.⁵⁶

⁵⁰ Although fishing resources are part of wildlife, fishing crimes are usually commented individually, because of its particularities. However, there is a bigger industry involving crime and wildlife labeled under the name “wildlife crime.” A similar parallel can be drawn with respect to forest crimes.

⁵¹ TANYA WYATT, *WILDLIFE TRAFFICKING: A DECONSTRUCTION OF THE CRIME, THE VICTIMS AND THE OFFENDERS* 39 (2013).

⁵² *Id.* at 40.

⁵³ *ENFORCING ENVIRONMENTAL LAWS FOR STRONG ECONOMIES AND SAFE COMMUNITIES*, THE WORLD BANK, 5 (2014), available at <http://documents.worldbank.org/curated/en/2014/02/19042258/enforcing-environmental-laws-strong-economies-safe-communities>.

⁵⁴ Juliana Machado Ferreira, *The Fight to End Rare-Animal Trafficking in Brazil* (Feb. 2010), available at https://www.ted.com/talks/juliana_machado_ferreira (last visited Aug. 28 2014).

1.1.2.1 Environmental impacts of Illegal Wildlife Trade

The environmental impact of illegal wildlife trade is the main reason for a government to be concerned with the trade. Those impacts can be broken into direct and indirect effects. The direct effect is the loss of the species, which negatively impacts biodiversity.

On the other hand, wildlife trade also has indirect effects. Problems involving extinction are not limited to the loss of a single species, because species are interrelated.⁵⁷ Consider, for example, the illegal trade of the pangolin in Southeast Asia. One pangolin can eat approximately “70 million ants and other insects” in a year, which makes it imperative for the ecosystem balance.⁵⁸ Where the population of pangolin is decreased as a result of illegal trade, the population of ants will run to excess, which can be a menace both to other species and to the flora (including plantations).⁵⁹

Wildlife trade is also “[...] a vehicle for the entry of non-native or invasive species into an ecosystem.”⁶⁰ Burmese Pythons have been introduced into Florida’s Everglades as a result of the pet trade, providing yet another concrete example of how wildlife trade can menace an ecosystem balance.⁶¹ These pythons now compete for food with the Everglades’ native species, menacing their food supply.⁶² This poses an additional threat to Everglades’ native endangered species, such as the Keylargo Woodrat and Round-tailed Muskrat.⁶³

⁵⁵ *Id.*

⁵⁶ *Id.*

⁵⁷ WYATT, *supra* note 51, at 39.

⁵⁸ *Id.* at 46.

⁵⁹ *Id.*

⁶⁰ *Id.* at 41.

⁶¹ *Id.* at 42.

⁶² *Id.*

⁶³ *Id.*

Illegal wildlife trade can also be a mechanism of introducing new diseases into the native ecosystem.⁶⁴ In 2002, wildlife inspectors found the Wamema virus, a lethal infection to cool-blooded animals, in four Green Tree pythons arriving in Australia from Singapore.⁶⁵ In this instance, the risks were eliminated by quarantine.⁶⁶ In the case of illegal trade, however, the wildlife would not be submitted to customs procedures, thus those risks would not have the opportunity to be eliminated. Despite the lack of clear statistics about the illegal market, as the majority of crimes are not prosecuted,⁶⁷ the dangers are difficult to deny.

1.1.2.2 Economic Effects of Illegal Wildlife Trade

The economic impacts of illegal wildlife trade are also a reason for concern. One effect is the “loss of tax revenue” for the government,⁶⁸ as the illegal wildlife trade does not pay taxes.⁶⁹ According to UNEP and Interpol, the illegal wildlife and plants trade value is between US\$ 7-23

⁶⁴ WYATT, *supra* note 51, at 43.

⁶⁵ *Id.*

⁶⁶ *Id.*

⁶⁷ ANTONIO GARCÍA-PABLOS DE MOLINA AND LUIZ FLÁVIO GOMES, *CRIMINOLOGIA* 42 (2006).

⁶⁸ WYATT, *supra* note 51, at 44.

⁶⁹ It is important to highlight that Brazil has adopted the “*pecunia non olet*” principle in tax law, which says illegal income should also be taxed (Brazilian Tax Code, Article 118). The Brazilian Supreme Court has already recognized that principle in two opportunities, one involving drug trafficking (HC 77530, Relator(a): Min. SEPÚLVEDA PERTENCE, 25/08/1998) and the other involving gambling activities (HC 94240, Relator(a): Min. DIAS TOFFOLI, 23/08/2011). The same idea is adopted by the United States of America, as the Sixteenth Amendment states that “[t]he Congress shall have power to lay and collect taxes on incomes, from whatever source derived, without apportionment among the several states, and without regard to any census or enumeration.” The United States Supreme Court also recognized that a bootlegger should have paid taxes and the Fifth Amendment did not protect him from the duty of file a return. *United States v. Sullivan*, 274 U.S. 259 (1927). According to the federal tax instructions: “Income from illegal activities, such as money from dealing illegal drugs, must be included in your income on Form 1040, line 21, or on Schedule C or Schedule C-EZ (Form 1040) if from your self-employment activity.” IN THAT SENSE: OTHER INCOME, INTERNAL REVENUE SERVICE, *available at* <http://www.irs.gov/publications/p17/ch12.html> (last visited Jun. 30, 2105). Thank you to Professor Laura Jensen for helping me with this point.

billion.⁷⁰ Just a single rhinoceros horn may have a market value of US\$ 260,000.⁷¹ In Brazil, the market value of wildlife trade is estimated in US\$ 2 billion.⁷² More than just losing tax revenues, these governments ultimately must invest in law enforcement to eradicate the illegal trade,⁷³ which will result in additional budgetary repercussions.

There are also economic impacts of the illegal wildlife trade on the legal business and industry sectors. The illegal wildlife trade black-market has the power to destroy the legal market and all the jobs involved.⁷⁴ For instance, a pet store that sells legal wildlife cannot compete with the prices offered by the black market, which sells the same species with an illegal origin. A parrot, for example, could either come from a legal breeder or could have been hunted illegally. The lack of tax costs, alone, can make the illegal business more “competitive,” and able to provide better prices. If the costs of breeding are taken into consideration, the competition is almost impossible to beat. There is almost no cost for the hunter to catch an animal in the wild. Under this scheme, legal companies can be bankrupted by the black-market.⁷⁵

Non-human diseases, such as mad cow disease and avian influenza, might also be introduced by illegal wildlife trade, and, consequently, affect the business market.⁷⁶ In the case of mad cow disease, the cost of cattle losses and of eradicating the disease will certainly be

⁷⁰ UNEP Report, *supra* note 1, at 19.

⁷¹ Global Initiative Report, *supra* note 4, at 7.

⁷² Ferreira, *supra* note 54.

⁷³ WYATT, *supra* note 51, at 45. This indirect effect is common to all kinds of environmental crimes.

⁷⁴ *Id.* at 44.

⁷⁵ Even though there are critics about the conducts of the pet industry involving animal welfare, the fact is that this industry is considered legal. Hence, the law-abiding components of the market should be protected, especially because the illegal market does not follow regulations and the possibilities of animal mistreatment are logically higher.

⁷⁶ WYATT, *supra* note 51 at 45.

reflected in the price of beef. In the end, those interested in eating that kind of protein will have to pay the increasing costs of the product.

The illegal wildlife trade also affects the livelihood of the human inhabitants of a menaced ecosystem. For example, a portion of South Africa's economy depends on wildlife tourism. The "Big Five" (elephants, rhinoceros, lion, buffalo and leopard), for example, are a great resource of richness.⁷⁷ Many tourists are willing to pay significant prices to see these species in the wild. As the population of these species decreases, the South African tourism industry is likewise damaged. Specifically, tourism was responsible for 7.9% of South Africa's GDP in 2012.⁷⁸ In other words, 1 in 12 jobs in South Africa is fruit of the tourism industry. The economic risks created by the illegal wildlife trade thus threatens a vitally important portion of South Africa's economy.⁷⁹

1.1.2.3 Effects of Illegal Wildlife Trade on Human Well-being

The risk of contracting zoonosis for human and non-humans' health, is another reason for governmental concern with the illegal wildlife trade. Consider, for instance, SARS and Ebola: these are just two examples of diseases contracted from animals.⁸⁰ For example, monkeys, part of the illegal pet trade, can carry a series of diseases as "monkey pox, Hepatitis A and B, Herpes Simples B, shigellosis (dysentery in a highly infectious form), cholera and tuberculosis (Green and CPI 1999)."⁸¹ Armadillos can carry human leprosy.⁸² Birds can "carry the avian flu, but can

⁷⁷ SOUTH AFRICA'S WILDLIFE WONDERS, SOUTHAFRICA.INFO, <http://www.southafrica.info/about/animals/wildlife.htm> (last visited Aug. 30, 2014).

⁷⁸ *South Africa's Tourism Economy, Tourism and Economy*, SOUTHAFRICA.INFO, <http://www.southafrica.info/business/economy/sectors/tourism-overview.htm#.VY9gk87DNlK> (last visited Jun. 27, 2015)

⁷⁹ *Id.*

⁸⁰ WYATT, *supra* note 51, at 49.

⁸¹ *Id.*

also transmit parrot fever, or psittacosis, which causes high fever, severe headaches and pneumonia-like symptoms in people (Green and CPI 1999).”⁸³ In particular, Ebola provides an interesting case of zoonotic disease. Although previous outbreaks have been connected to the handling of wildlife such as bats, gorillas, chimpanzees, monkeys and even porcupines, the source of the last outbreak remains uncertain.⁸⁴ However, specialists maintain that “[...] it is clear that we must examine human relationships with wildlife to ensure we protect against this and other future disease risks.”⁸⁵ Precaution is absolutely necessary; the World Bank estimates that the recent outbreak of Ebola would have cost US\$ 32.6 billion if it had not been contained.⁸⁶ The harm created by the illegal wildlife trade is unquestionable.

1.1.2.4 Effects of Illegal Wildlife Trade in the National Security

The illegal wildlife trade also has national security impacts that should be of governmental concern.⁸⁷ Corruption, for example, is a part of the wildlife trade that unequivocally undermines national security.⁸⁸ Illegal wildlife trade “[...] would not occur were it not for corruption of the officials in origin, transit and destination countries as well as

⁸² *Id.* at 50.

⁸³ *Id.*

⁸⁴ Timothy Bouley & Sara Thompson, TRAFFICKING WILDLIFE AND TRANSMITTING DISEASE: BOLD THREATS IN AN ERA OF EBOLA, WORLD BANK, https://blogs.worldbank.org/voices/trafficking-wildlife-and-transmitting-disease-bold-threats-era-ebola?cid=EXT_TWBN_D_EXT&hootPostID=1de2ec46c921c1166333595300b36cc3 (last visited Oct. 14, 2014).

⁸⁵ *Id.*

⁸⁶ EBOLA: NEW WORLD BANK GROUP STUDY FORECASTS BILLIONS IN ECONOMIC LOSS IF EPIDEMIC LASTS LONGER, SPREADS IN WEST AFRICA, WORLD BANK, <http://www.worldbank.org/en/news/press-release/2014/10/08/ebola-new-world-bank-group-study-forecasts-billions-in-economic-loss-if-epidemic-lasts-longer-spreads-in-west-africa> (last visited Oct. 14, 2014).

⁸⁷ *Id.* at 51.

⁸⁸ *Id.* at 52.

corruption of the employees of transportation agencies involved along the smuggling chain.”⁸⁹ The illegal wildlife trade also attracts organized crime, due to high profits and low risk of detection.⁹⁰ Furthermore, the connections between terrorism and the illegal wildlife trade can certainly undermine national security.⁹¹ Terrorist organizations like Boko Haram use wildlife trade to fund themselves. According to Science Magazine:⁹²

Wildlife-related conflict is not limited to labor injustice. Scarce wildlife species used as luxury goods can draw extraordinary prices. For example, high demand and reduced supply have contributed to record prices in elephant and rhino products, with ivory recently sold for \$3000/kg and rhino horn fetching \$60,000 to \$100,000/kg. As in the drug trade, such concentrations of value promote a cascade of social consequences. Huge profits from trafficking luxury wildlife goods have attracted guerilla groups and crime syndicates worldwide. In Africa, the Janjaweed, Lord’s Resistance Army, al-Shabab, and Boko Haram poach ivory and rhino horn to fund terrorist attacks.

The entrance of organized crime into the wildlife trade may also increase violence and other crimes, especially if criminal organizations are involved.⁹³ The connections between fishing crimes and slavery, explained above, demonstrate the effects of those vicious connections that start by harming animal welfare and end by fulminating human dignity through labor exploitation of the most vulnerable.⁹⁴ In other words, the illegal wildlife trade can be as dangerous as other illegal markets, such as drug, arms and human trafficking, especially when the markets interrelate. The harmful effects of the illegal wildlife trade on National Security, compared to the others, is enough to justify why governments all over the world are concerned with this industry and are looking for alternatives to eradicate it.

⁸⁹ *Id.*

⁹⁰ *Id.* at 53.

⁹¹ *Id.* at 55.

⁹² Bachares, *supra* note 46, at 377.

⁹³ WYATT, *supra* note 51, at 50.

⁹⁴ *See supra* subsection 1.1.1.1.

1.1.3 Illegal Forest Trade

According to Greenpeace, “[e]very two seconds, an area of forest the size of a football pitch is lost due to logging or destructive practices. Seventy two per cent of Indonesia's intact forest landscapes and 15 per cent of the Amazon's have already been lost forever. Now the Congo's forests face the same threat.”⁹⁵ This includes legal deforestation, but needless to say, “[t]he extent of illegal logging in some countries is so large, and law enforcement is so poor, that the chances of detection and punishment may be very small – and the incentives to operate illegally correspondingly large.”⁹⁶ According to a four-year research project conducted in Brazil, Mexico, Indonesia and the Philippines, the probability of a logging crime being punished is less than 0.082 percent and the probability of being convicted in some regions as Papua and Indonesia was even smaller - just 0.006 percent.⁹⁷ With a lucrative market and small probability of being arrested, this illegal market has all the ingredients to thrive. Its effects, however, are extremely harmful, as it will be shown in the next subsection.

1.1.3.1 Impacts of Illegal Forest Trade

The harmful effects of illegal forest trade, which impact ecology, economy, and the nation's government, explain why governments should prevent it, especially using criminal law. Like the impacts of the illegal wildlife trade, the effects of the illegal forest trade are both direct and indirect.

⁹⁵ FOREST – THREATS, GREENPEACE, <http://www.greenpeace.org/international/en/campaigns/forests/threats/> (last visited Aug. 28, 2014).

⁹⁶ Duncan Brack, *Illegal Logging*, 1 (2007), available at https://web.archive.org/web/20080703162659/http://www.chathamhouse.org.uk/publications/papers/download/-/id/508/file/9384_bp0707illegallogging.pdf.

⁹⁷ Maryline Pereira Gonçalves et al., JUSTICE FOR FORESTS: IMPROVING CRIMINAL JUSTICE EFFORTS TO COMBAT ILLEGAL LOGGING 5 (2012), available at http://siteresources.worldbank.org/EXTFINANCIALSECTOR/Resources/Illegal_Logging.pdf.

1.1.3.1.1 Ecological Effects

The ecological effects of the illegal forest trade are both direct and indirect. Directly, the illegal forest trade results in the loss of native species. There are, however, plentiful indirect effects. First, deforestation has an enormous impact on climate change, as the loss of trees results in increased atmospheric carbon dioxide.⁹⁸ Not only does global warming menace the polar bears,⁹⁹ but humans are also surely menaced by the climate change. Additionally, deforestation impacts fauna. For example, consider illegal logging in Far East Russia, which destroys the wild boar's food source.¹⁰⁰ The Amur or Siberian Tiger, already an endangered species, depends on the wild boar for food, and thus illegal logging contributes to that species' decline.¹⁰¹ Further, in Central Africa, illegal logging is a menace to great apes, such as gorillas and chimpanzees.¹⁰² These are but a few examples that can explain why the forest market should be strictly regulated.

1.1.3.1.2 Economic Effects

The first economic effect from the illegal trade is the loss of tax revenue.¹⁰³ Estimates in the Philippines, for example, suggest the government loses between 2.5 and 5% of its budget to illegal logging.¹⁰⁴ The explanation is simple, as illegal loggers do not pay taxes. Nevertheless, there are other indirect economic effects of the illegal logging trade. It is not difficult to estimate that deforestation will generate scarcity of timber and that lack of product in the market will increase the product price in the future. Not just the government loses with the forest illegal trade, but so does the consumer, who will ultimately pay a higher price for wood products.

⁹⁸ WYATT, *supra* note 51, at 39.

⁹⁹ *Id.*

¹⁰⁰ *Id.* at 41.

¹⁰¹ *Id.*

¹⁰² Brack, *supra* note 96.

¹⁰³ WYATT, *supra* note 51, at 44.

¹⁰⁴ Brack, *supra* note 96, at 2.

Further, people who work in the forest industry will lose their jobs due to this scarcity. In turn, the State, in addition to the employees who lost their jobs, will suffer in the form of an increase in unemployment social security beneficiaries. Entrepreneurs will also be negatively impacted. Although the scarcity will cause higher timber prices in the future, currently the illegal logging trade causes reduced prices; and it is impossible to compete with the black market.¹⁰⁵ The explanation is, again, straightforward: those who need to invest in sustainable forest management cannot compete with an illegal market that does not have operational costs. The result is the collapse of the legal industry and lack of investment in sustainable development.¹⁰⁶ Finally, that illegal market also generates increasing costs in law enforcement.¹⁰⁷

1.1.3.1.3 Effects on Nation's Governability

Forest crime also weakens a nation's governability. The first factor is the link between corruption and illegal logging. As explained by the World Bank, the existence of the latter is easier when accompanied by the former, as "illegal logging operations cannot occur without the explicit or implicit consent of those government officials in charge of protecting the forests."¹⁰⁸

¹⁰⁵ *Id.*

¹⁰⁶ *Id.*

¹⁰⁷ WYATT, *supra* note 51, at 45.

¹⁰⁸ Gonçalves, *supra* note 97, at 6. According to the document:

[...] Whether in the form of grease payments and the bribing of local forest officials or the securing of protection from high-ranked political figures, large-scale illegal logging operations cannot occur without the explicit or implicit consent of those government officials in charge of protecting the forests. Indeed, research has shown that forest crime is, in most countries, accompanied by corruption among regulatory and forest law enforcement officials, making it even more difficult to detect and prevent these crimes. Forestry officers generally have significant discretionary powers with comparatively little oversight, creating an environment in which corruption flourishes, particularly since government forest officers are paid relatively little, compared to the value of forest resources.

In addition to corruption, illegal timber trade also promotes conflict and political instability. For example, the recent conflicts in Liberia and Democratic Republic of Congo are funded by illegal logging.¹⁰⁹ Khmer Rouge insurgents, in Cambodia, were also funded by logging.¹¹⁰ Deforestation can likewise be linked with violence. Dorothy Stang's case, the American nun murdered in Brazil for defending the Amazon Forest, is just one example of how preservation can be a menace to those trying to obtain profit from forest.¹¹¹ For any of those effects presented above, illegal forest trade justifies government prevention concerns.

1.2 Why Criminal Law?

As we can see from the scenarios explained above, there is room for the use of criminal law to punish and prevent environmental harm. Criminal law is characterized by a stronger moral condemnation and by the possibility of using one of the most severe ways of punishment: imprisonment.¹¹² As a result of that characterization, the use of criminal law is ideally restricted only to punish and prevent the most serious misconduct.¹¹³ This is still true in cases in which alternatives to prison are used. For example, if an individual does not perform the community

¹⁰⁹ Brack, *supra* note 96, at 2.

¹¹⁰ *Id.*

¹¹¹ BRAZILIAN RANCHER JAILED FOR MURDER OF AMERICAN NUN DOROTHY STANG, *THE GUARDIAN*, <http://www.theguardian.com/world/2013/sep/20/brazilian-rancher-jailed-dorothy-strang-murder> (last visited Aug. 28, 2014).

¹¹² See WAYNE R. LAFAYE, *PRINCIPLES OF CRIMINAL LAW* 13 (2nd ed 2003). Some countries preview also the death penalty for environmental crimes. (Global Initiative Report, *supra* note 4, at 30) However, as the polemics about this penalty can justify another thesis, it will not be object of this work. Also, the use of alternatives to prison is well known and, therefore, not all crimes result in a prison sentence. That does not change the conclusion above, because imprisonment always remains an option, especially for the cases in which the defendant refuses to submit to community service, for example. Brazilian Criminal Code (C.P.), Article 44, § 4.º is an example.

¹¹³ In that sense, see SANTIAGO MIR PUIG, *BASES CONSTITUCIONALES DEL DERECHO PENAL* 96 (2011).

service as his or her sentence required, he or she will end in prison, which is essentially a form of coercion.¹¹⁴

Unequivocally, due to its associated impacts as discussed above, environmental crimes fit within the standard of serious misconduct. It is not difficult to provide examples within the categories of environmental crimes quoted above: fishing crimes are a clear menace to the oceans and to the extraction of an important kind of protein; wildlife crime can swipe species off the map and be a menace to the economy of several countries, with harmful consequences in health, social and governability levels; forest crimes have consequences to the ecosystem as a whole, but its consequences to climate change due to the CO2 emissions¹¹⁵ are ultimately enough to prove that there are reasons for using criminal law to repress and prevent these wrongs.

1.3 Environmental Crimes in Brazil and in the United States of America

This section provides examples of fishing, wildlife and forest crimes in Brazil and at the federal level of United States of America.¹¹⁶ It explains how criminal law is used to protect the environment in these countries and whether imprisonment is being used as an answer for environmental crimes. This section will use examples from each country to show that imprisonment is not the standard sentence for environmental crimes, which begs the discussion: should this be changed?

¹¹⁴ For example, C.P., Article 44, § 4.º.

¹¹⁵ Gonçalves, *supra* note 97.

¹¹⁶ It is important to highlight that, in Brazil, just the Federation can enact crimes. There are no State crimes. All crimes, including the environmental offenses, are federal. Brazilian Constitution (C.F.), Article 22, I.

1.3.1 Fishing Crimes in Brazil and in the federal level of the United States of America

This subsection will discuss whether imprisonment is a common punishment for fishing crimes in Brazil and in the United States of America.

In Brazil it is a crime to transport, commercialize, process or industrialize species obtained by illegal fishing. The crime is punished with a prison term of one to five years.¹¹⁷ However, these criminals are rarely sentenced to terms of imprisonment. First of all, because non-recidivists, as a rule, have the option to accept an agreement suspending the criminal procedure with the use of alternative punishments.¹¹⁸ Even where criminal procedure does proceed, the use of imprisonment is still unlikely. In charges involving unintentional crimes that carry sentences less than 4 years, the use of alternative measures to prison is mandated by law, unless the culpability, the criminal history, the social conduct, and the personality of the offender, in addition to the reasons and circumstances of the crime, prove that the sentence will not be enough to reprove and prevent crime.¹¹⁹ These kinds of crimes thus rarely result in imprisonment, and the sentence for other fishing crimes¹²⁰ is typically less than 4 years.¹²¹

Although Brazilian judges could sentence the offender to a term longer than the minimum prescribed, they are very careful to use discretion when there is a factual justification

¹¹⁷ Law 9.605/98, Article 35, I.

¹¹⁸ Law 9.099/95, Article 89. The agreement will not be proposed if the offender personal characteristics or the crime circumstances do not allow the benefit, what is rare in practice.

¹¹⁹ Law 9.605/98, Article 7.

¹²⁰ In Brazil, all fishing crimes have minimum punishment of one year and none of them have a maximum term greater than 5 years. *See* Law 9.605/98, Articles 33 to 35.

¹²¹ According to reputable scholars, with whom I totally agree, length sentences are not a reality in Brazil. *See* VLADIMIR PASSOS DE FREITAS AND GILBERTO PASSOS DE FREITAS, *CRIMES CONTRA A NATUREZA* 338 (2012).

for such.¹²² In other words, the fact that the conduct is serious is precisely what made the legislature enact a statute criminalizing it; to impose a punishment over the minimum or to justify the use of imprisonment would require the Judge to explain why that case differs from those in which the minimum sentence was imposed. For example, the judge will have to explain why a specific case of transporting illegal fish is especially serious and deserves more punishment than the minimum fixed by statute. If the judge cannot, the minimum punishment and alternatives to incarceration will be applied.¹²³

If the crime is performed through a criminal organization or other kind of criminal association, the chances of imprisonment grow.¹²⁴ This is because the offender likely performed other criminal conduct and the total sentences applied can be higher than 4 years, which makes illegal the use of alternative measures to prison.¹²⁵ Research on the Superior Tribunal de Justiça (STJ), the highest Brazilian Court responsible for the interpretation of federal statutes, however, shows that it is extremely rare to impose terms of imprisonment for fishing crimes.¹²⁶

¹²² As an example, *see* the following case: STJ, HC 203.276/PE, Rel. Ministro SEBASTIÃO REIS JÚNIOR, SEXTA TURMA, 20/11/2014, DJe 12/12/2014).

¹²³ Another reason for caution on using imprisonment is the terrible and overcrowded situation of Brazilian prisons. Even the Brazilian Secretary of Justice confessed he would prefer to die than have to live inside one of Brazilian prisons, which, according to him, are medieval. *See* Tatiana Santiago, MINISTRO DA JUSTIÇA DIZ QUE 'PREFERIA MORRER' A FICAR PRESO POR ANOS NO PAÍS, G1.GLOBO.COM, <http://g1.globo.com/sao-paulo/noticia/2012/11/ministro-da-justica-diz-que-preferia-morrer-ficar-preso-por-anos-no-pais.html> (last visited Jan. 11, 2015).

¹²⁴ The concept of criminal organization is at Law 12.850/13, Article 2, and involves an organization of at least 4 persons created to perform crimes punished with more than 4 years of imprisonment or transnational ones. Being part of an organized crime ring can be punished with imprisonment from 3 to 8 years, more fine. Criminal groups that do not fit that description can also be punished for conspiracy. The cooperation of 3 or more persons in performing crimes is punished with imprisonment from 1 to 3 years by the Criminal Code (C.P.), Article 288.

¹²⁵ LAFAVE, *supra* note 112.

¹²⁶ STJ, HC 104.341/MT, Rel. Ministro NAPOLEÃO NUNES MAIA FILHO, QUINTA TURMA, 16/09/2008, DJe 10/11/2008. This is a case involving the maintenance of pre-trial imprisonment for a person that has more than 6 accusations of environmental crimes.

At the federal level of United States of America, the Lacey Act states it is unlawful “to import, export, transport, sell, receive, acquire, or purchase any fish or wildlife or plant taken, possessed, transported, or sold in violation of any law, treaty, or regulation of the United States or in violation of any Indian tribal law”.¹²⁷ Offenders “shall be fined not more than \$20,000, or imprisoned for not more than five years, or both”.¹²⁸ Therefore, prison is an option to American Federal Judges in those cases.

Compared to Brazil, the American statutes make it easier for someone to be imprisoned for fishing crimes, because they do not put as many limits on the use of prison sentence.¹²⁹ The case law further supports the contention that it is easier to imprison someone for fishing crimes in the United States of America as compared with Brazil. For instance, in *U.S. v. Fountain*, operators at an oyster fishing business were sentenced to thirty and thirty seven months in prison for conspiring to maximize the quantity of oyster sold, by creating false records.¹³⁰ In *U.S.*

¹²⁷ 16 U.S.C. § 3372 (2012).

¹²⁸ 16 U.S.C. § 3373 (2012).

¹²⁹ The infrastructure of the prison system in the United States is better (although far from ideal) than in Brazil, which can make Judges feel more comfortable using imprisonment for environmental crimes. According to the International Centre for Prison Studies, the United States of America has a rate of occupancy of 99%. PRISON STUDIES, www.prisonstudies.org (last visited Jan. 12, 2015). Brazil has an occupancy level of 163%. Brazilian data (2013) is more contemporary than American’s (2011). Although this indicates that there is no overcrowding in the United States of America, this is not accurate, at least in some states (e.g., California). *Brown v. Plata*, 131 S.Ct. 1910 (2011). In a way or another, the Brazilian situation is unfortunately worse. To have a better notion of Brazilian prison system, read the opinion of Justice Luis Roberto Barroso on the case RE 580.252/MS, still in discussion in the Brazilian Supreme Court. The vote quoted penitentiaries that do not provide minimum basic hygiene products and other where there is not water for bathing everyday. Terrible and insufficient food also seems to be a constant. Unfortunately, there is more to be read in that opinion for those who are interested in the subject, which is strictly connected with overcrowding.

¹³⁰ *United States v. Fountain*, 277 F.3d 714 (5th Cir. 2001).

v. Bruce, a case applying the Lacey Act to the commerce of undersize mussels, the accused did not plead guilty but was still sentenced between twelve and twenty-four months in custody.¹³¹

In other words, American Federal Judges seem to use imprisonment more often in fishing crimes than their Brazilian counterparts. Saying it is easier to impose terms of imprisonment for fishing crimes at the federal level in the United States of America is not the same as concluding it is easy or even common. Research about imprisonment and fishing crimes at the federal level of the United States of America indicates that the use of prison is not a common trend in those cases.¹³² In general, imprisonment is not a common outcome for fishing crimes in either country, especially if compared with other kinds of offenses, such as drug crimes, for example. Therefore, the discussion about whether imprisonment should be used in fishing crimes (and environmental crimes, generally) is relevant.

1.3.2 Wildlife crimes in Brazil and in the federal level of the United States of America

Imprisonment is likewise not a common punishment for wildlife crimes in Brazil and at the federal level of the United States of America.

In Brazil, it is a crime to export wildlife without a permit, license or authorization. The punishment is detention, from six months to one year, and a monetary fine.¹³³ This is considered

¹³¹ *United States v. Bruce*, 437 Fed.Appx. 357, 360 (6th Cir. 2011). Defendants who pled guilty got probation, or probation with house arrest. *Id.* at 359.

¹³² There are not many examples of imprisonment in those cases, according to research in the West Law Next system. I want to thank Professor Lissa Griffin for the help in this topic. One of the explanations for that could be the use of plea bargain in exchange of leniency, as happened in the case law quoted. According to the United States Department of Justice, 88.9% of federal criminal cases ended in plea bargains. FEDERAL JUSTICE STATISTICS 2010, BUREAU OF JUSTICE STATISTICS, <http://www.bjs.gov/index.cfm?ty=pbdetail&iid=4861> (last visited Nov. 19, 2015).

¹³³ Law 9.605/98, article 29, § 1, III.

a petite offense, and there is usually a kind of non-prosecutorial agreement as stated in Law 9.099/95, article 61.¹³⁴ Even if the crime is performed through a criminal organization or association, it is not guaranteed that the criminal will be subjected to a prison term, unless the punishment is fixed in more than 4 years, as explained in the last subsection.

If more crimes are involved, imprisonment becomes more plausible, as demonstrated by the famous case of the Leucistic Boa Constrictor illegally exported to the United States of America.¹³⁵ In this case, a rare boa constrictor, valued between US\$ 350,000 to 1,000,000, was illegally smuggled to the United States of America after being stolen from a zoo in Brazil. The offenders served several months in prison awaiting trial.¹³⁶ In that case, prison was a viable sentencing option because more crimes, namely theft and procedural fraud, were involved. It takes extreme cases such as this for imprisonment to be imposed on environmental offenders in Brazil who commit crimes against wildlife.

At the federal level of the United States of America, it is also unlawful to export wildlife in violation any law, treaty or regulation of the United States or even to any Tribal law.¹³⁷ It is considered a crime and is punishable by a fine not greater than US\$ 20,000 dollars or prison “for

¹³⁴ The non-prosecutorial agreement is not proposed only if: (a) the agent was already sentenced to prison, (b) if the agent already made an agreement in the last 5 years, or (c) if the personal criminal history, conduct, personality, as well of the motives or characteristics of the crime indicate the agreement is not sufficient to reprove or prevent crime, according to article 76 of Law 9.099/95.

¹³⁵ See Laurel Neme, BRAZILIAN INVESTIGATORS CRACKING THE CASE OF MISSING ONE-OF-A-KIND SNAKE, NATIONALGEOGRAPHIC.COM, <http://news.nationalgeographic.com/news/2014/05/140507-brazil-leucistic-boa-zoo-wildlife-trafficking-world/> (last visited Jan. 11, 2015).

¹³⁶ STJ, HC 282.722/RR, Rel. Ministro MARCO AURÉLIO BELLIZZE, QUINTA TURMA, 25/03/2014, DJe 02/04/2014.

¹³⁷ 16 U.S.C. § 3372 (2012).

not more than five years, or both”.¹³⁸ In *U.S. v. Bernal*, two accused were sentenced to seventy days of imprisonment for exporting two endangered primates from the United States of America to Mexico, in violation of the Lacey Act and Endangered Species Act.¹³⁹ The statutes provided that the prison sentence could have been longer, but the fact that the defendants were conservationists and did not want to harm the animals was considered in making a departure from the sentencing guidelines.¹⁴⁰ Again, the American system allows more possibility to impose prison sentences, including cases where the term is less than 4 years. This does not mean it is common to go to prison for a crime like this,¹⁴¹ as it is in drug offenses. The exchange for leniency can be a good leverage for a plea deal in wildlife offenses.¹⁴² The statute also creates the possibility of the imposition of a fine only, as stated above.

1.3.3 Forest Crimes in Brazil and in the federal level of the United States of America

In Brazil, it is a crime to cut trees in a permanent preservation area. The punishment is detention, from one to three years, and/or fine.¹⁴³ Usually, offenders of this crime do not actually end up in prison, for the motives stated above. In the United States of America, it is crime to cut or destroy timber growing in public land, which is punishable with fine or imprisonment for “not more than one year, or both.”¹⁴⁴

¹³⁸ 16 U.S.C. § 3373 (2012).

¹³⁹ *United States v. Bernal*, 90 F.3d 465 (11th Cir. 1996).

¹⁴⁰ *Id.* at 469.

¹⁴¹ Simple research on West Law Next can demonstrate this point. It also has to be said that according to the United States Sentencing Guidelines, USSG § 5C1.1.(b), imprisonment is not mandatory on those cases. Although the Guidelines are not binding, *United States v. Booker*, 543 US. 220 (2005), they are persuasive and certainly an influence.

¹⁴² *United States v. Bruce*, 437 Fed.Appx. 357, 360 (6th Cir. 2011). Defendants who pled guilty received probation, or probation with house arrest. *Id.* at 359.

¹⁴³ Law 9.605/95, article 46.

¹⁴⁴ 18 U.S.C. § 1852 (2012).

Once again, the comparison between the United States of America and Brazil made in the previous subsections applies here. It is more plausible to be imprisoned for environmental crime in the former than in latter, even though imprisonment is not common in either,¹⁴⁵ especially as compared to other kinds of crimes, like those involving drugs. This is why, remarkably if considered the harmful effects of forest crimes depicted in this chapter, it is reasonable to discuss whether imprisonment would be a good option for governments to deal with environmental crimes, considering the necessity of repressing and preventing them.

1.4 What should we do? Is Criminal Law working?

This chapter showed that environmental crimes are a challenge to be overcome. What has been done until now, including the use of criminal law, is clearly not enough. The illegal market of natural assets attracts crime, especially because environmental crimes are as lucrative as other criminal enterprises but less risky. The scenario does not show any possibility of crime reduction without coercion. With high profits and smaller risks, the growth of the illegal market is an inevitable outcome. Something must be done. This is the reason why there are voices already asking for a more severe approach in environmental crimes.¹⁴⁶

¹⁴⁵ Simple research on West Law Next demonstrates this point.

¹⁴⁶ Bachares, *supra* note 47. Although the publication used the term “war on poachers,” this dissertation preferred to use the term “tough on crime,” because there is no real war in the traditional sense, even though the United States of America “[...] has declared war on an array of incorporeal forms and notions, including terrorism, drugs, crime, illiteracy, and poverty.” David Nathan Cassuto, *Crime, War & Romanticism: Artur Andersen and the Nature of Entity Guilt*, 13 VA J. OF SOC. POL’Y & THE L. 179 (2006). In a political scene, it is possible to cite S.27 — 114th Congress (2015-2016), proposed by Senator Dianne Feinstein. That bill “[...] applies provisions of the federal criminal code concerning money laundering and racketeering to wildlife trafficking violations of the Endangered Species Act of 1973, the African Elephant Conservation Act, and the Rhinoceros and Tiger Conservation Act of 1994, if the endangered or threatened species of fish or wildlife, products, items, or substances involved in the violation and relevant conduct have a total value of more than \$10,000. Violators would be subject to increased fines and years of imprisonment.” The recent emphasis on prosecuting the individual for corporate crimes is

What, then, is a more severe approach? The probable answer is enhancing punishment through the use of imprisonment. This was, at least, the reaction Brazil and the United States of America had in the case of the drug epidemic. Tough on crime, in those countries, meant imprisonment. The percentage of inmates incarcerated for drug offenses in those nations evidences that conclusion. In Brazil in 2010, 20.3% of all inmates had been incarcerated for drug crimes.¹⁴⁷ In the United States of America, the scenario is not very different. Data from 2014 shows that 48.7% of federal inmates were imprisoned for drug offenses.¹⁴⁸ In 2013, 16% of the state's inmates were related to drug offenses.¹⁴⁹

The question that should be posed, however, is whether the imprisonment approach is an efficient way of punishing and preventing environmental crime. In the chapters that follow, this dissertation will try to provide an answer.

another trend that tends to increase the use of imprisonment in environmental crimes, at least crimes involving corporations. Focusing on the individual, the United States Department of Justice intends to enhance deterrence and promote confidence on Justice system. *See* Memorandum from Sally Quillian Yates, Deputy Attorney General, to Members of the Department of Justice & FBI (Sep. 9, 2015), *available at* <https://assets.documentcloud.org/documents/2393039/justice-dept-memo-on-corporate-wrongdoing.pdf> (last visited Sep. 13, 2015).

¹⁴⁷ Luiz Flavio Gomes and Mariana Cury Bunduky, 4 ANOS APÓS A VIGÊNCIA DA LEI DE DROGAS: AUMENTO DE 123% DOS PRESOS POR TRÁFICO DE ENTORPECENTES, INSTITUTOAVANTEBRASIL.COM.BR, <http://institutoavantebrasil.com.br/4-anos-apos-a-vigencia-da-lei-de-drogas-aumento-de-123-dos-presos-por-trafico-de-entorpecentes/> (last visited Jan. 12, 2015).

¹⁴⁸ OFFENSES, FBP.GOV, http://www.bop.gov/about/statistics/statistics_inmate_offenses.jsp (last visited Jan. 12, 2015).

¹⁴⁹ E. Ann Carson, PRISONERS IN 2013, 15 (2014), *available at* <http://www.bjs.gov/content/pub/pdf/p13.pdf> (last visited Jan. 12, 2015). The bill cited *supra*, note 132 expressly adopts imprisonment as a way of challenging environmental crimes.

2. Why we punish?

This chapter poses two questions. First, what are the objectives of imprisonment? Second, does imprisonment efficiently achieve those objectives? Upon answering these two questions, it will be possible to discuss whether imprisonment would work for environmental crimes, which will be considered in the third chapter.

The first question starts to be answered with a brief explanation of the theories of punishment, in which the philosophical rationale for imprisonment is presented. Then, an analysis of international law, as well as the Brazilian and American systems, is provided in a way of concluding that prevention and retribution are among the objectives for imprisonment in both of these countries. With that information in hand, the next step is to determine whether imprisonment can fulfill those aims, and particularly whether imprisonment can prevent crime. The balance between costs and benefits of imprisonment is also discussed in order to pave the road for a discussion about imprisonment and environmental crimes in the third chapter.

The chapter concludes that, although imprisonment is unequivocally efficient to generate retribution, it is a very expensive way of providing punishment, and could be substituted by cheaper options. Additionally, despite the high costs of imprisonment, it has achieved limited results in terms of prevention. Further, the effectiveness of prison in terms of deterrence, incapacitation and rehabilitation is limited. Therefore, in terms of prevention, prison should only be used in rare cases, such as when the harmful effects of the conducts are so high that even a discrete effect on prevention will justify the high investment. The conclusion is not that imprisonment should not be used, but, instead, that segregation should be used more wisely. Chapter 3 will discuss what wise use of imprisonment means as applied to environmental crimes.

2.1 Theories of Punishment

This subsection provides an overview of the theories of punishment. The theories explain why we punish and elucidate reasons why imprisonment is used to prevent and repress crimes.

2.1.1 Retributionism

The first theory of punishment is retribution. As described in the bible, “eye for eye, tooth for tooth.”¹⁵⁰ For retributionists, punishment is imposed simply because the offender caused harm to society; there is no need of rehabilitating the offender, providing deterrence or incapacitating. Retributionism is connected to what the criminal did in the past, not to what he will do in the future.¹⁵¹ It involves the idea of resolving a debt. By being punished, the criminal pays his debt to society.¹⁵² Punishment under the theory of retribution may also be explained by the idea of annulment, as “the penalty *annuls* the crime.”¹⁵³ Finally, punishment rectifies an “unfair advantage,”¹⁵⁴ if compared with those who follow the law and pay its costs, financial or not. Punishment serves to make certain that crime does not pay.

No one theory of punishment is perfect.¹⁵⁵ However, retributionism has its appeals. For example, there would be no reason for punishing a Nazi officer in his nineties if the goal of imprisonment was incapacitation.¹⁵⁶ He would not probably be able to perform something similar in that age and at this historical moment. Also, there would be no reason for rehabilitating

¹⁵⁰ Lev. 24:19–21.

¹⁵¹ NIGEL WALKER, WHY PUNISH? THEORIES OF PUNISHMENT REASSESSED 69 (1991).

¹⁵² *Id.* at 73.

¹⁵³ *Id.* at 74.

¹⁵⁴ *Id.* at 74–75. See also Andrew Von Hirsch, *Censure and Proportionality*, A READER ON PUNISHMENT 115 (Antony Duff & David Garland eds., 2013).

¹⁵⁵ See Paul H. Robinson, *The Ongoing Revolution in Punishment Theory: Doing Justice as Controlling Crime*, 42 ARIZ. ST. L. J. 1089, 1092 (2010–2011).

¹⁵⁶ *Id.* at 1091.

or providing individual deterrence to an elderly man. He likely won't live much longer. Even collective deterrence could be questioned, if the crime and the punishment are not fully covered by the press. However, it would be unfair to simply leave crime unpunished, especially considering the severity of the crime.

2.1.2 Utilitarianism

Inflicting pain as an answer to crime without a clear advantage for the community is not something that convinces all philosophers. There is no reason for inflicting pain if not to achieve a goal: deterrence, rehabilitation and incapacitation. The existence of meaningful reasons for punishing is exactly the core of the utilitarian thinking.

According to Jeremy Bentham, punishment only exists to prevent future offenses and to compensate the victim (not society, as in the retributive prism) for the evil done.¹⁵⁷ The concept of prevention has been divided into general and particular.¹⁵⁸ Bentham sustained that “[p]ain and pleasure are the great springs of human nature.”¹⁵⁹ Therefore, an evil only will be prevented if the benefits are outweighed by the risks.¹⁶⁰ This is the general prevention, which “[...] ought to be the chief end of punishment, as it is its real justification.”¹⁶¹ The pain inflicted on the offender is, therefore “[...] an indispensable sacrifice to the common safety.”¹⁶² Particular prevention is the one that applies to the criminal, personally.¹⁶³ If crime were an isolated fact that would never occur again, the punishment “would be useless.”¹⁶⁴ There are three ways of preventing the

¹⁵⁷ JEREMY BENTHAM, *RATIONALE OF PUNISHMENT*, Book I, Ch. 3 (Kindle ed.).

¹⁵⁸ *Id.*

¹⁵⁹ *Id.*

¹⁶⁰ *Id.*

¹⁶¹ *Id.*

¹⁶² *Id.*

¹⁶³ JEREMY BENTHAM, *RATIONALE OF PUNISHMENT*, Book I, Ch. 3 (Kindle ed.).

¹⁶⁴ *Id.*

criminal from offending again.¹⁶⁵ The first one is “[b]y taking from him the physical power of offending.”¹⁶⁶ This is also known as incapacitation. The second one is “[b]y taking away the desire of offending.”¹⁶⁷ Bentham called it “moral reformation”.¹⁶⁸ The third possibility is “[b]y making him afraid of offending.”¹⁶⁹ Bentham refers to it as “intimidation or terror of the law.”¹⁷⁰

Bentham was clear: as punishment is an evil in itself, it is only acceptable under the principle of utility to avoid a greater evil.¹⁷¹ Therefore, punishment should not be inflicted if “groundless,” “inefficacious,” “unprofitable, or too expensive,” or when it is “needless.”¹⁷² A punishment is “groundless,” for example, when the victim freely consents, a case in which there is no harm.¹⁷³ There is also no reason for deterring someone from performing an absolutely involuntary act (“inefficacious” punishment).¹⁷⁴ A punishment should also not be inflicted if the pain caused is superior to the pain prevented (“unprofitable” punishment).¹⁷⁵ Finally, a punishment is needless if avoidance can be achieved by “a cheaper rate.”¹⁷⁶

Beccaria was also an utilitarian. He said “[...] that the intent of punishment is not to torment a sensible being, nor to undo a crime already committed.”¹⁷⁷ Therefore, the goal “[...] is no other, than to prevent others from committing the like offense.”¹⁷⁸ The punishment and the

¹⁶⁵ *Id.*

¹⁶⁶ *Id.*

¹⁶⁷ *Id.*

¹⁶⁸ *Id.*

¹⁶⁹ JEREMY BENTHAM, *RATIONALE OF PUNISHMENT*, Book I, Ch. 3 (Kindle ed.).

¹⁷⁰ *Id.*

¹⁷¹ *Id.* at Ch.4.

¹⁷² *Id.*

¹⁷³ *Id.*

¹⁷⁴ JEREMY BENTHAM, *RATIONALE OF PUNISHMENT*, Book I, Ch. 4 (Kindle ed.).

¹⁷⁵ *Id.*

¹⁷⁶ *Id.*

¹⁷⁷ CESARE DE BECCARIA, *ON CRIMES AND PUNISHMENT*, Ch. XII (Kindle ed.).

¹⁷⁸ *Id.*

mode of inflicting it “[...] ought to be chosen, as will make the strongest and most lasting impressions on the minds of the others, with the least torment to the body of the criminal.”¹⁷⁹ For Beccaria, consequently, a punishment that would not be able to prevent a new crime is useless. Further, punishing more than needed to reach that goal is unnecessary, as the evil of punishment is justified just based on the need of prevention.

2.1.3 Which Theory is the Best?

This subsection explores the pros and the cons of each theory, in a way of concluding which one is most prevalent.

Immanuel Kant, a retributionist, did not agree with the utilitarian ideals. For him, punishment should be based on the evil done.¹⁸⁰ One man should not be sacrificed to achieve a goal (e.g. deterrence).¹⁸¹ There are other critiques to utilitarianism. First, in a radical view, even finding the innocent guilty might be accepted as a way of avoiding crime.¹⁸² The risks of punishing an innocent might be out weighed by need to reduce the sensation of impunity. Also, recent experiences with mass incarceration are still creating a lot of doubts about criminal law’s ability to control crime.¹⁸³ The high rates of recidivism create an adequate environment for questioning whether imprisonment is able to provide deterrence (individual¹⁸⁴ or collective¹⁸⁵) and rehabilitation,¹⁸⁶ as it will be shown later in this chapter.

¹⁷⁹ *Id.*

¹⁸⁰ IMMANUEL KANT, THE CRITIQUE OF PRACTICAL REASON, Second Part (Kindle ed.).

¹⁸¹ *Id.*

¹⁸² WALKER, *supra* note 151, at 90.

¹⁸³ *Id.* at 59.

¹⁸⁴ *See* subsection 2.3.3.2.

¹⁸⁵ *See* subsection 2.3.3.1.

¹⁸⁶ *See* subsection 2.3.4.

Those critics can surely be refuted. Some argue that there is no immorality in human sacrifice (use of human as an end), because it is normal to demand personal losses in the name of collectivity.¹⁸⁷ It happens with jury service, currency restrictions, food rationing and quarantine, for example.¹⁸⁸ There is also certain exaggeration on the conclusion that prison does not work for deterrence.¹⁸⁹ Saying that prison provides very limited or timid general deterrence is more accurate, as this chapter will show.¹⁹⁰ Also, the inability to provide individual deterrence is not fruit of prison by itself, but by the way the system is being administered. There are successful programs that generate outstanding results on avoiding recidivism using education and labor training.¹⁹¹ The system can also achieve some success on the grounds of incapacitation, because an incarcerated person cannot perform crimes outside prison personally.¹⁹² Likewise, it is not accurate to state utilitarianism can profit from the conviction of innocent people, because unfair convictions would undermine the confidence from the public in the judicial system.¹⁹³

On the other side, utilitarianists have a very difficult task of trying to prove that punishment does *not* intend to provide pain. There is clearly a sense of lawful vengeance on punishing somebody, the same sense that makes retributivism intuitive. What makes a punishment possible is the right of retaliation and the principle of equality, which returns the pain felt by the victim in the same intensity to the offender. According to Kant, all other criteria are “wavering and uncertain.”¹⁹⁴ A murderer must die because he has killed another human

¹⁸⁷ Nigel Walker, *Reductivism and Deterrence*, A READER ON PUNISHMENT 214 (Antony Duff & David Garland eds., 2013).

¹⁸⁸ *Id.*

¹⁸⁹ WALKER, *supra* note 151, at 137-139.

¹⁹⁰ *See* subsection 2.3.3.1.

¹⁹¹ *See* subsections 2.3.3.2 and 2.3.4.

¹⁹² WALKER, *supra* note 151, at 137-139. *See also* subsection 2.3.2.

¹⁹³ *Id.* at 92.

¹⁹⁴ KANT, *supra* note 180.

being, and not because the death penalty should be used as an example. Nothing is a more precise reflection of his thinking than the classical example of the dissolving civil society:¹⁹⁵

Even if a civil society resolved to dissolve itself with the consent of all its members as might be supposed in the case of a people inhabiting an island resolving to separate and scatter themselves throughout the whole world the last murderer lying in the prison ought to be executed before the resolution was carried out. This ought to be done in order that every one may realize the desert of his deeds, and that blood-guiltiness may not remain upon the people; for otherwise they might all be regarded as participators in the murder as a public violation of justice.

Retributionism, however, can also be challenged. First, the humanist side of utilitarianism is very appealing. Utilitarianism certainly has strong advantages analyzed through the eyes of humanity. It tries to transform the evil (crime) into an opportunity to succeed through rehabilitation, transforming an unproductive existence into a meaningful life.

It is similarly difficult to establish which punishment is proportional to the offense.¹⁹⁶ Of course, murder should be more severely punished than theft, for example, because a life is more important than an object. However, there are grey areas where the conclusion is less intuitive. Environmental crimes are such an example. Should the smuggling of prohibited pesticides be treated similarly to drug smuggling, or should it have the same treatment as the smuggling of prohibited cigarettes? In Brazil, pesticide smuggling¹⁹⁷ is punished less severely than cigarettes smuggling.¹⁹⁸ While both products can be dangerous to human health, illegal pesticides can contaminate the soil and food, causing harm to innocent people or collectivities. Those who

¹⁹⁵ *Id.*

¹⁹⁶ WALKER, *supra* note 151, at 138-139.

¹⁹⁷ Law 9605/98, Article 56. Punishment: imprisonment from 1 to 4 years, plus fine. In this case, it is possible for the prosecution to propose a deal similar to a non-prosecutorial agreement (Article 89 of Law 9.099/95).

¹⁹⁸ C.P., Article 334-A. Punishment: imprisonment from 2 to 5 years. In this case, it is **not** possible for the prosecution to propose a deal similar to a non-prosecutorial agreement (Article 89 of Law 9.099/95).

smoke assume the risk created by cigarettes and those who don't can keep typically their distance from the smoke. On the other hand, a person who eats vegetables contaminated by illegal pesticides likely does not have the opportunity to avoid the contamination. Viewed in this manner, it seems that the Brazilian punishment scheme is askew. Fixing that problem will not be easy, however. Should those crimes be punished equally? Or must pesticide smuggling be punished more severely than cigarettes? In that case, should pesticide smuggling be treated similarly to drug or firearm trafficking? Or should pesticide smuggling stay in the middle? The answer is not easy. Indeed, it is difficult to find a punishment proportional to the conduct.

Against retributivism, it is also possible to focus on the fact that the punishment usually has impacts beyond individual offender. His or her family also suffers as a result of his or her incarceration.¹⁹⁹ A wife loses her husband and vice-versa. Their children suffer while one parent is imprisoned. Alternatively, parents may also suffer, living with the fact that their child is in prison. The suffering is emotional and individual, but also economical and social. Incarcerating people harms families economically and makes it difficult for formerly incarcerated persons to succeed in life upon release.²⁰⁰ Retributivism, however, does not account for the indirect effect of third parties' suffering. The stigma provided by punishment can be a barrier for employment even after the offender paid his or her debt with the society.²⁰¹ Retributivism cannot explain that, as the debt was paid. The need to incapacitate or even rehabilitate for the benefit of all the community, including the offender's family, can explain the indirect suffering with which families and societies must live.

¹⁹⁹ WALKER, *supra* note 151, at 106.

²⁰⁰ See subsection 2.3.1.

²⁰¹ WALKER, *supra* note 151, at 108.

The difficulty determining the better theory explains why public opinion reflects both traditions (utilitarian and retributivist).²⁰² "It is therefore not surprising that penal codes sit on the fence."²⁰³ Legislatures, feeling the division, adopt the theory that "ambiguity, not honesty, is the best policy."²⁰⁴

Even though there is a tendency to use both theories at the same time, the lack of positive effects of criminal law (and, especially, imprisonment) on crime reduction resulted in an approach more focused on retributivism. If it is not possible to sustain punishment based on the results it should have generated (reduction of recidivism, for example), why not focus more on retribution? The so-called "just deserts" give emphasis to the retribution deserved by the offender as a result of the skepticism about utilitarian *aims*.²⁰⁵ The results of this approach is clearly demonstrated by today's overcrowded prison systems.

2.1.4 Mixed Systems

Therefore, nowadays the scholars work with mixed theories.²⁰⁶ If it is not possible to prove beyond a reasonable doubt the superiority of retributivism over utilitarianism, and vice-versa, why not mix the pros and forget the cons? Systems that mix the two theories are called hybrid or eclectic systems. Hybrid systems "graft the two principles together."²⁰⁷ On the other side, an

²⁰² *Id.* at 8. In England, two of every five adults is retributivist. The others believe in deterrence, incapacitation and reform.

²⁰³ *Id.*

²⁰⁴ *Id.*

²⁰⁵ *Id.* at 137. Despite "just deserts" is not a purely retributivist ideology, it focuses on the intuitive and popular idea that offenders should suffer proportionally to their offenses, especially because utilitarian aims were difficult to prove.

²⁰⁶ See H.L.A. HART, PUNISHMENT AND RESPONSIBILITY 3 (2d ed. 2008) as an example of scholar. American and Brazilian systems, as shown above, are examples of legal systems.

²⁰⁷ WALKER, *supra* note 151, at 128.

eclectic system is one that allows judges to alternate between utilitarian and retributive principles.²⁰⁸

Of course, the adoption of a mixed systems does not end all the discussions about the theory of punishment. After all, there are those who maintain that it is not possible to mix contradictory purposes like retribution and rehabilitation.²⁰⁹ On the other hand, if it were clear what the preponderant purpose is, this would not be a problem. The problem is which principle should prevail, but this is not the central question here.²¹⁰ For the purposes of this work, it suffices to conclude that we punish not just to inflict retribution, but also to achieve deterrence, incapacitation and rehabilitation. Those are also the reasons that we should take into consideration in the context of environmental crime, as those crimes constitute an important part of a broader discipline called criminal law.

2.1.5 Four Philosophical Purposes of Punishment

This section explains each of the four philosophical purposes of punishment. Understanding the purposes is vital for concluding whether imprisonment fulfills those aims. Retribution is the need to inflict pain as an answer to a crime. The fact that penitentiaries cause pain is beyond question. That is why legislatures usually evoke its use to provide an answer to an angry population: because imprisonment is painful, sending an offender away for a long time to a penitentiary satisfies the population's rage and thirst for justice. It also has a symbolic effect. The expressive function of punishment, through which the evil is officially recognized and

²⁰⁸ *Id.*

²⁰⁹ DEBORAH H. DRAKE, PRISON, PUNISHMENT AND THE PURSUIT OF SECURITY 24 (2014). The author sustains that rehabilitation and punishment are incompatible. I disagree with that idea, especially because of the outstanding results of the educational programs described in the next pages. The inmates suffered with the pain of imprisonment, but have the opportunity to become law-abiding citizens.

²¹⁰ See Robinson, *supra* note 155.

condemned by the state, is important to society.²¹¹ Criminals are being separated from the rest of the society because of their acts confirm that they are evil and, as a consequence, they should be segregated.

Deterrence is founded on the idea that someone will give up crime because its costs (prison, for example) are higher than its benefits (profits from crime).²¹² General deterrence is when the punishment experienced by one individual dissuades others from performing a crime.²¹³ On the other hand, particular deterrence is when the punishment suffered by one individual motivates him to live a law-abiding life.²¹⁴

Another purpose of imprisonment is incapacitation. When someone is incarcerated, he is not only being punished and used as an example, but he is also being incapacitated. While in a penitentiary, the idea is that the inmate would not be able to perform crimes. Therefore, social peace is enhanced and the community is protected from the dangers imposed by the criminal. The offender is locked up, so law-abiding citizens can live in peace and tranquility.

Rehabilitation is also one of imprisonment's most important purposes. Rehabilitation provides the opportunity for the inmate to be a better person, through education, labor and counseling. There is no rehabilitation with overcrowding, unsafe and unhealthy environment.

²¹¹ See Joel Feinberg, *The Expressive Function of Punishment*, A READER ON PUNISHMENT 73 (Antony Duff & David Garland eds., 2013).

²¹² It is important to highlight the difference between deterrence and displacement. If, due to the presence of police, the offender decides to perform the felony in another neighborhood, this is a case of displacement, and not of deterrence. WALKER, *supra* note 151, at 13-14. If it were a case of deterrence, the criminal would not perform the offense because of the risk of getting caught. Deterrence would make pesticide smugglers look for a legal way of living. On the other hand, displacement would make smugglers just look for another route or place to sell their product.

²¹³ See LAFAYE, *supra* note 112, at 25.

²¹⁴ *Id.*

Therefore, rehabilitation is also a way of reducing the harmful effects of penitentiaries,²¹⁵ allowing incarcerated persons to become law-abiding citizens.

Nigel Walker differentiates personal reform (through counseling of a relative or parole officer, for example) and rehabilitation (through a new job and honest living).²¹⁶ Wayne R. LaFave enunciates education as a purpose of punishment, because people are sent to prison “[...] to educate the public as to the proper distinctions between good conduct and bad – distinctions that, when known, most society will observe.”²¹⁷ These terms are not used in this work; I believe that the concept of reform is inseparable from rehabilitation. Personal reform is part of becoming a law-abiding citizen. It is also difficult to conclude that an inmate has become a law-abiding citizen just because he or she received counseling or learned a profession. Additionally, I believe that education, as described by LaFave, is included in general deterrence. In his example, citizens are taught by coercion how to follow the correct path. It is difficult, however, to say that a citizen acts correctly because of fear or due to the fact that he really agrees with the content of the statute.

Therefore, in this work, I argue that imprisonment has four purposes: retribution, deterrence, incapacitation and rehabilitation. Are they, however, adopted by American and by Brazilian legal systems? The next subsection will answer this question. Knowing the legal aims of punishment is necessary to conclude whether imprisonment fulfills those aims and,

²¹⁵ See E. Rotman, *Beyond Punishment*, A READER ON PUNISHMENT 295-296 (Antony Duff & David Garland eds., 2013). Rotman argues that, in fact, imprisonment should be justified by retribution or incapacitation. Rehabilitation should be a way of neutralizing the harmful effects of penitentiaries. The next subsection, however, explains that United States and Brazil consider rehabilitation as a purpose of imprisonment.

²¹⁶ WALKER, *supra* note 151, at 42.

²¹⁷ LAFAVE, *supra* note 112, at 26.

consequently, if segregation is an efficient way of dealing with those that perform environmental crimes.

2.2 Legal Aims of Punishment

In the previous section, the philosophical theories of punishment were presented. Now, this section provides an overview about which theories are adopted by Brazilian and American legal systems.

In the first subsection, this work analyzes some treaties about punishment internalized by Brazil and/or by the United States of America, to understand whether those countries compromised themselves by adopting a specific theory of punishment in the international level.

Subsequently, the internal legal system of both countries will be the subject of this work, describing which of the purposes of punishment have been adopted in the United States of America and in Brazil, which lays a foundation for the later discussion of whether those purposes are fulfilled by imprisonment.

2.2.1 International Law

International law does not offer just one justification to punishment, but there is a clear dominance of utilitarian concerns. Article 5 of the Universal Declaration of Human Rights established that “[n]o one shall be subjected to torture or to cruel, inhuman or degrading treatment or punishment.” The International Covenant on Civil and Political Rights follows this path. In its Article 10.1, the international treaty stated that “[a]ll persons deprived of their liberty shall be treated with humanity and with respect for the inherent dignity of the human person.” The intent of those articles is to limit the imposition on pain through cruel practices, which in effect limits retribution.

The major step, however, was taken when Article 10.3 of the International Covenant on Civil and Political Rights made clear that the essential aims of the penitentiary system “[...] shall be their reformation and social rehabilitation.” Of course, recognizing those utilitarian purposes as essential aims is not the same as saying there is no retributive aspect to punishment. That would be hard to explain, as the stigma and suffering provided by segregation are difficult to deny. The words, however, are powerful and focus specifically on the penitentiary system. Imprisonment should aim to reform and rehabilitate, regardless of the retributive and other utilitarian purposes. It would be against the Covenant to use prison in a merely retributive way. It is important to highlight that the Standard Minimum Rules for the Treatment of Prisoners,²¹⁸ in its item 58, also listed protecting the society against crime (incapacitation) as one of the ultimate goals of prison, which can only happen if the imprisoned is provided the opportunity for rehabilitation. This will depend, of course, on the individualization of the treatment, as stated in the item 63(1). Rehabilitative treatment involves work (item 71), education and recreation (item 77), social relations and after-care (item 79). Even though the Standard Rules are not a treaty, it is viewed as a general consensus about the topic, as stated in its preliminary observations, and, therefore, is a tool for understanding international law.²¹⁹

The American Convention of Human Rights, known as the Pact of San Jose of Costa Rica, has similar provisions. Article 5, item 1, states that “[e]very person has the right to have his physical, mental, and moral integrity respected.” Consequently, item 2 of the same article prohibits the “cruel, inhuman or degrading punishment”, as “[a]ll persons deprived of their liberty shall be treated with respect for the inherent dignity of the human person.” Finally, the

²¹⁸ STANDARD MINIMUM RULES FOR THE TREATMENT OF PRISONERS, UNODC.ORG, *available at* https://www.unodc.org/pdf/criminal_justice/UN_Standard_Minimum_Rules_for_the_Treatment_of_Prisoners.pdf (last visited Jan. 13, 2015).

²¹⁹ *Id.*

pact ends recognizing the importance of utilitarianism, stating, on Article 5, item 6, that “[p]unishments consisting of deprivation of liberty shall have as an essential aim the reform and social readaptation of the prisoners.” As explained before, saying that reform and readaptation are essential aims is not the same as concluding that those are the only purposes. There is recognition, however, that a State under this Pact cannot adopt a merely retributive system. Imprisonment should seek rehabilitation. The American Commission on Human Rights also issued a document of consensus similar to the UN Standard Minimum Rules, in a way of inspiring a future treaty about persons deprived of liberty. The Principles and Best Practices on the Protection of Persons Deprived of Liberty in the Americas, in its *considerandum*, recognizes that “[...] that punishments consisting of deprivation of liberty shall have as an essential aim the reform, social readaptation and personal rehabilitation of those convicted; the reintegration into society and family life; as well as the protection of both the victims and society.”²²⁰

Although the United States signed the Pact of San Jose, the country did not ratify it.²²¹ However, the United States is bound by the International Covenant on Civil and Political Rights, which was signed (October 7, 1977) and ratified (June 8, 1992)²²² and contains basically the same provisions as the American Convention. Therefore, United States of America and Brazil

²²⁰ PRINCIPLES AND BEST PRACTICES ON THE PROTECTION OF PERSONS DEPRIVED OF LIBERTY IN THE AMERICAS, CIDH, <http://www.cidh.org/Basicos/English/Basic21.a.Principles%20and%20Best%20Practices%20PD L.htm> (last visited Jul. 15, 2015).

²²¹ GENERAL INFORMATION OF THE TREATY, OAS, http://www.oas.org/dil/treaties_B-32_American_Convention_on_Human_Rights_sign.htm (last visited Jan. 17, 2015).

²²² STATUS OF RATIFICATION, OHCHR, https://treaties.un.org/pages/viewdetails.aspx?chapter=4&src=treaty&mtdsg_no=iv-4&lang=en (last visited, Jan. 17, 2015).

(which ratified both treaties),²²³ have the legal obligation to recognize rehabilitation as one of the aims of punishment (not the only, as explained above).

Treaties have legal value inside both countries, although in different ways and weights. In Brazil, treaties, after their approval by the legislature, had the same status as a statute until 2004. However, after Amendment 45, treaties about human rights began to have the same status as amendments to the Constitution if approved with the same quorum needed in both chambers for changing the Brazilian Constitution (C.F.).²²⁴ Those treaties about human rights that are not approved using this quorum are hierarchically below the Constitution, but still above normal statutes (*supra legal*), as decided by Brazilian Supreme Court (S.T.F.) when discussing exactly the American Convention of Human Rights.²²⁵ Therefore, the treaties above are *supra legal* in Brazil, meaning that they are hierarchically superior to a statute, but inferior to the Constitution. That is a difference between Brazil and the United States of America, in which treaties signed and ratified have the status of federal law.²²⁶

2.2.2 Brazilian Law

The Brazilian Constitution incorporated most of the principles contained in the international treaties cited above. Cruel punishment is expressly forbidden, as well as capital punishment (except in case of declared war), life imprisonment, forced labor and ban.²²⁷ The

²²³ PRINCIPLES AND BEST PRACTICES ON THE PROTECTION OF PERSONS DEPRIVED OF LIBERTY IN THE AMERICAS, *supra* note 221; GENERAL INFORMATION OF THE TREATY *supra* note 222. Brazil ratified the International Covenant on Civil and Political Rights on Jan. 24, 1992, and the Pact of San Jose on July 09, 1992.

²²⁴ C.F., Article 5th, § 3.º.

²²⁵ RE 349703, Relator(a): Min. CARLOS BRITTO, Relator(a) p/ Acórdão: Min. GILMAR MENDES, Tribunal Pleno, julgado em 03/12/2008.

²²⁶ NADIA E. NETZEL, LEGAL REASONING, RESEARCH, AND WRITING FOR INTERNATIONAL GRADUATE STUDENTS 210.

²²⁷ C.F., Article 5th, XLVII.

Constitution also says that statutes have to regulate the individualization of the punishment.²²⁸ This is meaningful because the fact that the punishment should fit the person means that retribution is not the only purpose of punishment. If no utilitarian ideology (rehabilitation, for example) were involved, in theory, all people would be treated equally for performing the same crimes, regardless of their personal characteristics and their dangerousness to the society.

Concerns about humane treatment are all abound in the Brazilian Constitution, which is a clear limitation to retributivism. The punishment cannot extend to anyone other than the criminal.²²⁹ Prisoners rights to physical and moral integrity are expressly recognized by the Constitution.²³⁰ Women in prison have the right to stay with their babies during breast-feeding time.²³¹ Prisoners have the right to be separated according to the nature of their crime, their age and gender.²³² Therefore, besides the individualization of the punishment, the Brazilian Constitution also has a series of limitations to retributivism, which is further restricted by the treaties cited above, that are hierarchically inferior to the Constitution but superior to normal statutes, and focus clearly on rehabilitation.

Brazilian statutes equally do not conflict with constitutional and supra legal dispositions. For example, Brazilian Criminal Code (C.P.) says that punishment has two reasons: reprove and prevent.²³³ Those reasons permeate the statute about penitentiary law, named “Lei de Execuções

²²⁸ C.F. , Article 5th, XLVI.

²²⁹ C.F. , Article 5th, XLV. According to that norm, the reparation and forfeiting can only reach inheritors within the limits of the heritage. If the estate is not enough to cover the debts, inheritors cannot be charged.

²³⁰ C.F. , Article 5th, XLIX.

²³¹ C.F. , Article 5th, L.

²³² C.F. , Article 5th, XLVIII.

²³³ C.P., Article 59. *See also* Law 9.605/98, Article 7, II.

Penais” (L.E.P.). That statute has the goal of achieving the reintegration of the inmate,²³⁴ through the individualization of the punishment.²³⁵ The State has the duty to provide assistance to inmates, to decrease recidivism rates and allow reintegration into society.²³⁶ That assistance includes material (food, clothes and hygiene), health, legal, educational, social and religious aid.²³⁷ Educational assistance includes basic education, which is mandatory,²³⁸ high school,²³⁹ and professional education.²⁴⁰ Also vital to rehabilitation is work, which is considered a social duty and condition to human dignity, with both educational and productive finality.²⁴¹ The prison work cannot be remunerated with less than 3/4 of the minimum wage and the income is to be used for reparation, family assistance, modicum personal expenses and maintenance costs inside prison.²⁴²

Therefore, it is clear that Brazil adopts a mixture of retributivism with utilitarianism. First, Brazilian Constitution focuses clearly on limitations to retribution and individualization of punishment, as stated above. If no utilitarian ideal (rehabilitation, for example) were involved all people would have to be treated equally for the same crimes, regardless of their personal

²³⁴ L.E.P., Article 1st.

²³⁵ L.E.P., Article 5th.

²³⁶ L.E.P., Article 10th.

²³⁷ L.E.P., Article 11.

²³⁸ L.E.P., Article 18.

²³⁹ L.E.P., Article 18-A, recently included by Law 13.163, from September 9, 2015.

²⁴⁰ L.E.P., Article 19.

²⁴¹ L.E.P., Article 28.

²⁴² L.E.P., Art. 29. On April 10, 2015, Brazil’s Attorney General challenged before the Brazilian Supreme Court (S.T.F.) the constitutionality of the norm that allows the payment of ¾ of minimum wage for prison work based on the principles of equality and human dignity, as well as an express disposition from Brazilian Constitution that established the minimum wage. According to him, prisoners should receive at least the minimum wage. *See* REMUNERAÇÃO DE PRESOS EM TRÊS QUARTOS DO SALÁRIO MÍNIMO É TEMA DE ADPF, STF.JUS.BR, <http://www.stf.jus.br/portal/cms/verNoticiaDetalhe.asp?idConteudo=289202> (last visited Apr. 13, 2015).

characteristics and their dangerousness to the society. Second, the Brazilian Criminal Code²⁴³ requires that punishment should repress and prevent crime, which clearly means mixing utilitarianism with retribution. Preventing and repressing crime is also the objective of criminal law with respect to environmental crimes.²⁴⁴

2.2.3 American Law

This section discusses if and how theories of punishment are accepted by the American system. The Eighth Amendment to the U.S. Constitution states that “[e]xcessive bail shall not be required, nor excessive fines imposed, nor cruel and unusual punishments inflicted.” According to the United States Supreme Court:

The exact scope of the constitutional phrase ‘cruel and unusual’ has not been detailed by this Court. But the basic policy reflected in these words is firmly established in the Anglo-American tradition of criminal justice. The phrase in our Constitution was taken directly from the English Declaration of Rights of 1688, and the principle it represents can be traced back to the Magna Carta. The basic concept underlying the Eighth Amendment is nothing less than the dignity of man. While the State has the power to punish, the Amendment stands to assure that this power be exercised within the limits of civilized standards. Fines, imprisonment and even execution may be imposed depending upon the enormity of the crime, but any technique outside the bounds of these traditional penalties is constitutionally suspect. This Court has had little occasion to give precise content to the Eighth Amendment, and, in an enlightened democracy such as ours, this is not surprising. But when the Court was confronted with a punishment of 12 years in irons at hard and painful labor imposed for the crime of falsifying public records, it did not hesitate to declare that the penalty was cruel in its excessiveness and unusual in its character. [citation omitted]. The Court recognized in that case that the words of the Amendment are not precise, and that their scope is not static. The Amendment must draw its meaning from the evolving standards of decency that mark the progress of a maturing society.²⁴⁵

²⁴³ C.P., Article 59.

²⁴⁴ Law 9.605/98, Article 7, II.

²⁴⁵ *Trop v. Dulles*, 356 U.S. 86, 99 (1958) (discussing evolving standards of decency and the meaning of cruel and unusual punishment); *see also Thompson v. Oklahoma*, 487 U.S. 815 (1988) (prohibiting death penalty for defendants under 16 years-old); *Graham v. Florida*, 560

Prohibiting cruel and unusual punishment is clearly a way of limiting retributivism and opening a path for a more humane and rehabilitative treatment. As there is not a constitutional right for rehabilitative programs, its absence, in some regards, gives way to claims of cruel and unusual punishment.²⁴⁶ This is why, coherent with the international law, American statutes have incorporated some utilitarian purposes to criminal sentencing, as it will be shown shortly. Although every state has its own criminal system, all states are bound by the Constitution and by the international treaties incorporated in the United States' system.²⁴⁷ As, in Brazil, just a federal statute can enact criminal law, this section presents an overview of the American federal system as an example of the American legal tradition.²⁴⁸

In the American federal system, the sentence should be “[...] sufficient, but not greater than necessary, to comply with the purposes set forth in paragraph (2) of this subsection.”²⁴⁹ In determining the particular sentence, courts will consider “the nature and circumstances of the offense and the history and characteristics of the defendant.”²⁵⁰ Once again, a system that does not contemplate only the nature and circumstances of the crime, but also the characteristics of the defendant, is not totally retributivist, but also has utilitarian purposes. Therefore, it is not a surprise that the purposes adopted by federal legislation include retribution, deterrence, incapacitation and rehabilitation. Federal legislation expressly adopt retribution when it states

U.S. 48 (2010) (prohibiting life without parole for non-homicide crimes performed by juvenile offender); *Brown v. Plata*, 131 S. Ct. 1910 (2011) (ruling that overcrowding was the cause lack of adequate care in Californian system, what made the United States Supreme Court order the State of California to reduce its prison population).

²⁴⁶ See *Garza v. Miller*, 688 F.2d 480, 486 (7th Cir. 1982).

²⁴⁷ NETZEL, *supra* note 226. International treaties are incorporated as federal law in the United States of America.

²⁴⁸ C.F. , Article 22, I.

²⁴⁹ 18 U.S.C. § 3553 (2012).

²⁵⁰ 18 U.S.C. § 3553 (1) (2012).

that punishment should “reflect the seriousness of the offense,” “promote respect for the law,” “provide just punishment for the offense.”²⁵¹ The punishment also must “[...] afford adequate deterrence to criminal conduct.”²⁵² The purpose of incapacitation is expressly adopted when it is said that punishment should “[...] protect the public from further crimes of the defendant.”²⁵³ Sentencing intends to “[...] provide the defendant with needed educational or vocational training, medical care, or other correctional treatment in the most effective manner,” meaning that the sentence should also have a rehabilitative purpose.²⁵⁴

The rehabilitative purpose is fulfilled by initiatives such as prison work. Working in a prison industry intends to provide inmates with “[...] maximum opportunity to acquire a knowledge and skill in trades and occupations which will provide them with a means of earning a livelihood upon release.”²⁵⁵ Recognizing rehabilitation as a purpose of punishment, American federal legislation faced that challenge when it created a governmental corporation to provide industry jobs for federal prisoners – the Federal Prison Industries.²⁵⁶ Prison industry, however, is not the only way of rehabilitating through work. It is also, possible, for example, to use prison labor “for constructing or repairing roads, clearing, maintaining and reforesting public lands, building levees, and constructing or repairing any other public ways or works financed wholly or

²⁵¹ 18 U.S.C. § 3553(2)(A) (2012).

²⁵² 18 U.S.C. § 3553(2)(B) (2012).

²⁵³ 18 U.S.C. § 3553(2)(C) (2012).

²⁵⁴ 18 U.S.C. § 3553(2)(D) (2012).

²⁵⁵ 18 U.S.C. § 4123 (2012).

²⁵⁶ 18 U.S.C. § 4121 (2012).

in major part by funds appropriated by Congress.”²⁵⁷ These options fight idleness and provide experience and knowledge for a law-abiding life outside the prison walls.²⁵⁸

Education is also an option for rehabilitating inmates. In the federal prison system, an inmate without a high school diploma or General Education Development (GED) credential “[...] is required to attend an adult literacy program for a minimum of 240 instructional hours or until a GED is achieved, whichever occurs first.”²⁵⁹ The regulations bring some exceptions to that rule, such as “pretrial inmates” and “sentenced deportable aliens,” but this does not belittle the overall requirement to provide mandatory secondary education in the prison system.²⁶⁰ As secondary education will be a requisite for some jobs in the outside world, the same logic applies to prison. Without a high school diploma or GED, it is not possible, as a rule, to get “a commissary work assignment above minimum pay level, an institution work assignment above grade 4 compensation, or an industrial work assignment above grade four or in a non-graded incentive pay position.”²⁶¹ Therefore, there is no doubt that rehabilitation is a purpose of imprisonment in the United States of America.

Although the educational and work programs in prisons are a real part of the American system, federal legislation expressly states that, on deciding about punishment, the Court should recognize “that imprisonment is not an appropriate means of promoting correction and

²⁵⁷ 18 U.S.C. § 4125 (a) (2012).

²⁵⁸ The prison industry is not restricted to the federal level. Corcraft, from the New York State Department of Corrections and Community Supervisions, have industries in 17 correctional facilities in the state. *See* CORCRAFT PRODUCTS, www.corcraft.org (last visited Nov. 19, 2015). The shops provide a wide arrange of products (apparel, chemicals, and furniture, for example) which are sold to “[...] government agencies (including other states) at the state and local levels; schools and universities, courts and police departments, and certain nonprofits.” *Id.* Rehabilitation through prison industry, therefore, is a reality both in federal and state level.

²⁵⁹ 28 C.F.R. § 544.70 (2014).

²⁶⁰ 28 C.F.R. § 544.71 (2014).

²⁶¹ 28 C.F.R. § 544.74(a)(2) (2014).

rehabilitation.”²⁶² This, in fact, does not contradict 18 U.S.C. § 3553 (1). It is one thing to say that rehabilitation should be pursued; it is another to say that judges should choose prison because it rehabilitates. Rehabilitation should be provided inside federal prisons, especially as a way of limiting idleness.²⁶³ However, this should not be a main topic when deciding if imprisonment should be used. Therefore, the federal system adopts a mixed model, focusing on retribution, deterrence, incapacitation and rehabilitation, which also applies to federal environmental crimes.

2.3 Practice of Imprisonment

As explained above, both Brazil and the United States of America imprison people to obtain retribution, deterrence, incapacitation and rehabilitation. To determine if imprisonment would work for environmental crimes, it is necessary to determine whether imprisonment works in general and, if so, how it works. To achieve this goal, this paper analyzes each purpose individually.

2.3.1 Retribution

Imprisonment works as a way of retribution. The loss of liberty causes suffering and that is undeniable. However, imprisonment has effects, which go beyond restricting an inmate’s liberty, that impact the inmate’s family, professional life and health; this recommends caution.

²⁶² 18 U.S.C. § 3582(a) (2012). To have a better historical background from this paragraph, *see Tapia v. United States*, 131 S. Ct. 2382, 2387 (2011). In that case, the United States Supreme Court held that the Sentencing Reform Act precluded the sentencing judge not just from choosing prison to promote rehabilitation, but also to lengthen the prison sentence in furtherance of rehabilitation.

²⁶³ Laboring seems to be an efficient way to reduce idleness. At least in the State of New York, it was clear that the main objective of prison industry is to avoid idleness, while providing inmates with soft skills necessary for entering in the job market after leaving the prison system. Interview with Michael Hunt, Director of Correctional Industries, at Great Meadow Correctional Facility (Mar. 10, 2015).

In prison, the inmate loses contact with family and children. This is painful and stressful by itself. But things get worse with time. Emotional distress from the loss of contact damages marriages and parents-children bonds.²⁶⁴ The loss of contact is aggravated by the financial burden on staying in touch with the family. Prisons are sometimes far away from central areas such that the costs of transportation are detrimental to families who are already dealing with wage loss. According to the Pew Charitable Trust, “[f]amily income averaged over the years a father is incarcerated is 22 percent lower than family income was the year before a father is incarcerated.”²⁶⁵ The investigative work of photographer Jacobia Dahm on the private network of midnight buses transporting families to prisons provided an interesting representation of the costs of staying in touch with family in New York.²⁶⁶ A trip from New York City to the penitentiary in Attica can cost US\$ 65 (sixty-five dollars) for an adult and US\$ 30 (thirty dollars) for a child, which is expensive for poor families who are already suffering from a deficit in their normal income.²⁶⁷

Prison has also its toll on health. Family and social bonds are essential for human health,²⁶⁸ which makes prisons an unhealthy place for living. Mental problems are an issue. One-

²⁶⁴ David Cloud, *On Life Support: Public Health in the Age of Mass Incarceration* 17 (2014), available at <http://www.vera.org/pubs/public-health-mass-incarceration> (last visited Jan. 14, 2015).

²⁶⁵ The Pew Charitable Trust, *Collateral Costs: Incarceration’s Effect on Economic Mobility* 5 (2010), available at http://www.pewtrusts.org/~media/legacy/uploadedfiles/pcs_assets/2010/CollateralCosts1pdf.pdf (last visited Jan. 15 2015). “Even in the year after the father is released, family income remains 15 percent lower than it was the year before incarceration.”

²⁶⁶ Andrew Boryga, FAMILY TIME ON PRISON BUSES, THE N.Y. TIMES (Nov. 7, 2014) <http://lens.blogs.nytimes.com/2014/11/07/family-time-on-prison-buses/> (last visited Jan. 15, 2015).

²⁶⁷ *Id.*

²⁶⁸ Cloud, *supra* note 264, at 16.

third of deaths in jails are due to suicide.²⁶⁹ "Today, about 14.5 percent of men and 31 percent of women in jails have a serious mental illness, such as schizophrenia, major depression, or bipolar disorder, compared to 3.2 and 4.9 percent respectively in the general population."²⁷⁰ Infectious diseases are also more common in prison than in general population. Tuberculosis is more than 4 times as prevalent in prison than general population.²⁷¹ Chronic diseases as hypertension, arthritis, asthma and cancer are also more common in the prison population.²⁷²

The professional harms are likewise unequivocal. The modern world is very dynamic. If you do not keep in touch with technology, you will get antiquated very fast. Upon being deprived of liberty, the prisoner involuntarily becomes out-of-date and thus loses some of his or her appeal to the labor market. Those who have a network of contacts will likely lose many and will ultimately have fewer social skills upon recovery. Inmates can easily dissocialize in prison. The sole fact of being inside a penitentiary reasonably affects prisoner's reputation. The numbers are cruel in that sense and prove the severe loss of income *post* release. According to The Pew Charitable Trust, "[s]erving time reduces hourly wages for men by approximately 11 percent, annual employment by 9 weeks and annual earnings by 40 percent".²⁷³ This means that, "[b]y age 48, the typical former inmate will have earned \$179,000 less than if he had never been incarcerated."²⁷⁴ Imprisonment impairs economic mobility harshly, which "[...] is the epitome of the American Dream."²⁷⁵ The report indicates that, "[...] of the former inmates who were in the lowest fifth of the male earnings distribution in 1986, two-thirds remained on the bottom rung in

²⁶⁹ *Id.* at 7.

²⁷⁰ *Id.* at 9.

²⁷¹ *Id.* at 6.

²⁷² *Id.* at 11.

²⁷³ The Pew Charitable Trust, *supra* note 265, at 4.

²⁷⁴ *Id.* The report also makes clear that "[i]ncarceration depresses the total earnings of white males by 2 percent, of Hispanic males by 6 percent, and of black males by 9 percent."

²⁷⁵ *Id.* at 3.

2006, twice the number of those who were not incarcerated.”²⁷⁶ On the other hand, “[...] only one-third of men who were not incarcerated during that time frame remained stuck at the bottom.”²⁷⁷ For a better understanding of what imprisonment means to the professional life of an inmate, “[o]nly 2 percent of previously incarcerated men who started in the bottom fifth of the earnings distribution made it to the top fifth 20 years later, compared to 15 percent of men who started at the bottom but were never incarcerated.”²⁷⁸ The stigma of being an ex-con, *per se*, already puts the former inmate on the bottom of any list of job candidates, and it also dissuades employers “[...] by potential legal and financial liabilities.”²⁷⁹

If prisons cause pain and suffering to inmates, it can be said that imprisonment works from the retributive perspective, which also applies to environmental crimes. However, it should be used wisely, because prison also hurt families (emotional bonds, income) and the society (productivity) in a very meaningful way, as shown above, which recommends cautiousness.

Also, the overuse of prison contributes to the lack of credibility of the criminal justice system. If imprisonment is used for crimes that are not perceived as serious by the population, criminal law loses its ability to “stigmatize conduct,”²⁸⁰ the characteristic that is precisely what differentiates it from other ways of punishing as civil liability. Paul H. Robinson wisely remembers that even criminal statutes with “moral credibility,” like the Prohibition, may not be

²⁷⁶ *Id.* at 4.

²⁷⁷ *Id.* at 16.

²⁷⁸ *Id.* at 4.

²⁷⁹ *Id.* at 10. “Interestingly, when number of years of work experience also is statistically controlled, the estimated effect of incarceration on all of the above outcomes does not change much. This implies that incarceration’s effect on economic outcomes has much more to do with having been convicted and imprisoned than it does with the work experience lost while imprisoned. In other words, having a history of incarceration itself impedes subsequent economic success”.

²⁸⁰ Robinson, *supra* note 155, at 1106.

seen by the society as fair.²⁸¹ It is not easy to “track the community’s shared intuition of justice.”²⁸² That is the reason why being tough on crime is not always being smart on crime.

The necessity of not undermining prison’s ability to stigmatize should be taken into consideration also in terms of environmental offenses. Unequivocally, some environmental crimes are abominable, such as when a river is polluted and people are killed as a consequence. In that case, the use of prison is probably adequate to punish conduct that should be stigmatized. It is not the same case as using imprisonment to punish someone who illegally sprays a wall, which is an environmental crime in Brazil.²⁸³ In that case, comparing the offender with the “worst of the worst” would make imprisonment so common that penitentiaries would not have the capacity to stigmatize anymore.

The conclusion is that the decision of using penitentiaries is not an easy call, including for environmental crimes. Even though prison is unequivocally painful for the offender, it should be used wisely due to the severity of its consequences for the inmate and his family. Furthermore, overusing prison can undermine its ability to stigmatize.²⁸⁴

2.3.2 Incapacitation

This subsection discusses whether imprisonment in fact provides incapacitation. There is no doubt that imprisonment provides a certain amount of incapacitation, at least while the prisoner is in custody. Sometimes imprisonment provides total incapacitation, but other times the incapacitation is just relative. For example, a pedophile cannot inflict pain on any child while in

²⁸¹ *Id.* at 1007.

²⁸² *Id.*

²⁸³ Article 65, Law 9.605/98. This crime is usually not punished with prison in the Brazilian system, but with alternative measures to incarceration.

²⁸⁴ Robinson, *supra* note 155, at 1106.

a penitentiary. In contrast, leaders of criminal organization are not without means of communication and may continue commanding the ring from inside the system. It is not easy to prevent the passing of messages through visitors or even through the illegal use of cellphones.²⁸⁵

Likewise, consider the relative incapacitation of drug crime offenders. An arrested dealer loses, at least temporarily, the ability to sell cocaine in his neighborhood. There is no doubt about that. Furthermore, it is probable that another person will assume his function in the criminal organization because of the lucrative market.²⁸⁶

With the leaders of a criminal ring, the efficiency of imprisonment is also possible to question. It is near impossible to wholly prevent contact with the exterior world. Consequently, a leader's expertise may still be used by the criminal organization outside the penitentiary. Just to be clear: to be completely sure that no message is passed, the correctional agency would have to prohibit any type of communication between the inmate and persons from the outside world, including his lawyer. It would be necessary to restrict visitation, which would have dire consequences to inmate and his family. Cellphone signals would have to be cut in the area, which would further affect third persons who live and move through the penitentiary area.

It is important to highlight that the Brazilian progressive system limits the incapacitation likewise. That is because, in Brazil, there are three prison regimes: closed, semi-open and open.

²⁸⁵ See Rafael Wolff, ANOTAÇÕES ACERCA DO ART. 349-A DO CÓDIGO PENAL, REVISTADOUTRINA.TRF4.JUS.BR, <http://www.revistadoutrina.trf4.jus.br/index.htm> (last visited Apr. 1, 2015).

²⁸⁶ National Academy of Science, THE GROWTH OF INCARCERATION IN THE UNITED STATES 146 (2014, Jeremy Travis, Bruce Western, & Steve Redburn ed.), *available at* <http://www.nap.edu/catalog/18613/the-growth-of-incarceration-in-the-united-states-exploring-causes> (last visited Jan. 18, 2015). This report mentioned research that proved that drug dealers were easily substituted when arrested.

Closed regime works for those punished with more than eight years of incarceration.²⁸⁷ Those prisoners will have to pay their debt with society inside medium or high-security prisons. Inmates are isolated, being able to work during the day inside the facility (there is an exception for public constructions) and rest at night.²⁸⁸ That regime is worse than the semi-open, reserved for people sentenced with more than four and less than eight years, if not recidivists.²⁸⁹ They will be imprisoned inside a penal, agricultural or industrial colony, where they can work or study.²⁹⁰ However, working or studying outside is also possible, if authorized by the judge.²⁹¹ The open regime is for inmates sentenced to four years or less, if not recidivists.²⁹² This regime is based on self-discipline and on the sense of responsibility of the inmate, who will be inside a facility during the night, weekends, holidays or days-off.²⁹³ During the day, inmates will be outside, without vigilance, to work, to study, or to perform other authorized activity.²⁹⁴ The system is progressive, meaning that if the inmate starts in the closed regime, he or she should be able to move to the semi-open regime after 1/6, 2/5 or 3/5 of his or her prison time, depending on the gravity of his or her crime.²⁹⁵ The same applies for a move from the semi-open to open regime. The intent is to provide progressive reentry. Despite the good intentions, the fact that an inmate can be freed to work during the day after 1/6 of his or her prison time reduces actual incapacitation.

²⁸⁷ C.P., Article 33, § 2º, a.

²⁸⁸ C.P., Article 34.

²⁸⁹ C.P., Article 33, § 2º, b.

²⁹⁰ C.P., Article 35.

²⁹¹ *Id.*

²⁹² C.P., Article 33, § 2º, c.

²⁹³ C.P., Article 36.

²⁹⁴ *Id.*

²⁹⁵ L.E.P., Article 112. Law 8.072/90, Article 2º, § 2.º.

This is totally different from the truth-in-sentencing model sometimes adopted in the United States of America. At the federal level, for example, since the adoption of the Federal Sentencing Guideline in 1987, a person sentenced to prison should serve at least 85% of his sentence prior to release.²⁹⁶

The inability to predict with certainty that someone will perform a crime again is another problem with using imprisonment for incapacitation.²⁹⁷ It is not possible to be sure that a murderer will kill again, or that a polluter will dump waste in a clean river again. It is possible to consider recidivism data, but not to be 100% certain that someone will commit a crime again. Therefore, it is not possible to imprison someone just to prohibit him from performing another crime, because this is naturally uncertain.

In the case of environmental crimes, prison does prevent a wildlife smuggler from trafficking while imprisoned, but that does not mean that no one will substitute him in the outside world. Imprisoning someone does not end crime. In some cases, the effects of imprisonment in terms of incapacitation are even weaker. The chief executive officer (CEO) of a company responsible for polluting a river can likely still maintain control of his business from inside the penitentiary. In corporate crimes, the masterminds usually do not personally execute the crime. For example, it is difficult to imagine a CEO who personally disposes of toxic waste in a river.

The conclusion is, although incapacitation is one of the appeals of imprisonment, segregation may not completely incapacitate an inmate. What can be said is that imprisonment

²⁹⁶ TRUTH-IN-SENTENCING IN THE FEDERAL SYSTEM, SENTENCINGPROJECT.ORG, http://www.sentencingproject.org/doc/publications/inc_truthinsentencing.pdf (last visited Jan. 18, 2015).

²⁹⁷ See NORVAL MORRIS, THE FUTURE OF IMPRISONMENT 62 (1974).

will provide at least some form of incapacitation while the inmate is in custody. In Brazil, the incapacitation can be, in fact, very brief, for the reasons presented above.

Once again it should be clarified that the prisoner is incapacitated, not the crime. The incapacitated offender will not be able to perform a crime outside prison, but others can do it in his place. Especially inside criminal organizations, criminals are substituted rapidly to keep moving with the lucrative market.²⁹⁸

2.3.3 Deterrence

This section discusses whether imprisonment prevents individuals from offending. It may, but the effects are limited. Deterrence depends on a couple of factors. Punishment does not provide deterrence unless the offender knows what he is doing is punishable.²⁹⁹ Also, the offender must be able to analyze the costs and benefits of his conduct.³⁰⁰ Obviously, deterrence depends on the costs outweighing the benefits.³⁰¹ Robinson highlighted the fact that offenders “[...] are most likely to be bad calculators, or be indifferent to future consequences.”³⁰² Often people “[...] tend to exaggerate their own abilities [...]”³⁰³ The exception is white-collar criminals, who are more prone to be better calculators.³⁰⁴ The effect of punishment, therefore, depends on its magnitude (intensity and duration), certainty, proximity and quality.³⁰⁵ A

²⁹⁸ National Academy of Science, *supra* note 286.

²⁹⁹ Robinson, *supra* note 155, at 1093.

³⁰⁰ *Id.*

³⁰¹ *Id.*

³⁰² *Id.*

³⁰³ *Id.* at 1094.

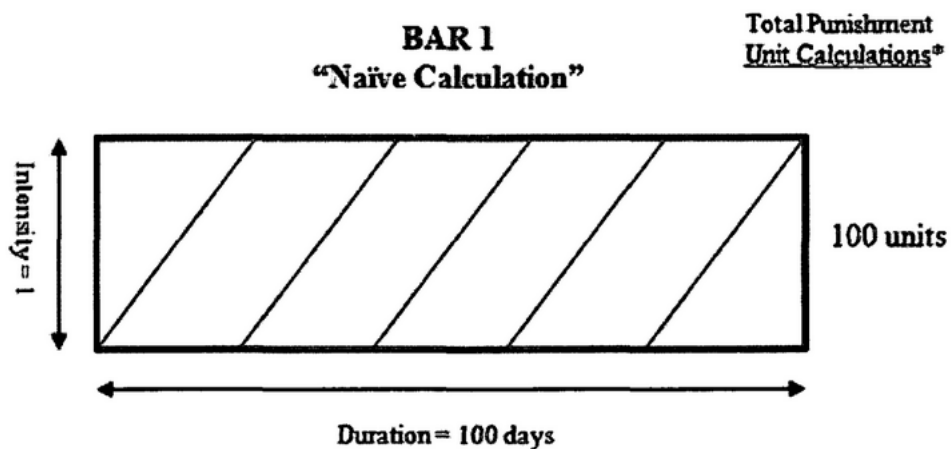
³⁰⁴ *Id.*

³⁰⁵ JEREMY BENTHAM, AN INTRODUCTION TO THE PRINCIPLES OF MORALS AND LEGISLATION Chs. XVI, XXVII, II (Kindle ed.).

punishment that is certain and swift can provide more deterrence, even though there is no precise mathematical equation.³⁰⁶

The quality of the punishment is indeed very important. That is the reason why this work intends to analyze the efficiency of imprisonment. That said, it should be highlighted that quality of punishment is just one of the factors involved in determining whether imprisonment works as a means of deterrence. This is just one of the relevant factors for concluding whether imprisonment is efficient as a way of preventing environmental crimes.

Analyzing the quality of punishment is not something easy. Even the intensity of punishment, which may seem evident, it is not. For example, Robinson explains that men often get used to the pain of the punishment.³⁰⁷ Therefore, the intensity of punishment, during a long sentence, is not the same at the start as it is at the end.³⁰⁸ The graphic description that compares the “naïve calculation” with the effects of “adaptation” is very instructive.³⁰⁹

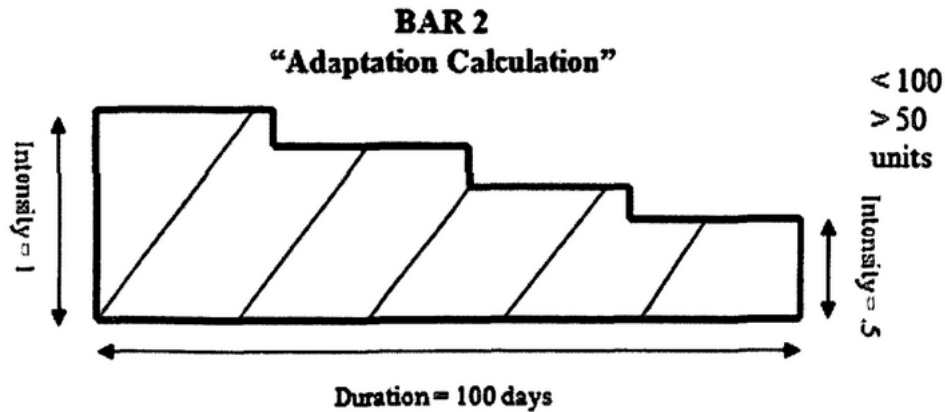


³⁰⁶ See subsection 2.3.3.1.

³⁰⁷ Robinson, *supra* note 155, at 1096.

³⁰⁸ *Id.*

³⁰⁹ *Id.* at 1095-1096.



* Punishment unit calculation = Intensity x Duration = total area within the bar

The first graphic represents the “naïve calculation,” in which the suffering from the beginning of the prison time would be the same in the end. This graphic disregards human beings’ ability to adapt. That is why Paul Robinson provides the second graphic, in which the “adaptation calculation” was taken into account. At the end of a prison term, the inmate suffers less than in the beginning because he has grown accustomed to segregation. If the intention of imprisonment were solely making an offender remember the pain he suffered in prison (individual deterrence), maybe the terms would have to be shorter. This is not so if the intent is to provide dissuasion for possible offenders (general deterrence). This example suggests that achieving one purpose sometimes means disregarding other; that is one more reason to analyze each purpose individually, in a way of determining if, collectively, imprisonment can fulfill the purposes of punishment.

2.3.3.1 Collective Deterrence

This subsection discusses whether imprisonment achieves collective deterrence. The answer is positive, even though the effect is very limited.

In the 1990s in the United States of America, crimes declined dramatically. For example, homicide rates decreased by 44%.³¹⁰ Steven Levitt provided an economical approach to this decline, which concluded that the rise of imprisonment is one of four factors (together with increased number of police officers, receding crack epidemics, and legalization of abortion) primarily responsible for the huge decreased crime rates. However, the increase of incarceration during the 90s, isolated, is individually responsible for approximately 12% of the reduction in homicide and violent crime and 8% of the reduction in property crime.³¹¹ The rest was fruit of the other factors, such as the increased number of police officers, which “[...] explain[s] somewhere between one-fifth and one-tenth of overall decline in crime.”³¹²

In explaining these trends, the author makes two important observations. The first is the impossibility of knowing if crime reduction is attributable to collective deterrence or incapacitation.³¹³ The decreased crime rates may be attributed to the incapacitation of more criminals. However, it might also be explained by the fear of being arrested. There is no certainty about how prison worked, which is relevant to deciding whether to use it. The second observation is that the increased use of imprisonment might reduce its benefits. If more offenders are going to prison, it is more likely that less dangerous criminals are in fact segregated, which may decrease prison’s efficiency.³¹⁴

³¹⁰ Steven Levitt, *Understanding Why Crime Fell in the 1990s: Four Factors that Explain the Decline and Six that Do Not*, 18 J. ECON. PERSPECTIVE 163, 163-165.

³¹¹ *Id.* at 178-179.

³¹² *Id.* at 177. See also FRANKLIN E. ZIMRING, *THE GREAT AMERICAN CRIME DECLINE* Ch. 3 (Kindle ed.). Zimring’s “best guess” about imprisonment share in crime reduction is something between 10 and 27%.

³¹³ *Id.* at 177-178. See also ZIMRING, *supra* note 312.

³¹⁴ *Id.* at 179. See also ZIMRING, *supra* note 312.

Also, although imprisonment does work in some ways to reduce crime, Levitt expresses a clear intent that his research should not be used as a justification for more imprisonment. He posits that investing in policing can be more effective than imprisonment as a means of preventing crime. According to him, “[...] a dollar spent on prisons yields an estimated crime reduction that is 20 percent less than a dollar spent on police, suggesting that on the margin, substitution toward increased police might be the efficient policy.”³¹⁵ Further, prison has indirect social costs. For instance, imprisoning minorities in a higher proportion has a larger effect on society.³¹⁶ Finally, in terms of collective deterrence, there is no certainty that the effects of imprisonment are constant. In fact, the author believes that “the two-millionth criminal imprisoned is likely to impose a much smaller crime burden on society than the first prisoner.”³¹⁷ Therefore, the dollar invested in the two-millionth criminal has lesser return to the community in terms of collective deterrence.

Analysis of other studies indicates that Levitt is not alone in concluding that imprisonment does provide deterrent effects, even though this is not enough to conclude that choosing segregation as a punishment is a good option. A report provided by the National Academy of Science also reaffirmed the deterrence theories expressed by Beccaria and Bentham.³¹⁸ According to the research, which analyzed the most up-to-date material about the

³¹⁵ *Id.*

³¹⁶ *Id.*

³¹⁷ *Id.* See also ZIMRING, *supra* note 312. Zimring also pointed the diminishing marginal return of imprisonment.

³¹⁸ National Academy of Science, *supra* note 286, at 156. Hawaii’s Opportunity Probation with Enforcement (HOPE) is quoted in the report as evidence that certainty on punishment, and not just severity, is also important to prevent crime. The Hawaiian program used frequent and random drug tests to prevent violation on parole, which would be punished with swift, short and certain prison time. The result was probationers that were 55% less likely to be arrested for a new crime. See The Pew Center on the States and National Institute for Justice, *The Impact of Hawaii’s HOPE Program on Drug Use*, CRIME AND RECIDIVISM 1, available at

topic, “[...] severity alone would not deter crime.”³¹⁹ Therefore, there should be a lot of caution “[...] about overreliance on the severity of punishment as a crime prevention policy.”³²⁰

A recent report from New York University School of Law’s Brennan Center confirmed Levitt’s impression that the already modest effects of incarceration could decrease with time. The study found “[...] that increased incarceration at today’s levels has a negligible crime control benefit.”³²¹ In fact,

“[s]ince 2000, the effect of increasing incarceration on the crime rate has been essentially zero. Increased incarceration accounted for approximately 6 percent of the reduction in property crime in the 1990s (this could vary statistically from 0 to 12 percent), and accounted for *less than 1 percent* of the decline in property crime this century.”³²²

Perhaps the most impressive fact is that “[i]ncreased incarceration has had no effect on the drop in violent crime in the past 24 years.”³²³ Even though the crime reduction percentage is not the same used by Levitt’s study, both studies agree that the rate is modest and can decline with time. These studies suggest skepticism about the deterrent effect of prison.

There is another agreement between the Brennan Center’s Report and Levitt’s article: investing in police may be more efficient than imprisonment. Brennan Center’s report concluded that policing techniques such as Compstat, which allows law enforcement officers to analyze

http://www.pewtrusts.org/~media/legacy/uploadedfiles/pcs_assets/2010/The20Impact20of20HawaiiE28099s20HOPE20Program20on20Drug20Use20Crime20and20Recidivism.pdf (last visited Aug. 11, 2015).

³¹⁹ *Id.*

³²⁰ *Id.*

³²¹ Oliver Roeder, Lauren-Brooke Eisen & Julia Bowling, WHAT CAUSED THE CRIME DECLINE? 15, *available at* https://www.brennancenter.org/sites/default/files/analysis/What_Caused_The_Crime_Decline.pdf (last visited Mar. 16, 2015).

³²² *Id.*

³²³ *Id.*

data and focus on areas of concentrated crime, “[...] may be responsible for a 5 to 15 percent decrease in crime across cities that introduced it.”³²⁴ Therefore, it had more influence on crime reduction than imprisonment. With this in mind, Nobel Laureate Joseph E. Stiglitz, in the Foreword of the Brennan Center’s report, affirmed that “[t]his prodigious rate of incarceration is not only inhumane, it is economic folly.”³²⁵

The low return on imprisonment is further demonstrated through an analysis of the effects of increasing penalties on drug consumption during the 1980s and 1990s in the United States of America. Despite the increase in punishment (which included enhanced prison time), a report from the Pew Charitable Trusts reveals that “[t]he self-reported use of illegal drugs has increased over the long term as drug prices have fallen and purity has risen.”³²⁶ Therefore, not only has the use of drugs increased, but the availability of those substances in the market has grown and consequently the prices have reduced.³²⁷ Enhancing severity through imprisonment did not work to deter drug crime.

The data from Brazil will likewise not increase confidence in prison as a deterrent factor. Research presented by “Instituto Avante Brasil” shows that, between 1990 and 2012, the prison population in Brazil had grown 508.8%.³²⁸ That was an expressive growth, especially considering that national population grew less than 30%.³²⁹ If the menace of imprisonment were

³²⁴ *Id.* at 65.

³²⁵ *Id.* at 1.

³²⁶ The Pew Charitable Trusts, FEDERAL DRUG SENTENCING LAWS BRING HIGH COST, LOW RETURN 1-3, <http://www.pewtrusts.org/en/research-and-analysis/issue-briefs/2015/08/federal-drug-sentencing-laws-bring-high-cost-low-return> (last visited Sep. 13, 2015).

³²⁷ *Id.*

³²⁸ Luiz Flávio Gomes, EVOLUÇÃO DA POPULAÇÃO CARCERÁRIA BRASILEIRA DE 1990 A 2012, INSTITUTOAVANTEBRASIL.COM.BR, <http://institutoavantebrasil.com.br/evolucao-da-populacao-carceraria-brasileira-de-1990-a-2012/> (last visited Jan. 15, 2015).

³²⁹ *Id.*

an efficient way to dissuade people from performing crimes, the crime rate would have sensibly dropped. However, this was not the case. The rate of sexual crimes grew 106.2% between 2005 and 2010.³³⁰ The percentage of homicides with firearms experienced a growth of 20% between 2000 and 2010.³³¹ The general homicide rate fell 4.13% between 2004 and 2010, though that is not a high reduction.³³² Vehicle robbery, however, experienced a reduction of 43.6% between 2006 and 2010, which is really meaningful.³³³

Consequently, it can be said that imprisonment, by itself, is not an efficient way to prevent crime in Brazil. Despite the high costs of a 508.8% growth in imprisonment, in general it did not cause a decrease in violent crimes. Certain types of violent crimes, such as sexual offenses and homicides with firearms, have grown exponentially in spite of increased rates of imprisonment. Others, such as homicide in general, had just an insignificant reduction. Although there was a huge decrease in the rate of car robbery, this may be attributable to other factors, such as anti-theft mechanisms. Evaluating these numbers makes it difficult to maintain that imprisonment is an efficient deterrent factor.

Finally, the investment in policing may explain the difference in the effectiveness of imprisonment between the American and Brazilian criminal systems. It is well known that, as a developed country, the United States of America has unequivocally more police structure than the South American nation. The data corroborates this: Brazilian Federal Police's budget for

³³⁰ Programa de las Naciones Unidas para el Desarrollo, INFORME REGIONAL DE DESARROLLO HUMANO 2013-2014, 83 (2014), http://www.latinamerica.undp.org/content/rblac/es/home/library/human_development/informe-regionalde-desarrollo-humano2013-2014/.

³³¹ *Id.* at 31.

³³² *Id.* at 29.

³³³ *Id.* at 61.

2015 was calculated at R\$ 5.39 billion, but can decrease to R\$ 3.7 billion, approximately US\$ 1 billion, due to cuts,³³⁴ in America the FBI's direct budget was US\$ 8.3 billion the same year.³³⁵

The comparison between Brazil and the United States of America confirms the impression that although imprisonment can generate some deterrence, investments in policing may be a less expensive and more efficient approach to reduce crime.

2.3.3.2 Individual Deterrence

Now it is time to discuss whether prison “works” for providing individual deterrence. The answer is negative. Recidivism is a way of measuring the prison system's efficiency on deterring people from performing new crimes. If the punishment was not enough to dissuade the inmate from committing additional felonies or misdemeanors, it cannot have provided individual deterrence.

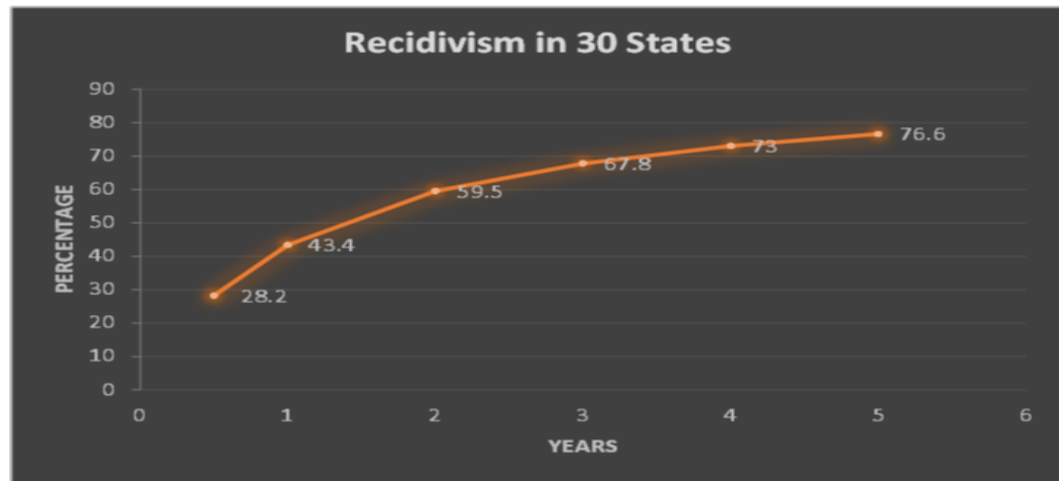
A special report from the Bureau of Justice Statistics provides astonishing data about recidivism in the United States of America. One study of thirty states puts the recidivism rate at 76.6%.³³⁶ In fact, the report provides a follow-up on prisoners released between 2005 and

³³⁴ DELEGADOS DA PF ALERTAM QUE CORTE NO ORÇAMENTO PODE AFETAR INVESTIGAÇÕES, FOLHA.COM.BR, <http://politica.estadao.com.br/blogs/fausto-macedo/delegados-da-pf-alertam-que-corte-no-orcamento-pode-afetar-investigacoes/> (last visited Jul. 19, 2015).

³³⁵ James B. Comey, Director of Federal Bureau of Investigation, Statement Before the House Appropriations Committee, Subcommittee on Commerce, Justice, Science, and Related Agencies (Mar. 26, 2014), available at <https://www.fbi.gov/news/testimony/fbi-budget-request-for-fiscal-year-2015> (last visited Jul. 19, 2015).

³³⁶ MATHEW R. DUROSE, ALEXIA D. COOPER & HOWARD N. SNYDER, RECIDIVISM OF PRISONERS RELEASED IN 30 STATES IN 2005: PATTERNS FROM 2005 TO 2010 1 (2014), available at <http://www.bjs.gov/index.cfm?ty=pbdetail&iid=4987> (last visited Oct. 27, 2015). Marie Gottschalk criticizes the use of recidivism as a way of assessing the performance of a penal system because this term usually refers to any reenter in the prison system, regardless if for a felony, minor crimes or infractions. See MARIE GOTTSCHALK, CAUGHT – THE PRISON STATE AND THE LOCKDOWN OF AMERICAN POLITICS 103. I disagree, because breaking the law after leaving the prison system proves that penitentiaries do not work for teaching prisoners how to live a law-

2010.³³⁷ In the first six months, 28.2% of the released prisoners ended up back in prison.³³⁸ The number of ex-prisoners that were incarcerated again within the first year is 43.4%.³³⁹ The percentage keeps escalating until 76.6% in the fifth year.³⁴⁰



It is worth noting that prisoners with more prior arrests are more likely to be imprisoned again.³⁴¹ For instance, 56.3% of prisoners with 4 or fewer arrests ended in prison 5 years after their release.³⁴² However, 85.6% of prisoners with 10 or more prior arrests return to prison 5 years after their release.³⁴³ The larger one's criminal background is, the higher the chances of recidivism are after leaving the prison system. This means that those who spend more time in

abiding life. That is the reason why this work uses recidivism as an indicator for prison performance. There is no perfect indicator in that case, but this one seems to be the more trustable one.

³³⁷ *Id.*

³³⁸ *Id.*

³³⁹ *Id.* at 8.

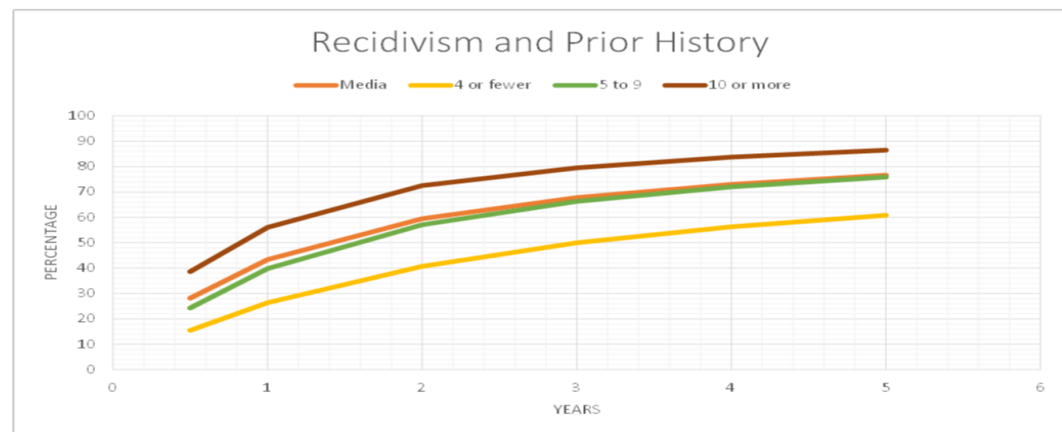
³⁴⁰ *Id.* This data considers in-state and out-of-state arrests, as better explained in a new study from the Bureau of Justice Statistics from September 2015. See Mathew R. Durose, Howard N. Snyder & Alexia D. Cooper, *Multistate Criminal History Patterns of Prisoners Released in 30 States* (2015), available at <http://www.bjs.gov/content/pub/pdf/mschpprts05.pdf> (last visited Oct. 27, 2015).

³⁴¹ *Id.* at 10.

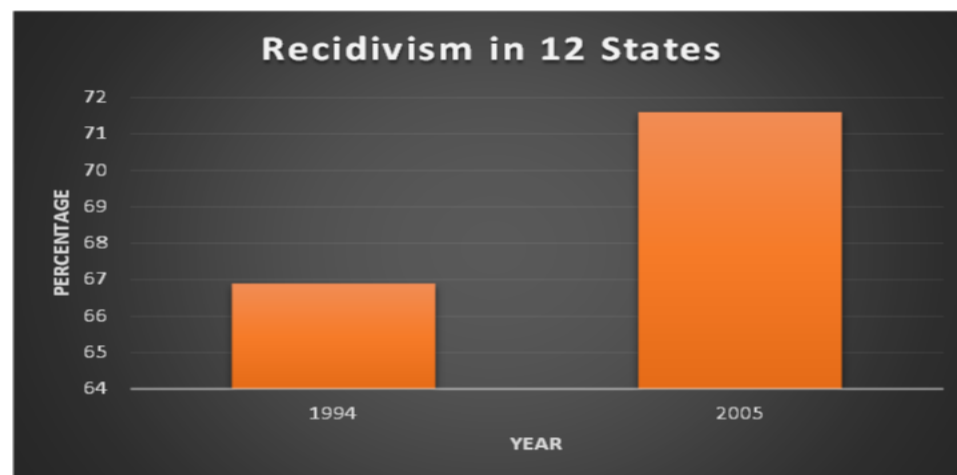
³⁴² DUROSE, *supra* note 336.

³⁴³ *Id.*

prisons usually commit more crimes, which undermines the thesis that prison is good for individual deterrence (and, also, for rehabilitation).



Even more important to note is that recidivism is increasing in the United States of America's criminal system. A comparison involving 12 states showed that, in 1994, the recidivism rate for a follow-up of three years was 66.9%.³⁴⁴ On the other hand, the rate was 71.6% in 2005.³⁴⁵

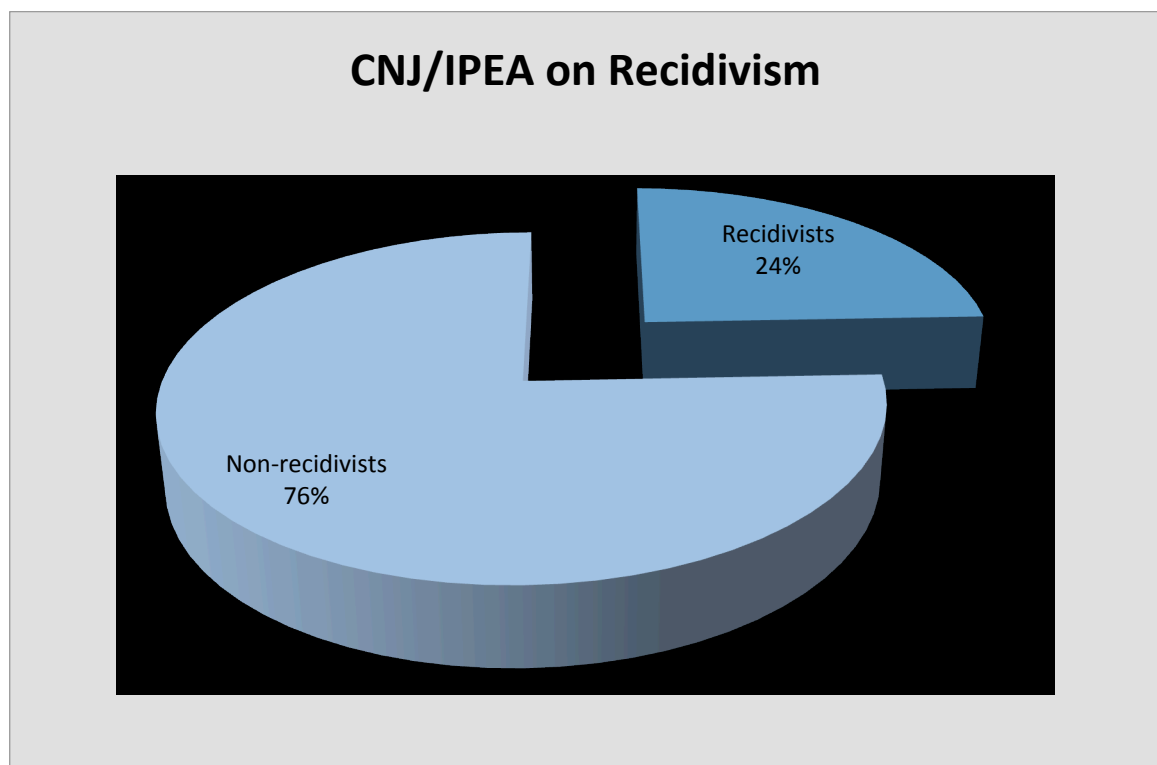


Brazil, until July 2015, did not have reliable data about national recidivism. However, the National Council of Justice (C.N.J.) hired Instituto de Pesquisa Econômica Aplicada (IPEA), a

³⁴⁴ *Id.* at 3.

³⁴⁵ *Id.*

Brazilian think tank, to research recidivism.³⁴⁶ Before IPEA's research, there was estimation, from the former Chief-Justice and President of C.N.J, Cezar Peluso, that the recidivism data from Brazil would be around 70%.³⁴⁷ Despite the estimation, the research above found that the recidivism rate is 24.4%, meaning that 75.6% of the incarcerated public researched from four states (AL, MG, PR and RJ) were non-recidivists.³⁴⁸



³⁴⁶ CNJ PESQUISARÁ REINCIDÊNCIA CRIMINAL, CNJ.JUS.BR, <http://www.cnj.jus.br/noticias/cnj/18527:-pesquisara-reincidencia-criminal-no-brasil> (last visited Jan. 15, 2015).

³⁴⁷ ÍNDICE DE REINCIDÊNCIA CRIMINAL NO PAÍS É DE 70%, DIZ PELUSO, VALOR.COM.BR, <http://www.valor.com.br/legislacao/998962/indice-de-reincidencia-criminal-no-pais-e-de-70-diz-peluso> (last visited Jan. 15, 2015).

³⁴⁸ Instituto de Pesquisa Econômica Aplicada (IPEA), REINCIDÊNCIA CRIMINAL NO BRASIL 23, http://www.ipea.gov.br/portal/images/stories/PDFs/relatoriopesquisa/150611_relatorio_reinciden cia_criminal.pdf (last visited Jul. 19, 2015) [hereinafter IPEA].

The discrepancy occurs because the research used the legal concept of recidivism.³⁴⁹ According to Brazilian Criminal Code, recidivism happens when someone, after being found guilty of a crime by a definitive judicial decision, practices another crime within 5 years.³⁵⁰ Therefore, if A is arrested for illegal fishing, is bailed and performs another fishing crime before the lawsuit referring to the first fact ends, A will **not** be part of IPEA/CNJ's statistics. He cannot be considered a recidivist, because, in Brazil, no one can be considered guilty until the end of the legal proceeding.³⁵¹ For him to be considered a recidivist, he would have to perform another crime within 5 years after the end of the proceeding that found him guilty for that fishing crime. This is the reason why there is a discrepancy between the expectation of Chief Justice Peluso and the research results.

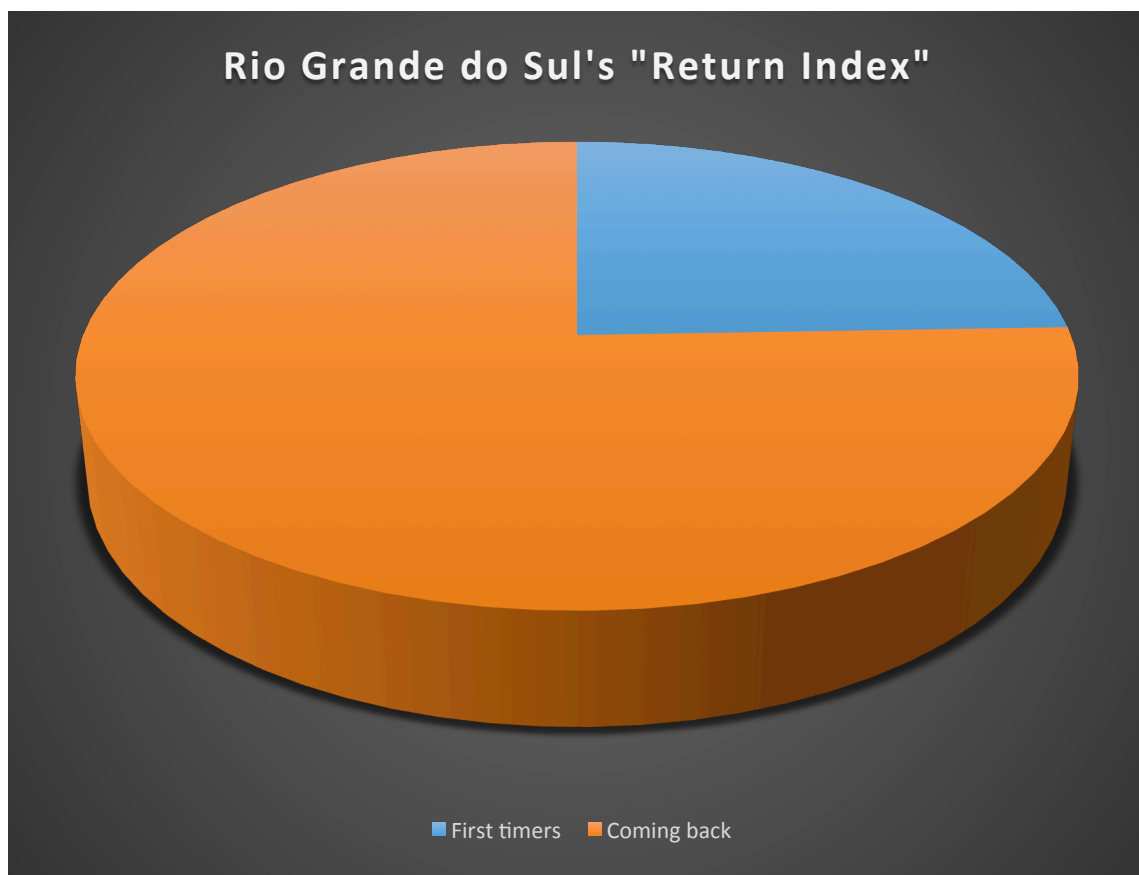
Note that, if other parameters were used, the result would be different. For example, the prison agency of Rio Grande do Sul (RS), a southern Brazilian state, provides a "return index," which measures who is not in prison for the first time. The criterion differs from the legal concept of recidivism, measuring only the percentage of inmates coming back to the system. Using data from December 4, 2014, the prison agency concluded that 68.47% of state inmates were not first-timers.³⁵²

³⁴⁹ *Id.* at 7.

³⁵⁰ C.P., Article 63. Article 64 creates some exceptions. For example, if someone is freed for the penitentiary after doing its time, but commit another crimes more than 5 years after the end of the punishment, this person will not be considered a re-incident (Article 64 C.P., I).

³⁵¹ C.F., Article 5, LVII.

³⁵² SUPERINTENDÊNCIA DOS SERVIÇOS PENITENCIÁRIOS, ÍNDICE DE RETORNO, SUSEPE.RS.GOV.BR, http://www.susepe.rs.gov.br/conteudo.php?cod_menu=39 (last visited Dec. 19, 2014).



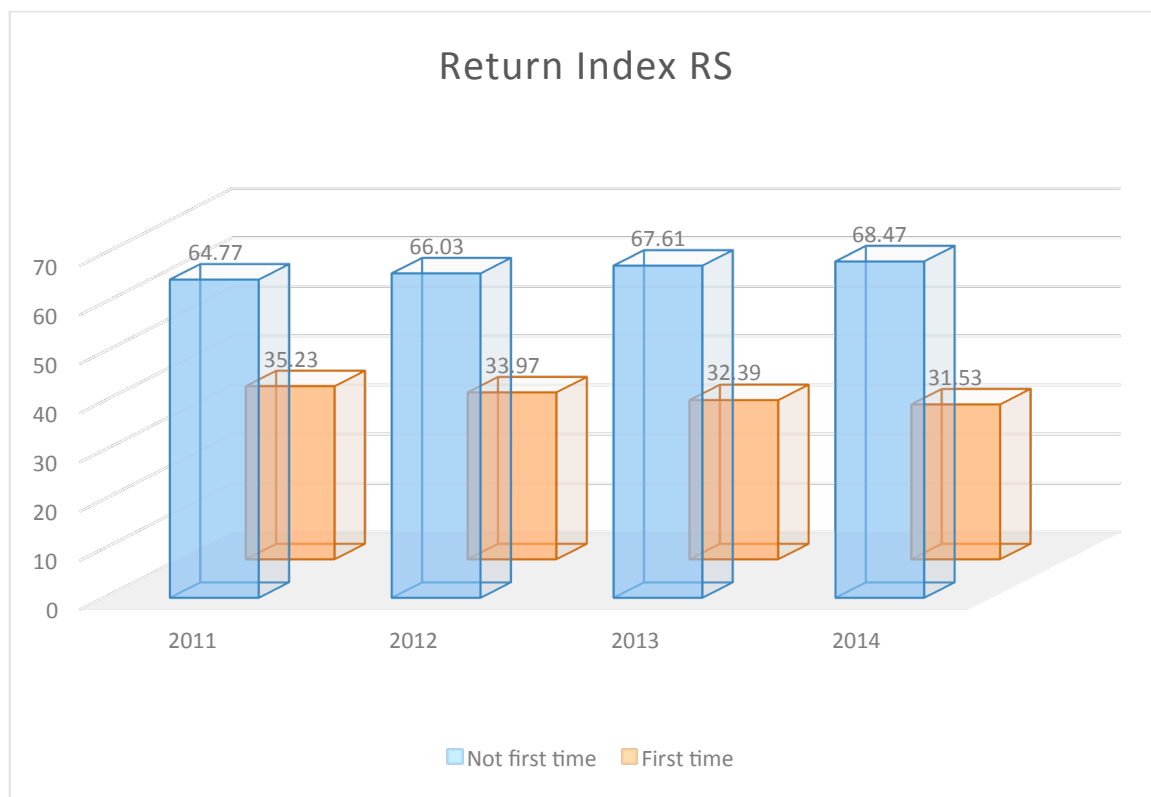
First-timers are each day rarer in Rio Grande do Sul (RS) prisons. In 2011, they represented 35.23% of the RS' inmates.³⁵³ The percentage is dropping year-by-year. In 2012, first-timers were 33.97 % of the population.³⁵⁴ One year later, in 2013, they were 32.39%.³⁵⁵ In 2014, just 31.53% on the inmates is Rio Grande do Sul were there for the first time.³⁵⁶ Therefore, in 4 years, the recidivist population of Rio Grande do Sul's prison has grown 3.7%.

³⁵³ E-mail from Cláudio R. Zamora Costa, Susepe's statistics department to the author (Dec. 31, 2014) (on file with the author).

³⁵⁴ *Id.*

³⁵⁵ *Id.*

³⁵⁶ *Id.*



Note that the fisherman used in the example above would be part of SUSEPE's statistics, even though he would not be part of CNJ/IPEA's index. Although SUSEPE's index is not using the legal criterion, its index seems more accurate. First, the legal concept of recidivism intends to punish someone more severely for a second offense. That is why the second offense should happen after the end of the legal proceeding for the first infraction. In Brazil, no one can be found guilty until the end of the criminal proceeding.³⁵⁷ The legal concept of recidivism does not focus on measuring prison efficiency. However, this is not so for SUSEPE's index case, which is more sensible to detect when prison did not work in the first time. That is why it may be more accurate as a measurement of whether imprisonment works in terms of deterrence.

³⁵⁷ C.F., Article 5th, LVII.

Note that although both the American³⁵⁸ and Brazilian³⁵⁹ bases do not provide data specific to recidivism in environmental crimes, those reports are still relevant to this work. Environmental crimes are motivated by money (as it usually happens with corporate crimes and wildlife trafficking) or by hate and cruelty (such as some crimes involving violence against animals), and so are the crimes depicted in the above reports (like murder or theft). There is thus no reason to believe that prison would be effective to prevent environmental crimes, if it is not effective for other kinds of offenses.

In conclusion, the data provided shows that imprisonment does not provide an efficient individual deterrent effect either in the United States of America or in Brazil. Many people leave prison only to return. This suggests that segregation is not an effective tool for dissuading offenders from performing crimes again. One possible explanation for this is the lack of rehabilitative tools inside prison, which is a topic discussed with the next subsection.

2.3.4 Rehabilitation

This section discusses whether prison works for rehabilitative purposes. Paul H. Robinson says that rehabilitation can “[...] work only for a limited kinds of offenses and offenders. When they do work, the effects tend to be quite modest.”³⁶⁰ However, he assures that “rehabilitation might be a very good correctional policy. [...] Used under the right circumstances, it could well be a good investment.”³⁶¹ The analysis of some programs indicates that Professor Robinson is not entirely correct, as some data suggests that rehabilitation results in sensibly smaller recidivism rates.

³⁵⁸ DUROSE, *supra* note 33.

³⁵⁹ IPEA, *supra* note 348.

³⁶⁰ Robinson, *supra* note 155, at 1099.

³⁶¹ *Id.*

2.3.4.1 Education

The question here is whether education works to rehabilitate prisoners, preventing recidivism. According to the Federal Bureau of Prisons, responsible for the federal prison system in the United States of America, the answer is positive. The agency found “[...] strong evidence that education programs reduce recidivism, possibly through normalization.”³⁶² This is because the prison system provides suffering to the inmate. Activities like work and education may reduce this suffering by emulating a sense of normality, better preparing the prisoner to rejoin society.³⁶³ In a follow-up study of three years, inmates who did not participate in any educational activity have an estimated recidivism rate of 44.5%, compared with 30.1% of those who took at least “.5 courses during each 6 months of their prison term.”³⁶⁴

The American federal policy of determining mandatory prison education for those who do not have at least a high school diploma or GED is supported by recent data. A study developed by RAND Corporation, under Bureau of Justice Assistance funding, “[...] found that inmates who participated in high school/GED programs had a 30 percent lower odds of recidivating than those who had not.”³⁶⁵ Furthermore, “[...] the odds of obtaining employment postrelease among inmates who participated in correctional education (either academic or vocational programs) was 13 percent higher than the odds for those who did not.”³⁶⁶

³⁶² Miles D. Harer, *Prison Education Program Participation and Recidivism: A Test of the Normalization Hypothesis* 12, available at http://www.bop.gov/resources/research_projects/published_reports/recidivism/orepredprg.pdf (last visited Jan. 15, 2015).

³⁶³ *Id.* at 1.

³⁶⁴ *Id.* at 11.

³⁶⁵ Lois M. Davis et al., *Evaluating the Effectiveness of Correctional Education* 57, available at http://www.rand.org/content/dam/rand/pubs/research_reports/RR200/RR266/RAND_RR266.pdf (last visited Jan. 15, 2015).

³⁶⁶ *Id.* at 58.

College education programs are also effective in fostering personal improvement and increasing chances of fitting in the job market. Although federal funding for college education inside prisons was cut during the 90s,³⁶⁷ there are some interesting private programs in the state of New York that can prove the effectiveness of college level education in prisons.

Bard Prison Initiative, from Bard College, started at 1999.³⁶⁸ The program had granted nearly 350 degrees and enrolled 600 students by January 2015.³⁶⁹ The program is highly cost-effective, as just 4% of students enrolled in the program came back to prison.³⁷⁰ The cost, US\$ 5,000 (five thousand dollars) per student, per year, is small compared to the costs of imprisonment.³⁷¹ The program offers the opportunity to obtain an Associate's or Bachelor of Art degrees from Bard College in six different prison facilities in New York State.³⁷² Even though Bard College focuses on the right to have a productive and fulfilling life through studying instead of law enforcement or recidivism,³⁷³ the Bard Prison Initiative proves that the prison system can rehabilitate if properly managed.

There are other programs working with college education in prisons that have succeeded. One example is the Cornell Prison Education Program, in which Cornell faculty joins graduate

³⁶⁷ Daniel Karpovitz and Max Kenner, *Education as Crime Prevention: The Case for Reinstating Pell Grant Eligibility for the Incarcerated* 5, available at <https://www.stcloudstate.edu/continuingstudies/distance/documents/EducationasCrimePreventionTheCaseForReinstatingthePellGrantforOffendersKarpowitzandKenner.pdf> (last visited Jan, 2015).

³⁶⁸ WHAT DO WE DO?, BARD PRISON INSTITUTE, <http://bpi.bard.edu/what-we-do/> (last visited Dec. 8, 2014).

³⁶⁹ E-mail from Prof. Megan Callaghan, PhD., Director of College Operations from Bard Prison Initiative, to the author (Jan. 17, 2015) (on file with author).

³⁷⁰ FAQs, BARD PRISON INSTITUTE, <http://bpi.bard.edu/faqs/> (last visited Dec. 8, 2014).

³⁷¹ Interview with Prof. Megan Callaghan, PhD., Director of College Operations from Bard Prison Initiative, in Annandale-on-Hudson, NY (Oct. 13, 2014).

³⁷² WHAT DO WE DO?, *supra* note 368.

³⁷³ Callaghan, *supra* note 369.

students “[...] to teach a college-level liberal arts curriculum to a select group of students at Auburn Correctional Facility and Cayuga Correctional Facility. The credits can be applied toward an associates degree from Cayuga Community College.”³⁷⁴ The recidivism rate for the 319 students that have completed at least one course is 9%.³⁷⁵ For students who have completed more than three courses, the recidivism rate is 7.5%.³⁷⁶ For the 30 students who have completed an associate’s degree, there is no recidivism yet.³⁷⁷

Another interesting experience is the Bedford Hills College Program. The program was born as an answer to the cut of public funding in prison college education in 1994.³⁷⁸ Marymount Manhattan College joined forces with Barnard College, Bank Street College of Education, Manhattanville College, Mercy College, Pace University, and Sarah Lawrence College to offer college education in Bedford Hills Correctional Facility.³⁷⁹ The Bedford Hills College Program offers the possibility of an Associates of Arts degree in Social Sciences or a Bachelor of Arts degree in Sociology.³⁸⁰ The program has granted 200 degrees, 150 Associates of Arts and 50 Bachelor of Arts, for inmates in Bedford Hills Correctional Facility, a high-security prison for

³⁷⁴ CORNELL PRISON EDUCATION PROGRAM, CORNELL UNIVERSITY, <http://cpep.cornell.edu/> (last visited Dec. 9, 2014).

³⁷⁵ E-mail from Rob Scott, Direct of Cornell Prison Education Program (“CPEP”), to the author (Jan. 16, 2015) (on file with author). The data is from 2008 on. According to an interview with Director Scott, the program is privately funded and has a cost of US\$ 5,000 per inmate, per year, including in-kind donations. CPEP is not part of law enforcement and avoiding recidivism is not its main objective. Interview with Rob Scott, Director of Cornell Prison Education Program, Ithaca, NY (Oct. 29, 2014).

³⁷⁶ *Id.*

³⁷⁷ *Id.*

³⁷⁸ PROGRAM HISTORY, MARYMOUNT MANHATTAN COLLEGE, <http://www.mmm.edu/academics/program-history.php> (last visited Dec. 9, 2014).

³⁷⁹ *Id.*

³⁸⁰ BEDFORD HILLS COLLEGE PROGRAM, MARYMOUNT MANHATTAN COLLEGE, <http://www.mmm.edu/academics/bedford-hills-college-program.php> (last visited Dec. 9, 2014).

women.³⁸¹ Of the 50 inmates with a Bachelor degree, no one has reoffended.³⁸² Of the 150 inmates that have an Associate's degree, only one person reoffended.³⁸³

The Prison to College Pipeline (P2CP), from John Jay College of Criminal Justice, takes a different approach than the others. Its intention is not to offer degrees, but instead to allow students to start taking college credits inside prison so that, after their release, they can continue college and finish their education.³⁸⁴ The P2CP, in association with other institutions, such as Osborne Association and College Initiative, will also help students in societal reentry by aiding them, for example, in obtaining residency, jobs and enrollment in college education.³⁸⁵ There are currently 14 students enrolled in the program and 16 students who have been released.³⁸⁶ Among the 16 released, only one came back to prison system.³⁸⁷ The program has state and private funding and is further evidence that rehabilitation is possible.

It is not only formal education that offers good results in terms of rehabilitation. Examples from Brazil demonstrate that informal education can also be an efficient method of rehabilitation. A good illustration comes from the city of Joaçaba, in the state of Santa Catarina (south of Brazil). Organized by Judge Márcio Bragaglia, the project called “Reeducação do

³⁸¹ Interview of Aillen Baumgartner, Director of Bedford Hills College Program, in Bedford Hills, NY (Dec. 4, 2014). Despite the high efficiency of the program, the costs are low, US\$ 1,200 per student, per year. The main objective of the program is education, not avoiding recidivism.

³⁸² *Id.*

³⁸³ *Id.*

³⁸⁴ NYS PRISON-TO-COLLEGE PIPELINE (P2CP), JOHN JAY COLLEGE OF CRIMINAL JUSTICE, <http://johnjayresearch.org/pri/projects/nys-prison-to-college-pipeline/> (last visited Feb. 10, 2014).

³⁸⁵ *Id.*

³⁸⁶ Interview of Baz Dreisinger, Director of P2CP, in New York, NY (Dec. 8, 2014).

³⁸⁷ *Id.*

Imaginário” offers inmates the possibility of exchange days in prison for book reading.³⁸⁸ After the reading, the inmates have to pass an oral test given by the Judge’s clerk.³⁸⁹ Based on the reading’s difficulty and number of pages, prison time is accordingly reduced. “The Magic Mountain”, an 840 page book by Thomas Mann,³⁹⁰ reduces an inmate’s prison time by 7 days.³⁹¹ Depending on the complexity of the book, inmates may receive a dictionary to aid reading.³⁹² The project involves only literature classics; Judge Bragaglia explains that the capacity of the inmates should not be underestimated.³⁹³ The results are inspiring. From the 200 inmates who participated in the project, there was only one case of re-incidence.³⁹⁴

Those results should not come as a surprise. There is ample data indicating that education makes a lot of difference in crime prevention. According to Pew Trust, in the United States of America “[...] those without a high school diploma or GED are far more likely to be locked up than others. While 1 in 57 white men ages 20 to 34 is incarcerated, the rate is 1 in 8 for white men of the same age group who lack a high school diploma or GED.”³⁹⁵ The same is true in

³⁸⁸ PROJETO LITERÁRIO GARANTE REMISSÃO DE PENA E RECUPERA PRESOS EM JOAÇABA/SC, CNJ.JUS.BR, <http://www.cnj.jus.br/noticias/cnj/30173:projeto-literario-garante-remissao-de-pena-e-recupera-presos-em-joacaba-sc> (last visited Jan. 15, 2015).

³⁸⁹ *Id.*

³⁹⁰ *Id.*

³⁹¹ *Id.*

³⁹² *Id.*

³⁹³ *Id.*

³⁹⁴ PROJETO LITERÁRIO GARANTE REMISSÃO DE PENA E RECUPERA PRESOS EM JOAÇABA/SC, CNJ.JUS.BR, <http://www.cnj.jus.br/noticias/cnj/30173:projeto-literario-garante-remissao-de-pena-e-recupera-presos-em-joacaba-sc> (last visited Jan. 15, 2015).

³⁹⁵ Bruce Western & Becky Pettit, *Collateral Costs: Incarceration’s Effect of Economic Mobility* 6, available at http://www.pewtrusts.org/~media/legacy/uploadedfiles/pcs_assets/2010/CollateralCosts1pdf.pdf (last visited Jan. 15, 2015).

Brazil.³⁹⁶ Data provided by State of Rio Grande do Sul, in the south of Brazil, suggests that a lack of education correlates with crime. Statistics from December 2014 show that 62.2% of inmates from Rio Grande do Sul do not have basic education.³⁹⁷ Just 6.2% of inmates have received a high school education and a mere 0.4% have superior education. More recent data based on four Brazilian states show that just 1.9% of the incarcerated people in Brazil have superior education.³⁹⁸ From those who are recidivists, just 0.7% has a college degree.³⁹⁹ It seems that without providing education imprisonment cannot effectively rehabilitate.

The importance of education, as a way of providing rehabilitation, should not be restricted to its effects on the labor market. Those effects are well documented, however, in the United States of America. The New York Times, based on data provided by the Bureau of Labor Statistics, states that the unemployment rate for individuals without a high school education is 11.5%.⁴⁰⁰ Having a high-school diploma reduced this rate to 7.4%, and just having some college education with no degree brings the rate down to 6.6 %.⁴⁰¹ The two-year occupational degree, which provides the right to perform certain respectful functions in the job market, such as nurses, pilots or detectives, has a joblessness rate of just 4%.⁴⁰² Although the two-year academic degree has a higher rate of unemployment (4.8%) than the two-year occupational degree, an academic degree is the pathway for a Bachelor's Degree. Unemployment is rare among individuals with

³⁹⁶ Brazil does not have, until now, enough national data about prison and education, and that is why this work has provided data from only one state. However, Law 13.163, from September 9, 2015, ordered a national census to be made, which will change this scenario soon.

³⁹⁷ ESTATÍSTICAS, SUSEPE.RS.GOV.BR, http://www.susepe.rs.gov.br/conteudo.php?cod_menu=34 (last visited Dec. 31, 2014)

³⁹⁸ IPEA, *supra* note 348, at 25.

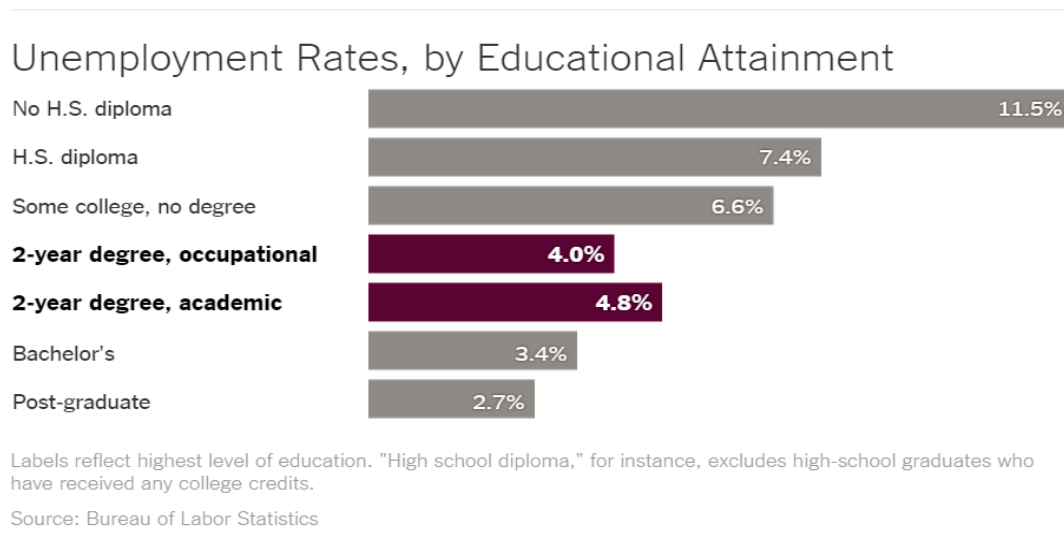
³⁹⁹ *Id.*

⁴⁰⁰ David Leonhardt, *The Jobless Rate for Community-College Graduates Is Also Low*, N.Y. TIMES, (May 29, 2014) <http://www.nytimes.com/2014/05/29/upshot/the-jobless-rate-for-community-college-graduates-is-also-low.html> (last visited Jan. 9, 2015).

⁴⁰¹ *Id.*

⁴⁰² *Id.*

Bachelor's Degrees (3.4%).⁴⁰³ Post-graduates have an unemployment rate even smaller (2.7%), as shown below in the graphic provided by the publication.⁴⁰⁴



Based on the data presented, the conclusion is that prison can rehabilitate if the proper tools are applied, especially if accompanied with higher education. Although none of the reports quoted above focused on environmental crimes, there is no reason to believe that it is not possible to rehabilitate an environmental criminal if he or she is imprisoned. In fact, as is the case with crimes in general, the success of rehabilitation is case-dependent. For example, a mule in a wildlife trafficking operation might find a better and licit job if he or she were more educated. In theory, education will help him more than the CEO of a company accused of dumping waste in a river, because the latter is already well educated. Again, education is more effective with certain kinds of criminals, as pointed by Robinson.⁴⁰⁵ Uneducated drug dealers can benefit more, in theory, from education than someone who kills another person out of jealousy. The former offense is related to the lack of opportunity in the labor market, something that

⁴⁰³ *Id.*

⁴⁰⁴ *Id.*

⁴⁰⁵ Robinson, *supra* note 155, at 1099.

higher education can ameliorate, whereas the latter offense is likely unrelated to the individual's educational background.

Although education can be provided outside penitentiaries, prison education is clearly a pathway to rehabilitation, and so is prison work.

2.3.4.2 Prison Work

Prison work can help inmates lead a law-abiding life. The effects of prison industries on rehabilitation are consistent. According to the Federal Bureau of Prisons, which investigated 7,000 federal prisoners for up to 12 years, “[...] inmates who participate in FPI are 24% less likely to recidivate for as long as 12 years following release as compared to similar situated inmates who did not participate.”⁴⁰⁶ Furthermore, those inmates “[...] are 14% more likely than non-participants to be employed 12 months following release from prison.”⁴⁰⁷ Those percentages are for all inmates, which is really important. Research from the same Federal Bureau of Prisons shows that although minorities (race and ethnicity) have higher risks of recidivism, they “[...] benefited more from vocational training and industries participation than their lower risk non-minority counterparts.”⁴⁰⁸

Data from the Program Industry Enhancement Certification Program (PIECP), in which the federal government, through the Bureau of Justice Assistance, provides incentive to state

⁴⁰⁶ FPI AND VOCATIONAL TRAINING WORKS: POST-RELEASE EMPLOYMENT PROJECT (PEP), BOP.GOV, http://www.bop.gov/resources/pdfs/pep_summary_05012012.pdf (last visited Jan. 15, 2015)

⁴⁰⁷ *Id.*

⁴⁰⁸ William G. Saylor & Gerald G. Gaes, *The Differential Effect of Industries and Vocational Training on Post Release Outcome for Ethnic and Racial Groups* 8-9, available at http://www.bop.gov/resources/research_projects/published_reports/equity_diversity/oreprprep_s1.pdf (last visited Jan. 15, 2015).

prison industries programs, is also consistent.⁴⁰⁹ In a follow-up study that ranged from less than 2 years to 7.5 years, 59.6% of PIECP participants were not arrested.⁴¹⁰ Additionally, 77.9 % of the participants were not convicted during that time.⁴¹¹ Perhaps most important is that 93% of program participants were not incarcerated during the follow-up program, indicating the effectiveness of industry prison work on preventing recidivism.⁴¹² Almost all of the inmates who worked in the industry program did not come back to prison. Working in the prison industry improves both hard and soft skills that are important to the labor market, which further explains the positive results for program participants.⁴¹³

In Brazil, an experience in the prison complex of Aparecida, state of Goiás, has also been very effective for preventing recidivism. In the compound, which includes several facilities, prisoners are employed in a variety of activities, such as making public phones and making balls. While the recidivism index in that State is 60%, just 10% of inmates who work in those facilities (just 12.7%) recidivate.⁴¹⁴

Although the research does not focus on environmental crimes, there is no reason to believe that prison work would not help to rehabilitate environmental offenders. In contrast,

⁴⁰⁹ See PROGRAM INDUSTRY ENHANCEMENT CERTIFICATION PROGRAM (PIECP), BJA.GOV, https://www.bja.gov/ProgramDetails.aspx?Program_ID=73 (last visited Mar. 15, 2015).

⁴¹⁰ Cindy J. Smith, Jennifer Bechtel, Angie Patrick, Richard R. Smith, & Laura Wilson-Gentry, *Correctional Industries Preparing Inmates for Re-entry: Recidivism & Post-release Employment* 69, available at <https://www.ncjrs.gov/pdffiles1/nij/grants/214608.pdf> (last visited Dec. 17, 2014).

⁴¹¹ *Id.* at 72.

⁴¹² *Id.* at 75.

⁴¹³ *Id.* at 79. “Those who worked in PIECP, gaining exposure to employment hard and soft skills, financial benefits, and the aesthetics of a work environment did significantly better in terms of post-release employment effects and recidivism effects than otherwise similar releases.”

⁴¹⁴ Michelle Rabelo, TRABALHO EM PRESÍDIO CONFRONTA OCIOSIDADE E DIMINUI REINCIDÊNCIA CRIMINAL, AREDAÇÃO.COM.BR, <http://www.aredação.com.br/noticias/22132/trabalho-em-presidio-confronta-ociosidade-e-diminui-reincidencia-criminal> (last visited Sep. 12, 2015).

prison work may be more effective for environmental offenders, as they previously lacked good opportunities in the legal market. On the other hand, a CEO from an oil company responsible for a huge spill will likely not benefit from prison work, as he already has the skills to acquire a good position in the legal labor market. Therefore, prison work can help with rehabilitation, including for environmental criminals.

2.3.4.3 Does prison work for rehabilitation?

The conclusion that can be drawn from this section is that prison can provide rehabilitation if education and work opportunities are provided. If, in general, prison is not rehabilitating in the United States of America and in Brazil,⁴¹⁵ it may be because the correct approach is not being used. As shown above, there are several examples of good work being done inside prison for rehabilitation.

The investment in rehabilitation can be worthwhile. For example, correctional education in prison costs US\$ 1,128 per inmate.⁴¹⁶ On the other hand, the benefits for taxpayers (US\$ 5,238) and non-taxpayers (US\$16,188) reach the amount of US\$ 21,426.⁴¹⁷ The result is US\$ 20,298 of profits.⁴¹⁸ Each dollar invested returned US\$ 19.⁴¹⁹ Correctional industries are likewise a profitable answer to the society. The cost is US\$ 1,417 per inmate.⁴²⁰ On the other hand, the return is US\$ 7,042, divided in benefits for taxpayers (US\$ 1,713) and non-taxpayers (US\$

⁴¹⁵ See *supra* subsection 2.3.3.

⁴¹⁶ Washington State Institute for Public Policy, *Return on Investment: Evidence-based Options to Improve Statewide Outcomes* 3, available at http://www.wsipp.wa.gov/ReportFile/1102/Wsipp_Return-on-Investment-Evidence-Based-Options-to-Improve-Statewide-Outcomes-April-2012-Update_Full-Report.pdf (last visited Dec. 30, 2014). “Benefits and costs are life-cycle present-values per participant, in 2011 dollars.”

⁴¹⁷ *Id.*

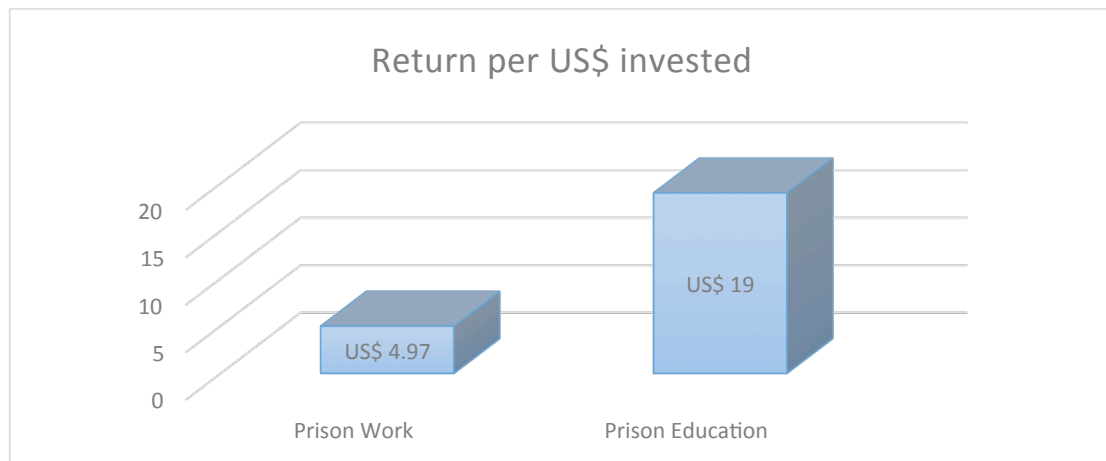
⁴¹⁸ *Id.*

⁴¹⁹ *Id.*

⁴²⁰ *Id.*

5,329).⁴²¹ The profits are US\$ 5,625.⁴²² For each dollar invested, there is US\$ 4.97 of profit.⁴²³

Therefore, if penitentiaries were used more wisely, rehabilitation would be more prevalent.



It should be highlighted that education and work opportunities, however, can also be provided outside penitentiaries. Therefore, if it is untrue that prison cannot work for rehabilitation, it is also untrue to conclude, solely based on the data provided above, that prison is the best option in terms of crime prevention. However, there is sufficient data to conclude that providing education and prison work is a worthwhile investment for reducing recidivism and helping to rehabilitate incarcerated persons.

2.3.5 Cost of imprisonment

It is not reasonable to determine whether imprisonment is a good option for repressing and preventing crimes solely based on the efficiency of segregation. It is also important to analyze the costs associated with imprisonment, which are high.

⁴²¹ *Id.*

⁴²² Washington State Institute for Public Policy, *Return on Investment: Evidence-based Options to Improve Statewide Outcomes* 3, available at http://www.wsipp.wa.gov/ReportFile/1102/Wsipp_Return-on-Investment-Evidence-Based-Options-to-Improve-Statewide-Outcomes-April-2012-Update_Full-Report.pdf (last visited Dec. 30, 2014).

⁴²³ *Id.*

Research from Vera Institute shows that the average cost per inmate, per year, is US\$ 31,286 (with data from 2010 and related to 40 states).⁴²⁴ There is a wide range among the states: some states spend as much as US\$ 60,076 per inmate (New York),⁴²⁵ while others (Kentucky) spend US\$ 14,603 per inmate.⁴²⁶ The average cost of a prisoner in a state institution is comparable to the amount paid in federal system, which was US\$ 26,163 in Fiscal Year 2011.⁴²⁷



The amount spent on imprisonment seems even more expensive if compared with educational costs. After analyzing the data provided by Vera Institute about 40 states, CNN Money compared imprisonment expenses with elementary/secondary educational costs extracted by the US Census.⁴²⁸ The result is astonishing: the cost per inmate is higher than the cost per student in **all** of those states. The cost of imprisoning one inmate in California is four times the

⁴²⁴ Christian Henrichson & Ruth Delaney, *The Price of Prisons – What Incarceration Costs Taxpayers* 10, available at <http://www.vera.org/sites/default/files/resources/downloads/price-of-prisons-updated-version-021914.pdf> (last visited Dec. 27, 2014).

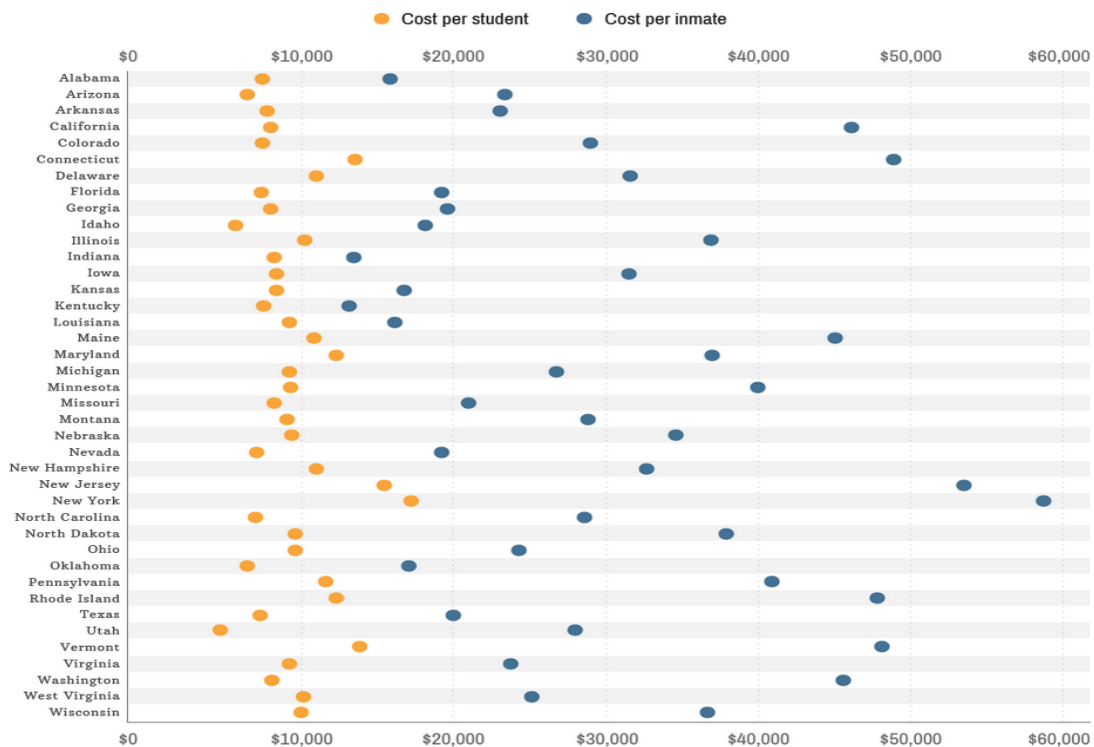
⁴²⁵ *Id.*

⁴²⁶ *Id.*

⁴²⁷ 78 Fed. Reg. 16711 (Mar. 18, 2013).

⁴²⁸ EDUCATION VS PRISON COSTS, CNN.COM, <http://money.cnn.com/infographic/economy/education-vs-prison-costs/> (last visited Dec. 28, 2014).

amount spent to educate a child or a teenager in the same year.⁴²⁹ Similar proportions are found in Maine, Illinois and Wisconsin.⁴³⁰ The graphic below, created by CNN, demonstrates this phenomenon.⁴³¹



As budget constraints are present in any state or nation, spending money on imprisonment means there is less money to spend on other areas. In fact “[i]f states were still spending on corrections what they spent in the mid-1980s, adjusted for inflation, they would have about \$28 billion more each year that they could choose to spend on more productive investments or a mix of investments and tax reductions.”⁴³² It is not a surprise that “[c]orrections spending is now the third-largest category of spending in most states, behind education and

⁴²⁹ *Id.*

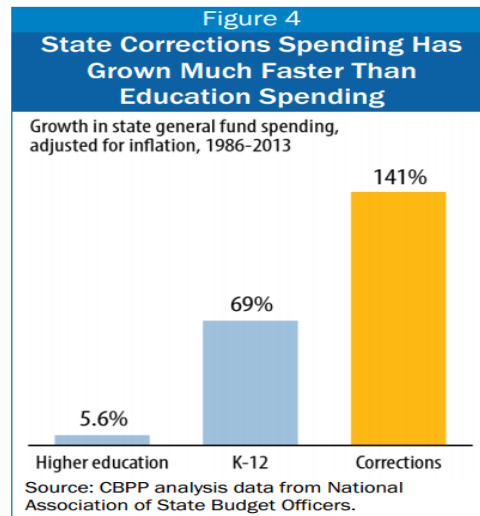
⁴³⁰ *Id.*

⁴³¹ *Id.*

⁴³² Michael Mitchell & Michael Leachman, *Changing Priorities: State Criminal Justice Reforms and Investments in Education 1*, available at <http://www.cbpp.org/files/10-28-14sfp.pdf> (last visited Dec. 29, 2014).

health care.”⁴³³ This is a cause of great concern in the United States of America; the amount spent on imprisonment grows at a faster pace than that invested in education, which is certainly not ideal.

Between 1986 and 2013, spending on corrections grew 141%, but spending on K-12 grew just 69%, and just 5.6% in higher education.⁴³⁴ States spent US\$ 20 billion on corrections in 1986 and, in 2013 US\$ 47 billion.⁴³⁵ The share of the budget going to corrections also rose: “[...] from 4.7 percent to nearly 7 percent nationally.”⁴³⁶ Here is the graphic representation made by the Center on Budget and Policy Priorities:⁴³⁷



⁴³³ *Id.*

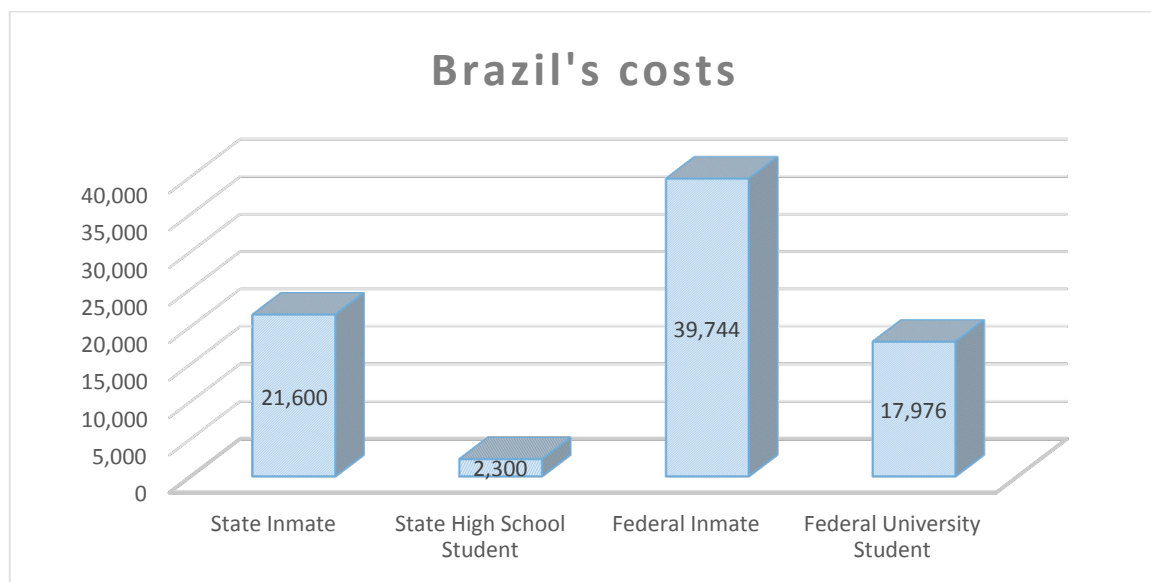
⁴³⁴ *Id.* at 8.

⁴³⁵ *Id.* “Spending rose in every state except Virginia, by more than four times in nine states (Arkansas, Colorado, Idaho, North Dakota, Oregon, Pennsylvania, West Virginia, Wisconsin, and Wyoming) and by five times in three of those states (Colorado, Idaho, and Pennsylvania).”

⁴³⁶ *Id.*

⁴³⁷ *Id.* at 7.

In Brazil, the average cost of an inmate in a state prison per month is R\$ 1,800.⁴³⁸ Per year, a prisoner costs R\$ 21,600. This is nine times higher than the cost of a high school student (R\$ 2,300, per year).⁴³⁹ The average cost of federal prisoner is higher, R\$ 3,312 per month, or R\$ 39,744 per year.⁴⁴⁰ Furthermore, the costs of maintaining a student in a public university, R\$ 1,498 per month, or R\$ 17,976 per year, is less than half of the amount spent with the federal prisoner.⁴⁴¹ Note that the difference in the cost of federal and state prisons is due primarily to the fact that federal prisons are high-security prisons, specifically designed for the most dangerous prisoners.⁴⁴²



⁴³⁸ Alessandra Duarte & Carolina Benevides, BRASIL GASTA COM PRESOS QUASE O TRIPLO DO CUSTO POR ALUNO, OGLOBO.GLOBO.COM, <http://oglobo.globo.com/sociedade/educacao/brasil-gasta-com-presos-quase-triplo-do-custo-por-aluno-3283167> (last visited Dec. 27, 2014).

⁴³⁹ *Id.*

⁴⁴⁰ Alexandre Saconi, PRESO FEDERAL CUSTA MAIS QUE O DOBRO QUE UNIVERSITÁRIO, R7.COM, <http://noticias.r7.com/brasil/noticias/preso-federal-custa-mais-que-o-dobro-que-universitario-20121010.html> (last visited Dec. 27, 2014).

⁴⁴¹ *Id.*

⁴⁴² Law 11.671/08, Article 3rd. Only the most dangerous prisoners, who cannot be handled by the State system because they present risks to the community or even to themselves, are sent to the federal system. The others, regardless if federal or state judges sentenced them, are sent to state prisons.

After analyzing the efficiency of prison and the associated costs, the conclusion is not that imprisonment is always a good or a bad option. In light of the limited effects of imprisonment on deterrence, highlighted above,⁴⁴³ perhaps it would be better to reduce the use of prison and invest more in prevention (policing) and in providing adequate penal treatment for the most dangerous inmates, to achieve rehabilitation.

This is not a proposal towards leniency. If the use of prison were reduced, more resources would be available to challenge crime. Deterrence may be enhanced, if the probability of being caught is higher.⁴⁴⁴ For the most dangerous offenders, smarter investment in prisons will mean both having better conditions on the inside (via work and educational programs) and having real incapacitation, by better breaking contact with the outside world. There is no space for cell phones in prison, for example. That goal has costs, but more costs per inmate can be balanced by having fewer inmates. Of course, it is likely that investing in the education of prisoners will be severely criticized, based on budget limitations. However, society must understand that fighting recidivism is both an investment in the inmate and in the greater community.⁴⁴⁵ An inmate who returns to the prison system imposes more costs on the state (imprisonment), on society (lack of productivity) and, also, on the victim.

In conclusion, the decision to use prison as a punishment should be made carefully, so the results are consistent with the purposes of imprisonment (retribution, deterrence, incapacitation and rehabilitation). In the next chapter, this work will discuss how and when imprisonment

⁴⁴³ See *supra* subsection 2.3.3.

⁴⁴⁴ *Id.*

⁴⁴⁵ The return of investments in education and work inside prison is consistent as highlighted in the subsection 2.3.4.3.

should be used in environmental crimes to guarantee that imprisonment will not just punish, but also effectively avoid crime.

3. Imprisonment and Environmental Crimes

In this chapter, this dissertation will discuss whether and when imprisonment is a good alternative for repressing and preventing environmental crime. Knowing that environmental crime is a very broad term, which encompasses a wide range of offenses and offenders with different grades of dangerousness, this work divides the topic into several subdivisions to provide a more accurate answer to the question above.

The first subsection analyses those who personally perform the crimes perpetrated by criminal organizations: executioners. Due to the fact that their dangerousness and culpability differs from the leader of the criminal ring, the latter is the topic of the second subsection. A discussion of corporate criminals follows, starting with the employees and moving to those with managerial powers. The accidental criminal, such as an individual who performs an environmental crime randomly when fishing on vacation, is next scrutinized. This discussion then moves to corruption by members of the Administration. Finally, terrorist acts performed against nature are the last topic. In each subsection, this dissertation will debate whether imprisonment fulfills each of the reasons for punishing. In the sequence, it will be analyzed if imprisonment is the only way of fulfilling that purpose and whether it is the better option under a benefit-cost analysis.

3.1 Criminal Organization member: executioners.

Not all members of criminal organizations should be punished the same way. Some should be censured more than others, especially when the conduct is more dangerous than average. This first section discusses those who personally execute the crimes performed by the organization. They are known as executioners.

The classic examples of executioners are the mules, the people responsible for transporting an illegal product. Mules might transport wildlife to another country in their baggage using public transportation, or might drive a truck with illegal pesticide from one country to another. However, mules are not the only example of executioners, and transporting is not the only way of executing an environmental crime. The hunter who captures the birds that are later illegally exported (and possibly transported by mules) is also an executioner. Those who dump waste illegally and loggers who illegally cut down trees are also executioners. Fishermen who catch illegal species in a forbidden time of the year are executioners. All that is required to be an executioner is the performance of an environmental crime under orders from someone else.

3.1.1. Purposes of Imprisonment

After defining executioners, it is important to answer whether their incarceration fulfills the purposes of imprisonment.

From the perspective of **incapacitation**, imprisonment can be efficient to avoid the transportation of wildlife by a trafficker, for example. An arrested hunter will also not make traps while inside a penitentiary. However, the effectiveness of incarceration as a way of incapacitating is relative for four reasons. First, the offender is incapacitated only during the time he is in prison.⁴⁴⁶ Second, imprisonment is not the only way to provide incapacitation to members of crime rings. Simply being on house arrest with electronic monitoring, for example, can incapacitate. Third, incapacitation of executioners does not guarantee that others in the organization will not perform the same function.⁴⁴⁷ The offender is incapacitated, but not the

⁴⁴⁶ See subsection 2.3.2.

⁴⁴⁷ WALKER, *supra* note 151, at 13-14.

crime. Fourth, there is no certainty that a criminal will not commit a second crime.⁴⁴⁸ Investing in incapacitation is risky, especially when first offenders are involved.

Imprisonment also has limited efficiency in the prevention of crimes due to **collective deterrence**.⁴⁴⁹ Although imprisonment contributed to crime reduction in the United States of America in the last decades, the share was very modest, as shown above in this thesis.⁴⁵⁰ This is because severe punishment alone is not enough to prevent others from offending; the punishment should be certain and swift.⁴⁵¹ This may be why prison is even less effective for deterrence in Brazil, as it has less infrastructure for law enforcement than the United States of America.⁴⁵²

Recidivism rates, depicted in the last chapter, also demonstrate that imprisonment, as used today, is not effective for **individual deterrence** in either Brazil or the United States of America.⁴⁵³ Considering the high percentage of inmates who are in prison for drug offenses,⁴⁵⁴ as well as the fact that many are just executioners, there is no reason to believe that there would be a different individual deterrent effect for environmental criminals.

The lack of individual deterrence (ex-prisoners performing new crimes) is connected with a defective **rehabilitation** policy. Although it is possible to rehabilitate with work and superior education,⁴⁵⁵ there is no need to incarcerate to provide those services. It is possible, for example, to sentence an executioner to community service, in addition to job and education training, to rehabilitate without the high costs of prison.

⁴⁴⁸ Robinson, *supra* note 155, at 1104.

⁴⁴⁹ See subsection 2.3.3.1.

⁴⁵⁰ *Id.*

⁴⁵¹ See National Academy of Science, *supra* note 286, at 156.

⁴⁵² See subsection 2.3.3.1.

⁴⁵³ See subsection 2.3.3.2.

⁴⁵⁴ See subsection 1.4.

⁴⁵⁵ See subsection 2.3.4.

Finally, imprisonment can undoubtedly provide pain and, therefore, be used as a way of **retribution**. On the other hand, using it indiscriminately serves to decrease its stigmatization effect.⁴⁵⁶ There are other ways of providing pain without relying solely on incarceration. For example, house arrest is not as painful as imprisonment. Inmates keep contact with their family and there is less loss of contact with the outside world. However, liberty is still severely limited, which provides a certain amount of discomfort; it is difficult to deny that not being able to have any leisure outside the home during the evenings and the weekends is not, at least, upsetting.

3.1.2 Should imprisonment be used with executioners?

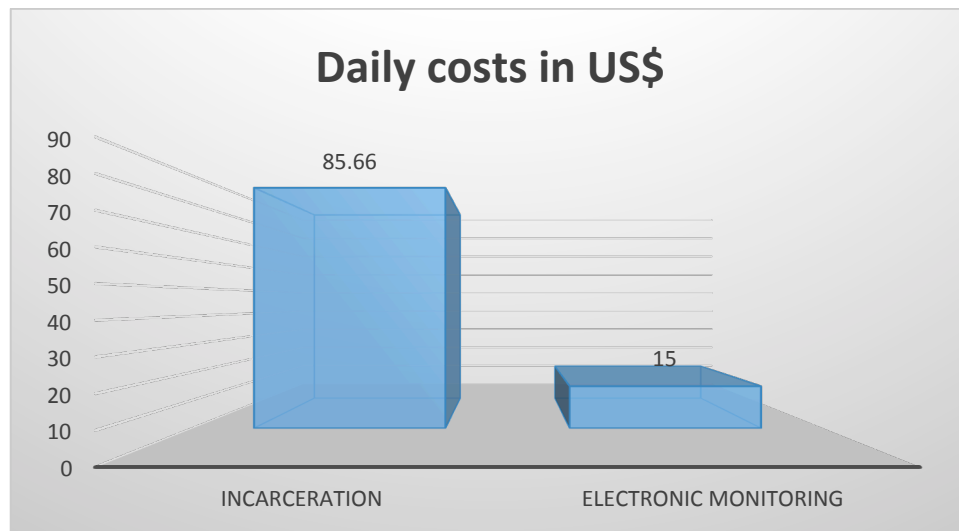
Following the discussion above, this paper now must discuss whether imprisonment should be used with executioners. In other words, given a limited budget and the high costs of imprisonment, should executioners be imprisoned? The answer should be negative, as a rule. Even though imprisonment does fulfill some of its purposes, the costs ultimately outweigh the benefits.

Imprisonment can provide some **incapacitation**, but it does not stop crime. Criminal organizations will always find other mules.⁴⁵⁷ The incapacitation of the offender can also be achieved by other means, with fewer costs for the government, family and society. Electronic bracelets and house arrest can provide that same effect in a more economical way. For example, using the average cost of an inmate to states presented in the last chapter (US\$ 31,268), it is

⁴⁵⁶ Robinson, *supra* note 155, at 1106.

⁴⁵⁷ WALKER, *supra* note 151, at 13-14.

possible to reach a daily cost of US\$ 85.66 per inmate. The Florida's costs of electronic monitoring, for example, is estimated at US\$ 105 per week, or US\$ 15 per day.⁴⁵⁸



Imprisonment can be effective to deter others from performing the same crime (**collective deterrence**). The magnitude of the effects, however, is limited, especially considering that Levitt found that imprisonment was responsible just for 12% of the crime reduction in homicide and violent crime and 8% of property crime in the 90s.⁴⁵⁹ New York University's Brennan Center found even smaller percentages of crime reduction.⁴⁶⁰ Further, investing in a mechanism to ensure more certainty in punishment can be more effective than just elevating the severity of punishment. The investment on policing, therefore, is more fruitful, with a greater return for each dollar invested.⁴⁶¹

⁴⁵⁸ MARISSA ALEXANDER'S HOUSE ARREST AND THE ISSUE WITH ELECTRONIC MONITORING, THEGUARDIAN.COM, <http://www.theguardian.com/us-news/2015/jan/27/marissa-alexander-house-arrest-electronic-monitoring> (last visited Feb. 10, 2015). Although the article reported about some fails of the electronic monitoring system, it is well known that, with the evolution, the system will be improved and also become less expensive, as any other technology.

⁴⁵⁹ Levitt, *supra* note 310, at 178-179.

⁴⁶⁰ Roeder, *supra* note 321.

⁴⁶¹ See subsection 2.3.3.1.

Imprisonment, as it has been used in Brazil and in the United States of America, is not effectively preventing new crimes from being performed by offenders released from prison. Recidivism rates speak for themselves. Therefore, imprisonment should not be the first option when choosing the correct punishment for executioners in terms of **individual deterrence** and **rehabilitation**.

There is no doubt that these offenders will suffer if imprisoned and, therefore, imprisonment can be efficient in terms of **retribution**. However, proportionality is an important characteristic of a fair system that is not taken into consideration if imprisonment is used for all members of the criminal organization, indistinctively. It is even more important to consider in environmental crimes, which may be “seen as morally neutral.”⁴⁶² The general population does not always see poor people who extract their livelihood from nature as criminals, for example. Even if the heads of the criminal organization were punished more harshly (meaning more prison time), this would still reduce stigmatization, because, for the layperson, imprisonment is used in both cases. For those persons, imprisonment is the division between the serious and not serious crimes. Consequently, imprisonment cannot be used in most cases without losing some of its social significance.⁴⁶³

On the other side, even the specialists would lose their faith in the system with the use of prison to provide retribution. The quality of punishment is as important as quantity, especially in the case of prison. In that sense, it should be remembered that the intensity of imprisonment loses strength with the passage of time.⁴⁶⁴ An executioner might leave the prison feeling more pain

⁴⁶² MICHAEL KIDD, ENVIRONMENTAL COMPLIANCE AND ENFORCEMENT IN SOUTH AFRICA 242-234 (ed. Alexander Paterson and Louis K. Kotze 2009).

⁴⁶³ Robinson, *supra* note 155, at 1106.

⁴⁶⁴ *Id.* at 1095-1096.

than the leaders if he served a shorter sentence that will not allow him to get used to the pain of incarceration. In other words, with respect to executioners, imprisonment is not very effective even for the purpose of retribution.

In conclusion, given that the purposes of punishment are not met with regard to imprisoning executioners, imprisonment is not a good option for executioners as a rule. Where imprisonment has not worked for drug traffickers, it follows that it likewise cannot be an effective solution for wildlife or pesticide smugglers. Of course, if the criminal is not a first offender and other forms of punishment were not effective previously, there may be no option except imprisonment because the punishment needs to be more severe, as the acts are even more censurable (retribution). Furthermore, incapacitation is not such a guess anymore. The offender committed another crime and segregation starts to be an assurance for the society. Although imprisonment would not be an efficient solution for the purposes of deterrence and rehabilitation, it is no longer a cost-benefit question. Prison might be the only more severe punishment available. The same can happen if the magnitude of the crime is larger than normal, such as when a huge amount of endangered species are trafficked. In such a case, another punishment would be just considered a slap on the wrist.

3.2 Criminal Organization Member: leaders.

The leaders of criminal organizations typically do not perform the crimes by themselves, but instead serve to coordinate the group. They do not transport wildlife across borders, but they are responsible for organizing the international smuggling. They receive profits in high scale, by organizing multiple crimes. Leaders are arguably more dangerous than executioners, both because of the impacts of their actions and because of their mastery of the knowledge necessary to perpetrate crimes in a larger scale.

Unquestionably, there is variation from one criminal organization to another. There are extremely large and compartmentalized groups, and then there are smaller rings. In all of those cases, though, the leaders should be punished more severely than the executioners, due to the consequences of their acts and their overall dangerousness.

3.2.1 Purposes of Imprisonment

The leader of a criminal enterprise is usually the most dangerous and difficult to replace. There is no doubt that the criminal organization will suffer more from the loss of a leader than an executioner. However, as the leader's participation is more connected to sharing knowledge and orientation, his **incapacitation** by segregation is no more effective than the executioner's, in light of prison's inability to completely intercept and prohibit communication between the criminal leader with the external world.

Imprisonment may generate more **collective deterrence** than normal in the case of a criminal organization leader, because punishment depends on publicity to provide deterrence.⁴⁶⁵ Therefore, the sentencing of a high profile offender may attract increased media attention, depending on the size of the enterprise and its capacity to call the attention of the press. On the other hand, as the deterrent effect of imprisonment is minimal on average,⁴⁶⁶ there is no certainty that the enhancement in this collective deterrent effect is enough to make segregation effective in terms of avoiding new crimes performed by third persons.

Statistics about **individual deterrence** and **rehabilitation** are discouraging, as the average recidivism rates show.⁴⁶⁷ Unfortunately, it is no better in the case of the leaders. Due to the fact that they earn a respectable amount of profits from the criminal enterprise, the severity of

⁴⁶⁵ See subsection 2.3.3.1.

⁴⁶⁶ *Id.*

⁴⁶⁷ See subsections 2.3.3.2, 2.3.4.

punishment (cost) is overcome by its profits (benefits). The balance would only be a disadvantage to the leader if the punishment were certain. It should be remembered that, in the case of illegal logging, for example, the cumulative probability of being caught was less than 1%.⁴⁶⁸ Further, this study did not provide any indication that imprisonment would be more effective in terms of rehabilitating the leader of a criminal ring as compared with the average criminal.⁴⁶⁹ In fact, the average scenario for rehabilitation is not favorable⁴⁷⁰ and, due to the dangerousness and deep involvement of some leaders with crime as a way of living, rehabilitation is likely a bigger challenge than normal.

From the point of **retribution**,⁴⁷¹ the case of organized crimes leaders does not face the same challenges as executioners. It will not affront the duty of proportionality to use prison for leaders because they deserve more censuring and are more dangerous than the executioners. Hence, as a rule, prison will not be a menace to the capacity of stigmatization and to the legitimacy of the criminal justice system,⁴⁷² considering the consequences of environmental crimes performed in high scale. Smaller criminal rings may be an exception, as their conduct is not as harmful and dangerous as larger criminal enterprises. In those cases, the proportionality may direct alternative ways of punishing.

⁴⁶⁸ *Supra* note 97.

⁴⁶⁹ *See* subsection 2.3.4 for more details.

⁴⁷⁰ *Id.* The research presented shows that it is possible to rehabilitate through prison, even though the actual scenario is not favorable to that goal due to a lack of proper tools. Nevertheless, rehabilitation would not justify the use of prison on the federal level in the United States of America. 18 U.S.C. § 3582(a) (2012).

⁴⁷¹ *See* subsection 2.3.1.

⁴⁷² *See* Robinson, *supra* note 155, at 1106.

3.2.2 Should imprisonment be used in the case of the leader of a criminal organization?

The question answered in this subsection is whether imprisonment is an option for punishing leaders of criminal organizations. The answer is positive in case of harmful criminal organizations or in case of reoffenders, as will be shown shortly.

As discussed in the previous subsection, imprisonment is not entirely effective for purposes of **incapacitation** in the case of the leader of a criminal organization. However, imprisonment is still favorable to other means of punishment in terms of incapacitation. For example, house arrest with electronic monitoring will not avoid any communication with the exterior.⁴⁷³ Therefore, imprisonment is the best means of incapacitating dangerous criminals, even though it is far from perfect.

The effects of imprisonment in term of **collective deterrence** are very limited. Although the deterrent effect of sentencing the leader of a criminal organization may be higher than the average criminal, due to press coverage, it still may not effectively provide collective deterrence. More investments in certainty of punishment, and not just severity, on the other hand, can elevate the deterrent effect of punishment. Investments in more sniffing dogs to find wildlife traffickers at airports may be more efficient in terms of general deterrence than the use of imprisonment, because it will make the apprehension of wildlife more certain and has fewer costs than imprisonment.⁴⁷⁴

⁴⁷³ Considering that the demands of rehabilitation require there not be a total lack of communication with one's family, perhaps incapacitation as a purpose of imprisonment is relative: fulfilled as much as possible, but limited by the need to provide humane treatment to the prisoner.

⁴⁷⁴ About the costs of training a sniffing dog, see FAQ, GLENDALECA.COM, <http://www.glendaleca.gov/government/departments/police-department/k9-unit/faq> (last visited

The effects on **individual deterrence** and **rehabilitation**, due to the high rates of recidivism, are not good justifications for choosing imprisonment for the leader of the criminal organization.⁴⁷⁵

In terms of **retribution**, the use of imprisonment can be justified. If the discussion involves the leader of a harmful criminal ring, less than incarceration would probably mean impunity, if compared with other severe crimes that are punished with segregation. On the other hand, in case of a smaller criminal organization, house arrest and community services can also be good alternatives which provide a more proportional punishment that has less cost for society.

Therefore, in the case of criminal organization that provokes massive damage to the environment, like an organization that smuggles a high amount of endangered species per month, the purposes of incapacitation and retribution will certainly justify the imposition of imprisonment. Incarceration is a way of provoking pain proportionate to the harm provided (retribution). Also, even a partial incapacitation of a dangerous criminal may be worthwhile. Even though the purposes of deterrence (collective and individual) and rehabilitation may not be met for leaders, the investment is already justified for the purposes of retribution and incarceration.

Note that, in cases of smaller criminal organizations, there will be no proportionality or even the need of high investment in that measure. If the criminal is not a first offender and other forms of punishment were not effective before, then there is no option except imprisonment,

Mar. 24, 2015). On that website, the City of Glendale, CA, states that the cost was US\$ 20,000, including the dog and the training.

⁴⁷⁵ See subsection 3.2.1. Nevertheless, rehabilitation would not justify the use of prison on the federal level in the United States of America. 18 U.S.C. § 3582 (a) (2012).

regardless of whether the offender is a leader of a small organization, as already pointed out before.⁴⁷⁶

3.3 Corporate Criminal: Administrator, Directors, CEOs and Managers.

This section is about corporate criminals. It is not about criminal corporations or criminal liability of legal entities. It is about the administrators, directors, CEOs, and managers who perform crimes on behalf of the corporation in order to enhance profits. The objective of the corporation is legal and, therefore, there is no parallel between the corporate criminal and the leader of a criminal organization.

3.3.1 Purposes of Imprisonment

This subsection discusses which purposes of imprisonment are fulfilled by imprisoning a corporate actor for environmental crimes.

Prison is not effective for incapacitating these individuals. The corporate criminal usually does not perform the crime by themselves. For example, he or she might have ordered his or her employees to throw garbage in a river, in disregard of an environmental regulation. The owner of a fishing company might have ordered the captain to fish inside a prohibited area, looking for profits. Rare is the instance where a CEO performs an environmental crime personally. His participation in the criminal enterprise occurs through orders and know-how. Therefore, imprisonment will restrict, but not avoid communication. Closing or interdicting the company would be more effective than imprisoning the CEO. Nonetheless, there is no guarantee that the

⁴⁷⁶ See subsection 3.1.2. This is because the punishment will need to be more severe, as the acts are even more censurable (retribution). Also, incapacitation would not be a guess anymore. Although imprisonment would not be an effective solution from the perspective of deterrence and rehabilitation, this would no longer be a cost-benefit question. Prison may be the only more severe punishment available.

corporate offender will not reoffend again. All of these issues make it difficult to choose imprisonment as a punishment for the corporate criminal only based on **incapacitation**.

The purposes of **retribution**, on the other hand, can be fulfilled by the imprisonment of a corporation's administrator. Corporate environmental crimes can have devastating effects. The example of illegally throwing garbage in the river speaks for itself. Even though some of these crimes occur as a result of negligence (e.g., an oil spill), the impacts can be enormous and, in this case, prison can become a reasonable option. As long as the case involves considerable harm to environment and the acts or omissions of a corporate criminal deserve censure, there is no risk of eroding the stigma of criminal punishment.⁴⁷⁷ In fact, the perception that corporate criminals do not go to prison can also be a menace to the legitimacy of criminal law;⁴⁷⁸ underpunishing can be as harmful as overpunishing.⁴⁷⁹

Although the purpose of **collective deterrence** is usually not met, there are reasons to conclude that because corporate criminals may have an enhanced ability to weigh the risks of business they are also more likely to be deterred from acting by the prison terms.⁴⁸⁰ They are better calculators.⁴⁸¹ Furthermore, prison may be more painful for the corporate criminal who is used to comfort. Those who want to enhance profits to live "la dolce vita" may also be less prone to risk ending in the correctional system.

As discussed above, recidivism rates suggest that prison usually does not provide **individual deterrence**. However, recidivism rates for certain types of non-violent offenders may suggest a minimal individual deterrent effect. For example, in the United States' Department of

⁴⁷⁷ Robinson, *supra* note 155, at 1106.

⁴⁷⁸ *Id.*

⁴⁷⁹ *Id.*

⁴⁸⁰ *Id.* at 1094.

⁴⁸¹ *Id.*

Justice Report about recidivism from April 2014, fraud and forgery were among the types of property crimes with lower rates of re-offense. Those cases could be compared with the corporate offender discussed in this subsection. Unfortunately, the rates were still relatively high and do not merit optimism.⁴⁸²

TABLE 8
Recidivism of prisoners released in 30 states in 2005, by most serious commitment offense and time from release to first arrest

Most serious commitment offense	Cumulative percent of released prisoners arrested within—					
	6 months	1 year	2 years	3 years	4 years	5 years
All released prisoners	28.2%	43.4%	59.5%	67.8%	73.0%	76.6%
Violent	24.9%	38.4%	53.8%	61.6%	67.2%	71.3%
Homicide ^a	12.5	21.5	33.9	41.5	47.0	51.2
Murder	10.1	18.8	30.4	37.8	43.6	47.9
Nonnegligent manslaughter	17.3	27.7	39.4	46.0	51.5	55.7
Negligent manslaughter	13.2	21.9	35.5	43.7	48.8	53.0
Rape/sexual assault	20.8	30.9	43.7	50.9	56.0	60.1
Robbery	25.8	41.0	58.6	66.9	72.8	77.0
Assault	27.9	42.6	58.9	67.1	72.9	77.1
Other	28.7	43.4	56.6	63.0	66.9	70.4
Property	33.6%	50.3%	66.7%	74.5%	79.1%	82.1%
Burglary	31.0	48.7	65.8	73.9	78.9	81.8
Larceny/motor vehicle theft	39.3	56.2	70.8	77.6	81.6	84.1
Fraud/forgery	27.7	42.2	60.0	68.6	73.2	77.0
Other	33.2	49.5	66.6	75.5	80.9	83.6
Drug	26.9%	42.3%	59.1%	67.9%	73.3%	76.9%
Possession	28.7	44.5	60.7	69.6	75.2	78.3
Trafficking	26.9	41.5	58.0	66.6	71.9	75.4
Other	25.3	41.4	59.3	68.3	73.6	78.1
Public order	25.6%	40.1%	55.6%	64.7%	69.9%	73.6%
Weapons	35.3	49.1	65.1	73.1	76.9	79.5
Driving under the influence	11.9	22.1	37.2	48.0	54.9	59.9
Other ^b	27.8	44.9	60.4	69.2	74.1	77.9

Note: Prisoners were tracked for 5 years following release. Inmates could have been in prison for more than one offense; the most serious one is reported in this table. See appendix table 9 for standard errors.

^aIncludes cases in which the type of homicide was unspecified, not shown separately.

^bIncludes 0.8% of cases in which the prisoner's most serious offense was unspecified.

Source: Bureau of Justice Statistics, Recidivism of State Prisoners Released in 2005 data collection.

Individuals who hold important positions in big companies are usually well educated. They often have respectable resumes and the credentials to perform their assigned duties. Because of this background, the educational and work opportunities provided by the correctional system are unlikely to have a positive impact on these offenders. As stated previously

⁴⁸² DUROSE, *supra* note 336.

rehabilitation is not a reason to decide to imprison in some systems.⁴⁸³ However, in those systems where it is legally possible, it would not be effective on these corporate offenders.

3.3.2 Should imprisonment be used in the case of those corporate offenders?

Now, the discussion is whether imprisonment should be used on the kinds of corporate offenders portrayed in the last subsection. After analyzing the purposes of punishment, it follows that imprisonment is an effective option for corporate criminals only if there is no other way to provide retribution for their offense. This is because utilitarian purposes do not support a sentence of imprisonment, as discussed below.

Imprisonment does not seem to be a good way to provide **incapacitation** for corporate crimes. First, it is difficult to forecast dangerousness. According to Ellen S. Podgor, offenders from the corporate arena are usually first time offenders, with “[...] little likelihood of recidivism. The individual seldom can resume a position of power that would allow for continued criminality of this nature.”⁴⁸⁴ Other options, such as suspension of corporate activities, may be much more effective in terms of incapacitation. Even less harsh options, such as prohibiting the offender of serving a future position in the corporation, would be more effective than imprisonment.⁴⁸⁵ “With the elimination of the individual's corporate role, the stripping of the convicted felon's money, and the accompanying collateral consequences, such as a loss of license or ability to conduct business with the government, future dangerousness is nearly eliminated.”⁴⁸⁶

⁴⁸³ 18 U.S.C. § 3582(a) (2012).

⁴⁸⁴ Ellen S. Podgor, *The Challenge of White Collar Sentencing*, 97 J. CRIM. L. & CRIMINOLOGY 731, 758 (2006-2007). Based on the chart presented on the previous subsection, I disagree that the “little likelihood of recidivism” is the best description for the scenario. Despite fraud has less likelihood of recidivism, I do believe it is still high, for example.

⁴⁸⁵ *Id.*

⁴⁸⁶ *Id.*

The goals of **deterrence** are also not a sufficient justification for the imprisonment of corporate offenders. It is true that the purpose of **collective deterrence** may be served by imprisoning corporate criminals.⁴⁸⁷ However, the cost of incarceration for the state, for society and for families discourages its use unless there is little more certainty about its efficiency, or unless another purpose, such as retribution, is present. Further, as previously explained, investing in making punishment more certain may provide better results than making punishment more severe, in terms of inspiring deterrence.⁴⁸⁸ The same could be said about **individual deterrence**. The scenario is a little better than the average crime, but the rates of recidivism for non-violent crimes, such as fraud and forgery, remain discouraging, even if they are smaller than other crimes.⁴⁸⁹ Therefore, imprisoning corporate offenders comes at high costs with insufficient certainty about whether such imprisonment will prevent new crimes or avoid re-offenses.

At the federal level in the United States of America, rehabilitation should not be a reason for choosing imprisonment.⁴⁹⁰ Nevertheless, corporate criminals are usually well educated and experienced in the industry. Therefore, it is difficult to imagine how imprisonment will give them the tools to be better citizens and or have an easier reentry.

As highlighted before, corporate environmental crime can have devastating effects. The lack of proportional punishment may undermine the legitimacy of the system, especially if corporate criminals are involved,⁴⁹¹ as there is a widespread perception that these offenders are not punished with the same intensity as other criminals. For those cases in which the seriousness of the crime do not justify the use of imprisonment, other means (such as home detention) may

⁴⁸⁷ Robinson, *supra* note 155, at 1106.

⁴⁸⁸ See subsection 2.3.3.1.

⁴⁸⁹ DUROSE, *supra* note 336. See chart presented in the previous subsection.

⁴⁹⁰ 18 U.S.C. § 3582(a) (2012).

⁴⁹¹ Robinson, *supra* note 155, at 1106.

service retribution without imposing the high expenses associated with sending the offender to a penitentiary.

It is important to make clear that home detention effectively can provide pain. The offender's liberty is extremely restricted and his movements are limited by judicial order. There is no vacation, holidays or weekends. Having dinner in a fancy restaurant is no longer a liberty. The simple act of going to the gym would demand approval by the judge. While it is much less painful than prison, it is an option that allows proportionality to the situation. It is also important to highlight that home detention demands considerably less investment from the state,⁴⁹² while keeping the offender active in society and providing less harm to his family. For these reasons, imprisonment should be reserved for the corporate criminal only when the conduct and harm generated is so high that any other punishment would be considered lenient.

3.4 Corporate Crime: employees.

The last subsection explored those who have managerial powers, and not the employees of the company. The latter may depend on the company to survive and this should be considered when punishing – not that the employee has no liability,⁴⁹³ but that his or her punishment should be proportionate.⁴⁹⁴ An employee's desire to keep his or her job should be considered as a factor for leniency to allow proportionality between the sentencing of the mastermind and the executioner. This section addresses whether imprisonment is appropriate for the employee-offender. Once again, imprisonment should not be the rule.

⁴⁹² *Supra* note 458.

⁴⁹³ In Brazil, the liability would only be avoided if the order is not manifestly illegal. C.P., Article 22. In the United States of America, the common law defense of duress does not apply to an employee that follows illegal orders. It can be applied if he believed or reasonably believed that he was performing a legal act. LAFAVE, *supra* note 112, at 396.

⁴⁹⁴ *See* C.P., Article 65, III, c.

3.4.1 Purposes of Imprisonment

This subsection discusses whether the use of imprisonment in the employee's case fulfills the purposes of punishment, which is necessary to conclude whether imprisonment should be used in the case.

In terms of **incapacitation**, an imprisoned employee will not perform crimes in the outside world while in prison.⁴⁹⁵ However, blue-collar workers are easier to replace and imprisoning the employee may not necessarily prevent to company from performing new crimes. Sending the employee to prison without suspending the activities of the enterprise is therefore ineffective.

In terms of **collective deterrence**, severe punishment does not provide high levels of deterrence.⁴⁹⁶ In the case of an employee, it is less likely that the crime will be widely broadcasted and thus the punishment would be even less likely to deter others. In terms of **individual deterrence**, the recidivism rates speak for themselves.⁴⁹⁷ Prison does not successfully deter crime.

In terms of **rehabilitation**, remember that federal legislation in the United States of America recognizes it as a purpose of punishment, but denies that it should be a reason for imprisoning.⁴⁹⁸ However, there is no reason to conclude that imprisonment meets the goals of rehabilitation. The employee was or is under labor contract. He is productive and has skills to work and maintain himself and his family, and thus would likely not benefit from the educational and work systems used for rehabilitation in prison. Regardless of rehabilitative efforts while

⁴⁹⁵ See subsection 2.3.2.

⁴⁹⁶ See subsection 2.3.3.1.

⁴⁹⁷ See subsection 2.3.3.2.

⁴⁹⁸ 18 U.S.C. § 3582(a) (2012).

imprisoned, the employee will likely have fewer job opportunities upon release because of the stigmatization of a formerly incarcerated person.⁴⁹⁹

The **retribution** topic is always the easier to deal. Prison provides pain and it is efficient in providing retribution. However, this does not mean that imprisonment should be an option for all cases involving employees. If employee's conduct is so reprehensible and the harm is so serious that no other punishment would be sufficient, imprisonment may be the only option to avoid negatively impacting the legitimacy of the system. If conduct is less severe, however, the use of imprisonment would likely decrease the negative stigma associated with imprisonment.⁵⁰⁰ Extremely severe and extremely lenient punishments are both harmful in the public's view of the criminal justice system.

3.4.2 Should imprisonment be used in the employee's case?

After analyzing the purposes of punishment, the conclusion is that imprisonment should only be used to punish employees when the crime is very serious and there is a high need for retribution. Compared with offenders who have managerial powers, it is more difficult, however, to consider a situation in which imprisonment would be necessary for these employees. Although the questions relative to the effectiveness of the utilitarian purposes are similar between the two types of offenders, the retributive factor in the employee's case is weaker.

Incapacitation would have very limited effects on company employees. It is true that the employee would not be able to perform crimes during his incarceration time.⁵⁰¹ However, this is not the only way to prevent re-offense. Prohibiting orders with electronic monitoring might also

⁴⁹⁹ See subsection 2.3.1.

⁵⁰⁰ Robinson, *supra* note 155, at 1106. This would not be the case if the person being sentenced is a recidivist who deserves more censure from performing crimes again.

⁵⁰¹ See subsection 2.3.2.

provide incapacitation, and while burdening less expense on the state.⁵⁰² Also, as the employee is not the brain or the planner, it is naïve to think that imprisoning him would stop the higher-level criminal activity. Closing the company could be more effective in that sense.

The case for **deterrence** is as weak as incapacitation. The expectation that **collective deterrence** may work better for corporate criminals does not apply to these employees. For these employees, it is unlikely that the press would get involved. Therefore, as it is seemingly less effective, the use of imprisonment should not be based on collective deterrence. If the intent is to provide collective deterrence, perhaps enhancing companies' supervision is the best answer, because the punishment will be more certain.⁵⁰³ Testing the water next to industrial facilities periodically is certainly cheaper than imprisonment, and will certainly enhance the probability of an offender being caught. The recidivism rate of American and Brazilian criminal systems further indicates that imprisonment does not provide **individual deterrence**.⁵⁰⁴ Therefore, it is investment without benefit.

In the federal level in the United States of America, **rehabilitation** should not be a reason for choosing imprisonment.⁵⁰⁵ But even in places where this is not mandated, such as Brazil, rehabilitation is still not a reason to imprison employees. Although these employees may not be as well educated as a CEO, or equipped with an as impressive resume, these individuals have proven capable of finding employment. Prison will cut that tie with the labor market. Even in those instances where the educational programs in prison positively encourage rehabilitation, there is no reason to believe that rehabilitation can only be achieved inside prison. Judges could make it mandatory for the offenders to study as a condition to applying an alternative sentence.

⁵⁰² *Supra* note 458.

⁵⁰³ *See* subsection 2.3.3.1.

⁵⁰⁴ *See* subsection 2.3.3.2.

⁵⁰⁵ 18 U.S.C. § 3582(a) (2012).

Under the auspices of rehabilitation, there is no need for actual imprisonment to achieve those goals for these employees guilty of environmental crimes.

As previously stated, corporate environmental crime can have devastating effects. In terms of retribution, sometimes no other punishment provides a proportionate response to the harm imposed on the environment. The lack of proportional punishment can undermine the legitimacy of the system, as discussed throughout this work.⁵⁰⁶ Even in instances where the environmental harm is higher and the corporate leader should be punished with prison, this is not necessarily true for the lower-level employee. One harmed the environment as motivated by profits. The other harmed the environment in order to keep his job.⁵⁰⁷ Treating these distinct cases similarly would undermine the legitimacy of the system, creating the perception that imprisonment is not reserved for the most dangerous criminals. Furthermore, treating all the cases with the same intensity of punishment can reduce the perception of fairness.

Imposing a punishment other than imprisonment is not the same as being extremely lenient. It should be highlighted again that the restriction of liberty of home detention provides reasonable pain to the offender, with far fewer costs for the state (which pays the costs of incarceration), the society (which loses work power) and the family (which loses the financial and emotional support of the imprisoned). Therefore, although imprisonment should not be totally disregarded with respect to lower-level employees, it should be applied in extremely severe and particular cases, when the need of retribution is so high that imprisonment is

⁵⁰⁶ Robinson, *supra* note 155, at 1106.

⁵⁰⁷ C.P., Article 65, III, c. The International Consortium on Combating Wildlife Crime (UNDOC, Cites, INTERPOL, World Bank and World Customs Organization) agrees the obedience to superior orders should be considered on sentencing. See UNITED NATIONS OFFICE ON DRUGS AND CRIME, WILDLIFE AND FOREST CRIME ANALYTIC TOOLKIT 136 (2012), http://www.cites.org/sites/default/files/eng/resources/pub/Wildlife_Crime_Analytic_Toolkit.pdf (last visited Apr. 13, 2015). Again, those who perform crimes in order to keep their jobs should be punished, but not as severely as those who ordered and profited from the crime.

necessary, even though the utilitarian purposes are not favorable to its use (e.g., in the case of recidivists).⁵⁰⁸

3.5 Accidental Criminal

The accidental criminal is different from the other criminals emphasized in this thesis. He is not similar to the members of the criminal organization (leader or executioner), because he lacks premeditation to engage in a criminal ring to commit crimes. Further, he likely has a licit profession, one not reliant on the performance of crimes. He is also different from the corporate criminals. He did not act in his professional duties with the intent to enhance profits. The accidental criminal is an occasional offender. Consider, for example, a tourist who decides to fish in a forbidden place believing no one will spot him.⁵⁰⁹ This is no different from the case of a vacationer who decides to hunt without a license and killed an endangered species.⁵¹⁰ That is also similar to the case of a camper who caused a forest fire due to his own negligence.⁵¹¹ All of those cases are crimes that need to be punished. The question here, however, is whether imprisonment is appropriate for those cases.

3.5.1 Purposes of Imprisonment

This subsection discusses whether the use of imprisonment in the case of an accidental criminal fulfills the purposes of punishment. In terms of **incapacitation**, the accidental criminal

⁵⁰⁸ See subsection 3.1.2. This is because the punishment will need to be more severe, as the acts are even more censurable (retribution). Also, incapacitation would not be a guess anymore. Although imprisonment would not be an effective solution from the perspective of deterrence and rehabilitation, this would no longer be a cost-benefit question. Prison may be the only more severe punishment available.

⁵⁰⁹ Law 9.605/98, Article 34. All the examples in this section are based on Brazilian Environmental Crimes.

⁵¹⁰ Law 9.605/98, Article 29.

⁵¹¹ Law 9.605/98, Article 41, unique paragraph.

cannot perform crimes outside the penitentiary while in prison.⁵¹² Therefore, imprisonment would work to fulfill that purpose.

On the other hand, prison has limited effectiveness with respect to **collective deterrence**, as stated in the last chapter.⁵¹³ Not all harsh sentences are highlighted in the public domain, and it is unlikely that the sentence of an accidental offender would attract media attention. Hence, imprisonment is not likely to effect collective deterrence in the case of the accidental criminal. Based on the conditions of the Brazilian and American prison systems, and the recidivism rate of both countries highlighted in the last chapter, there is also little likelihood that imprisonment would deter these individual offenders from committing crimes again upon reentrance to society (**individual deterrence**).⁵¹⁴

Although **rehabilitation** is not an acceptable reason for imprisoning at the federal level in the United States' system,⁵¹⁵ this purpose is likewise not fulfilled by imprisonment in a country such as Brazil, in the case of an accidental criminal. The programs typically used to allow the inmate to have a productive life outside prison, like education and work, are less likely to be effective on an individual who is already living a law-abiding life. The occasional criminal depicted in this subsection is a law-abiding and productive citizen, not someone whose survival is dependent on crime and needs help to sustain a life change.

Finally, imprisonment would certainly work as a mean of providing **retribution**, because it generates pain and causes unequivocal distress. Further, prison has the ability to stigmatize the criminal. The effectiveness of stigmatization, though, depends on the legitimacy of the system,

⁵¹² See subsection 2.3.2.

⁵¹³ See subsection 2.3.3.1.

⁵¹⁴ See subsection 2.3.3.2.

⁵¹⁵ 18 U.S.C. § 3582(a) (2012).

which can be undermined every time a punishment is perceived as unfair.⁵¹⁶ Therefore, the use of imprisonment should be justified by the specific case. Consider the example of the camper. If the camper was intoxicated, and, because of that, he caused a fire to burn down hundreds of trees, killed dozens of animals, and brought danger to residences, then a harsh punishment may be more warranted. This would be especially true if he fled the scene to avoid detection and chose not to call the Fire Department. Compare that camper to the inexperienced camper, who provoked minimal fire and got burnt trying to contain it as he waited for the Fire Department. Both are different cases, with different conduct. Where the same outcome resulted (a forest fire), the culpability demands different treatment with respect to imprisonment. Treating these two campers the same by the correctional system would be unfair. If an innocent mistake leads to the same punishment as a negligent one, and anyone risks being incarcerated for a mistake, the stigmatization of the prison system is lost.

3.5.2 Should imprisonment be used in the case of the accidental criminal?

This subsection discusses whether terms of imprisonment should be imposed on accidental criminals. Based on the above discussion, there is no reason to believe that imprisonment is a good way to punish, or prevent the commission of future crimes, the accidental offender.

First, the investment in imprisonment is too high to warrant its use when there are feasible alternatives. In terms of **incapacitation**, the relative goals can be met by less severe and expensive ways, such as house arrest and electronic monitoring.⁵¹⁷ Further, the fact that one hunter is imprisoned has little impact on whether anyone else will hunt in the same park.

⁵¹⁶ Robinson, *supra* note 155, at 1106.

⁵¹⁷ *Supra* note 458.

Spending less on prison and more on patrolling the park is likely more effective, if the intent is to stop crime and not just one criminal.⁵¹⁸

The same argument can be presented about deterrence. In terms of **collective deterrence**, the results are modest, as explained above.⁵¹⁹ If the intent is to increase deterrent effects, it seems that the investment is better spent to increase the chances of a crime being detected. The use of sniffing dogs in protected areas to detect illegal hunting leaving the area is a good example.⁵²⁰ In terms of **individual deterrence**, the numbers speak for themselves.⁵²¹ The percentage of formerly incarcerated individuals who come back to the system is extremely high. Hence, it is irresponsible to justify the use of imprisonment in the case accidental criminal offender on the basis of deterrence alone.

Rehabilitation is likewise not an adequate reason for imposing a prison sentences (in places it is legally possible). At least in terms of the examples highlighted above, there is no reason to believe that an accidental offender would need guidance to live a law-abiding life. Even if such guidance would be helpful, there is no need to be incarcerated to receive such education.

In terms of **retribution**, imprisonment is effective. However, three issues remain for those who would advocate for prison: a) it is an expensive tool,⁵²² b) it is not the only way of providing pain, and c) using it too much decreases stigmatization.⁵²³ There is no need to go further on the question of costs. The price of imprisonment was discussed in the last chapter.

⁵¹⁸ For sure, the punishment cannot be negligible; but as this work as already shown, imprisonment is not the only punishment that is severe enough. Home arrests and fines are just two good examples.

⁵¹⁹ See subsection 2.3.3.1.

⁵²⁰ *Supra* note 474.

⁵²¹ See subsection 2.3.3.2.

⁵²² See subsection 2.3.5.

⁵²³ About overuse of prison and lack of stigmatization, see Robinson, *supra* note 155, at 1106.

This is also not the only way to provide pain. For example, in the case of the tourist, community service and home arrest at night and on weekends may be a sufficient punishment. Being restricted to his home will undoubtedly cause him pain without bleeding the state's budget or hurting his family and the community. The excessive use of imprisonment will reduce stigmatization.⁵²⁴ People would not be able to link prison with the “worst of the worst.” If the offender is a recidivist, or if the environmental harm is extreme, there may be no better option than imprisonment. For instance, if a camper ruined a huge part of a forest by extreme recklessness, menacing the life of thousands of people who live around, imprisonment may be the most appropriate option; not punishing exemplarily would undermine society's confidence in the system. It should be noted that the criteria for exceptionally using imprisonment in those cases is not based on an economic reasoning. Sometimes the legitimacy of the system by itself and the duty to not leave the evil unpunished justify the use of prison, regardless of the efficiency of utilitarian purposes.

3.6 Member of the Administration: Corruption.

There is no absolute prohibition on environmental degradation. Humans need to survive and that is the reason why one of the most important terms nowadays is sustainability. The progress should be dosed with the need to conserve the environment for the next generation.⁵²⁵ That is why administration needs to supervise certain activities. Other behaviors may need to be authorized through permissions or licenses. Those procedures should be performed without any interference, to assure that society's interests are defended. That is why corruption should be punished exemplarily. The question posed in this topic, however, is whether punishing exemplarily includes using incarceration.

⁵²⁴ *Id.*

⁵²⁵ The Brazilian Constitution has an express provision about this. C.F., Article 225.

3.6.1 Purposes of Imprisonment.

This discussion involves whether the use of imprisonment to address corruption fulfills the purposes of punishment. In terms of **incapacitation**, imprisonment can be effective in some respects. For example, the public official will not be able to issue new authorizations through bribery if he is incarcerated. However, incarceration is only effective while the offender is incarcerated. Also, it is difficult to know the probability of an offender performing crimes again. In one way or another, imprisonment does provide some incapacitation.

For corrupt administrators, the use of imprisonment as a punishment may also provide **collective deterrence**. The fear of being incarcerated might inhibit other possible administrators from acting corruptly. This deterrence, however, is modest.⁵²⁶ **Individual deterrence** is not a reality. High rates of recidivism make this clear.⁵²⁷ Even for those systems in which **rehabilitation** is a permissible reason to impose imprisonment, there is still no indication that rehabilitation is worthwhile. The individuals who hold public duties presumably have the basic qualifications to lead a successful life. The criminal condition is more connected to character than to the lack of opportunities in life.

The ability of imprisonment to provide pain as a means of **retribution** for an environmental harm is beyond reasonable doubt.⁵²⁸ Corruption is a serious crime and using imprisonment in this case is not likely to undermine the legitimacy of the system; sentencing a corrupt administrator to a term of imprisonment is unlikely to be seen as excessive and, therefore does not risk reducing justice system's legitimacy.⁵²⁹

⁵²⁶ See subsection 2.3.3.1.

⁵²⁷ See subsection 2.3.3.2.

⁵²⁸ See subsection 2.3.1.

⁵²⁹ Robinson, *supra* note 155, at 1106.

3.6.2 Should imprisonment be used in case of corruption?

This subsection discusses whether imprisonment should be used in the case of corruption. The answer is positive in cases in which the environmental harm or risk of environmental damages is elevated, as well as in case of recidivism.

First, removing the corrupt official from the public service will have the same effect on **incapacitation** as imprisonment for the individuals who receive bribes. It should be stressed that removing the official from public service is a cheaper way of providing more efficient incapacitation compared to imprisonment. Having more effectiveness for less cost is never a bad call.

The **collective deterrence** effect of imprisonment is modest.⁵³⁰ In terms of **individual deterrence**, the results are also poor.⁵³¹ Therefore, sustaining the use of imprisonment based on its deterrent effects is unadvisable. If costs are taken into consideration, choosing to imprison becomes even more difficult.

Administrations that intend to reduce corruption deserve our admiration and support. However, simply punishing more severely does not reduce corruption. Perhaps the first step is to invest in more certain and swift punishment.⁵³² Comparing the finances of public servants with their stated incomes may be a good start. Creating mechanisms to secure crime detection is another. South African legislation provides an interesting example of those mechanisms: rewarding the informant. According to the National Environmental Management Act (NEMA), a Court imposing a fine “[...] may order that a sum of not more than one-fourth of the fine be paid to the person whose evidence led to the conviction or who assisted in bringing the offender to

⁵³⁰ See subsection 2.3.3.1.

⁵³¹ See subsection 2.3.3.2.

⁵³² About the effects of certainty and swiftness of punishment on deterrence, see subsection 2.3.3.1.

justice.”⁵³³ The advantage of this mechanism is the lack of investment: the remuneration of the informant would depend on the success of the lawsuit. The cost of imprisonment is too high to provide so little deterrence. If the intent is really to deter, maybe cheaper and more efficient options should be chosen.

Rehabilitation cannot sustain choosing prison to eradicate corruption. In most of cases, environmentally-related corruption crimes are motivated by economic factors. However, these offenders usually have the means to thrive in legal ways. Therefore, rehabilitation is a huge investment for mostly no return. In fact, rehabilitative tools like education and work would just have the effect of alleviating the harmful effects of incarceration.⁵³⁴

The importance of choosing the correct way to impose pain has two important effects. First, over-punishing undermines the legitimacy of the criminal system and the ability of a sentence to provide stigmatization.⁵³⁵ Second, it avoids the use of an expensive means of punishment, one that is not the only means of **retribution**. Hence, if the case involving corruption is extremely serious, or involves recidivism, there may be no better option than imprisonment: in the first case (extremely serious consequences), crime cannot be punished with shorter terms than deserved without harming the legitimacy of the system; in the second (recidivism), the second offense deserves more censure than the first.⁵³⁶

However, if the case involved limited harm and first time offenders, there are likely viable alternatives to imprisonment. For example, there is home arrest, which may cause pain to the offender without hurting his family or his community (who does not lose labor force). The

⁵³³ Nat’l Env’tl Mgmt Act § 34B(1) (S. Afr.). This paragraph is qualified by § 34B(2), which states that “[a] person in the service of an organ of state or engaged in the implementation of this Act or a specific environmental management Act is not entitled to such an award.”

⁵³⁴ See subsection 2.3.4.

⁵³⁵ Robinson, *supra* note 155, at 1106.

⁵³⁶ See C.P., Article 63.

public budget is also spared by the use of home arrest, as imprisonment is significantly more costly to impose upon an individual. Community service is another considerable alternative. It is more affordable than imprisonment and, at the same time, provides a benefit to the community from the offender. For those who commit crime for profit, fines are also appropriate punishments.

Therefore, given that the main justification for imprisonment in the case of corruption is retribution, incarceration should be restricted to cases of recidivism or those in which the environmental harm or risk of environmental damaged is elevated.

3.7 Terrorism against Natural Resources

This subsection discusses whether imprisonment should be used against those who perform terrorist acts that damage natural resources. The terrorist depicted in this section uses violence to promote fear in a way of achieving his political or religious goals.⁵³⁷ In doing so, he focuses on the destruction of natural resources, to promote massive death. Examples include those who decide to poison the air or a river to kill the nearby city inhabitants. Since the terrorist attacks on September 11th, 2001, the means of promoting terrorism have changed and the risk of terrorism with focus on natural resources is an increasing possibility.

3.7.1 Purposes of Imprisonment

Now, the discussion turns to whether the use of imprisonment in the case of terrorism against natural resources fulfills the purposes of punishment.

Imprisonment can incapacitate terrorists. This **incapacitation** is not absolute, however. While it is certain that the terrorist will not be able to perform acts outside the prison during his

⁵³⁷ TERRORISM, MERRIAM-WEBSTER, <http://www.merriam-webster.com> (last visited Mar. 28, 2015). According to Merriam-Webster Dictionary, terrorism is “the use of violent acts to frighten people in an area as a way of trying to achieve a political goal.”

incarceration,⁵³⁸ there is no way of securing that he cannot participate in planning another attack. Totally depriving such an offender contact with the exterior, and especially with lawyer and family, would face several obstacles in a democracy. Even if his conversations and letters are censored, there is always a risk of communication through codes or with the help of other prisoners. Unfortunately, it is also difficult to totally prevent cell phones inside a penitentiary.⁵³⁹

In terms of **collective deterrence**, prison has a limited effect.⁵⁴⁰ Considering that terrorism usually attracts wide media attention, it may seem as though the use of imprisonment as a punishment will effectively meet the purpose of collective deterrence. However, terrorism is a desperate act, made by desperate people, and thus imprisonment alone will not serve as a deterrent. Imagine the not so rare case of a suicide terrorist. An individual who is inclined to die is unlikely to be dissuaded by the risk being imprisoned. Additionally, recidivism data show that imprisonment is not being effective on **individual deterrence**.⁵⁴¹ Therefore, there is no reason to believe that imprisonment of environmental terrorists would serve the purpose of individual deterrence, especially where severe radicalism is involved.

The situation of penitentiaries nowadays is not favorable for **rehabilitation**.⁵⁴² Even if this was not the case, the tools that could be effective (education and labor skills) do not seem to be viable with terrorists in general. These offenders likely do not perform crime because of the lack of social opportunity, but instead to accomplish political goals. Therefore, rehabilitation is not a reason to imprison in this case.⁵⁴³

⁵³⁸ See subsection 2.3.2.

⁵³⁹ Wolff, *supra* note 285.

⁵⁴⁰ See subsection 2.3.3.1.

⁵⁴¹ See the recidivism rates discussed in subsection 2.3.3.2.

⁵⁴² See subsection 2.3.4.

⁵⁴³ Rehabilitation is not a reason to choose imprisonment in America's federal system. See 18 U.S.C. § 3582(a) (2012).

Prison can provide pain and penitentiaries have the ability of providing **retribution**.⁵⁴⁴ For sure, the use of prison for all types of criminal can reduce the ability of penitentiaries to stigmatize.⁵⁴⁵ But this is less likely to be the case for terrorism, a crime that is widely understood as serious, especially in cases in which violence promotes harm or extreme risk to people or to the environment. Furthermore, when environmental terrorism results in death, there is certainly no obstacle from the perspective of retribution to utilize imprisonment.

3.7.2 Should imprisonment be used in the case of terrorists that target natural resources?

The question is thus whether imprisonment should be used for terrorists who target natural resources. The answer will be positive for those cases in which lives have been taken or in which severe harm to the environment occurred or could have occurred. Incarceration is also viable in cases of recidivism, in which alternative punishment were ineffective. In those cases imprisonment cost-effectively fulfills most of the purposes of punishment.

The example of **incapacitation** is paradigmatic. Considering the dangerousness of a terrorist, the extremely violent nature of the act, and the intent to inflict massive harm, the amount of time that the offender will be incapacitated is likely worth the investment. Even though it may be difficult to totally prohibit communication with outside, every cent spent challenging the criminal enterprise of terrorists is well invested.

The same reason can be applied to **collective deterrence**, if extreme violence or harm to the environment is involved. Even if the effects are limited, any lives saved are worth the investment. For example, in 2013, 17,700 people died in terrorist attacks and 32,500 were

⁵⁴⁴ See subsection 2.3.1.

⁵⁴⁵ Robinson, *supra* note 155, at 1106.

injured.⁵⁴⁶ Even if imprisonment were responsible for the reducing these numbers by 1%, saving the lives of almost 18 people and the health of almost 33 others merits this investment. The same reflection works for **individual deterrence** with respect to cases of extreme violence or harm to the environment. Even recidivism rates for these crimes were 90%, avoiding the remaining 10% of these crimes is worth the investment.

Rehabilitation is the only purpose that may not be sufficiently fulfilled.⁵⁴⁷ Lack of opportunity was probably not the reason why terrorists resorted to crime. It follows that providing these offenders with tools such as education and labor is unlikely to foster rehabilitation. Rehabilitative tools, however, are important to provide a humane treatment for incarcerated persons.⁵⁴⁸

Finally, imprisonment fulfills the **retributive** purpose for environmental terrorists because it provides pain.⁵⁴⁹ Considering that terrorism is one of the most violent and serious crimes, incarceration is a reasonable way to punish, especially if death or extreme harm to environment are involved. Choosing a less painful mean of punishment would almost certainly undermine public confidence in the justice system.

The previous discussion addresses serious terrorist acts. In the case of small terrorist acts, where there is limited or no damage, imprisonment may not be the answer. There are other ways to provide pain (house arrest) and incapacitate (electronic monitoring) that may be a more proportional response to the harm and dangerousness of the criminal, without excessively

⁵⁴⁶ H.A. Goodman, *Of the 17,891 Deaths from Terrorism Last Year, 19 Were American. Let Iraqis Fight ISIS*, THE HUFFINGTON POST (SEP. 14, 2014), http://www.huffingtonpost.com/h-a-goodman/of-the-17891-deaths-from_b_5818082.html (last visited Feb. 7, 2015).

⁵⁴⁷ See subsection 2.3.4

⁵⁴⁸ See subsection 2.3.4.

⁵⁴⁹ See subsection 2.3.1.

bleeding the governmental budget.⁵⁵⁰ It should be remembered that, in these cases, the modest deterrent effect does not justify the amount of investment that prison demands.

3.8 Is prison the only option for preventing and repressing environmental crimes?

The answer to the question above is negative. There are more efficient options to prevent crime than prison. In almost all the cases quoted above, the utilitarian purposes of imprisonment (deterrence, incapacitation and rehabilitation) do not effectively fulfill their objectives. In most of the cases where some of the purposes were effectively served, the cost-benefit analysis still falls in favor of avoiding imprisonment.

There is no doubt that, in terms of providing retribution, imprisonment is effective.⁵⁵¹ Sometimes, however, this effectiveness is not necessarily good for the system. Punishment should be applied proportionally. If every offender ends up going to prison, penitentiaries will not be linked with just dangerous criminals.⁵⁵² The stigmatization associated with imprisonment will be lost and subsequently even this purpose could no longer be totally fulfilled.

The caution against enhancing punishment indistinctively is shared by the International Consortium on Combating Wildlife Crimes (UNDOC, INTERPOL, CITES, World Bank and World Customs Organization):

Calls for sanctions for wildlife and forest crime to be greatly increased and to be made mandatory for all detected illegal activities should, however, be answered with caution. Particularly severe penalties should be reserved for serious offences that are committed intentionally, for second or multiple offences, and for offences that cause harm or death to another person. While it is necessary to ensure that offenders are fairly and systematically convicted, it is important to note that increasing the fines and penalties for illegal activities is not always an effective deterrent. In some instances it may be counterproductive, as it can increase the willingness to pay bribes and may lead to higher levels of corruption. Stiffer

⁵⁵⁰ See subsection 2.3.5.

⁵⁵¹ See subsection 2.3.1.

⁵⁵² Robinson, *supra* note 155, at 1106.

penalties will thus only act as a deterrent where overall governance of the wildlife and forestry sectors is improved.⁵⁵³

Although the intent of this dissertation is not to provide options to incarceration, but instead to discuss whether imprisonment is an appropriate option, the next paragraphs discuss alternatives to imprisonment. Some of these examples have already been provided during the discussion above.

Investment in police training can be fruitful. Environmental crime has special characteristics and, without proper training, police officials may not be prepared to recognize their occurrence. For instance, police officers may not be able to identify all endangered species. Training can provide more certainty and swiftness of apprehension, and thus have more of a deterrent than imposing increasingly severe prison terms.⁵⁵⁴ Police training in special means of investigation, such as undercover operations, can also be extremely effective.⁵⁵⁵ Organized crime activity is compartmentalized and these offenders do not advertise in public about illegal animal smuggling, for example. Further, advanced investigative techniques may promote the incapacitation of the leaders, which is important to overall reduction of crime. Executioners are easy to replace, but ringleaders are not.

There is also a need for enhanced police and customs structure. Airports are used for illegal wildlife trafficking. An increased presence of sniffing dogs to detect smuggling may make the punishment more certain.⁵⁵⁶ Even if not ideal, dogs from shelters could be recruited and

⁵⁵³ *Id.*

⁵⁵⁴ About the effects of certainty and swiftness of punishment on deterrence, *see* subsection 2.3.3.1.

⁵⁵⁵ See RAFAEL WOLFF, AGENTES INFILTRADOS: O MAGISTRADO COMO FERRAMENTA DE APRIMORAMENTO DESTE MEIO ESPECIAL DE INVESTIGAÇÃO (Almedina 2012).

⁵⁵⁶ Jim Wyss, *Easter rush: Colombia's Wildlife-tracking Dogs See Booming Business Over Holiday*, MIAMI HERALD,

properly trained for this job. This further benefits society by providing the opportunity for animals to get the proper care and decrease the use of euthanasia on these innocent animals.⁵⁵⁷ Additionally, this alternative is clearly less expensive than prison, even including the potential purchase of these dogs.⁵⁵⁸ Police departments usually have the proper human resources to train and care for the dogs, which is unquestionably smaller than prison costs.

Another good method to increase the certainty of punishment is the use of DNA to investigate wildlife trafficking.⁵⁵⁹ This is a very effective way to discover, for example, whether the birds on sale really come from authorized institutions and in turn makes it more difficult for smugglers to profit from illegal sales. This is already a reality in the state of São Paulo, in Brazil.⁵⁶⁰

Punishment should not only be certain, but also swift.⁵⁶¹ Therefore, investing in imprisonment may not be as important as investing in contracting more police officers, prosecutors and judges to deal with these issues in a timely fashion way. Even with all the proper

<http://www.miamiherald.com/news/nationworld/world/americas/colombia/article17255522.html> (last visited Apr. 4, 2015).

⁵⁵⁷ ANIMAL SHELTER EUTHANASIA, AMERICANHUMANE.ORG, <http://www.americanhumane.org/animals/stop-animal-abuse/fact-sheets/animal-shelter-euthanasia.html> (last visited Apr. 4, 2015). According to this website, “56 percent of dogs and 71 percent of cats that enter animal shelters are euthanized.” The data is from the United States of America.

⁵⁵⁸ *Supra* note 474.

⁵⁵⁹ John Platt, *Nova Ferramenta Rastreia o Comércio Ilegal de Animais Silvestres*, SCIENTIFIC AMERICAN, *available at* http://www2.uol.com.br/sciam/noticias/nova_ferramenta_rastreia_o_comercio_ilegal_de_animais_silvestres.html (last visited Feb. 17, 2015). *See also* Emiliano Rodríguez Mega, *Fighting Wildlife Smuggling, One DNA Test at a Time*, SCIENCE, *available at* <http://news.sciencemag.org/latin-america/2015/08/fighting-wildlife-smuggling-one-dna-test-time> (last visited Oct. 27, 2015).

⁵⁶⁰ POLÍCIA AMBIENTAL TESTA MÉTODO PARA COIBIR TRÁFICO DE ANIMAIS SILVESTRES, GLOBORURAL, <http://g1.globo.com/economia/agronegocios/vida-rural/noticia/2014/09/policia-ambiental-testa-metodo-para-coibir-trafico-de-animais-silvestres.html> (last visited Feb. 17, 2015)

⁵⁶¹ About the effects of certainty and swiftness of punishment on deterrence, *see* subsection 2.3.3.1.

tools, nothing substitutes human resources. Just contracting policemen is not enough. All the tiers of the justice system should be equipped to deal with environmental crime. Police officers should be trained for investigation. Prosecutors may benefit from understanding how to effectively prove the occurrence of an environmental crime. Judges should better understand this phenomenon to properly sentence the offenders responsible for it. This is, in fact, one of the reasons why the author decided to write about this topic.

Finally, there are other options to repress environmental crime, providing some pain to the offenders. Imprisonment is not the only option. As highlighted throughout the last chapter, other means as community service, house arrest and fines serve this purpose. Prison, therefore, is not the only option to both prevent and repress environmental crimes.

Conclusion

The question that should be answered now is whether imprisonment should be used in the case of environmental crimes. The response is not simple. Certainly imprisonment is not the correct punishment for all environmental offenses. In fact, imprisonment is not the correct punishment for the majority of the environmental cases, because it does not effectively fulfill most of the four purposes of imprisonment, especially in light of its high costs. On the other hand, there are certain instances where prison should be used to address environmental offenses.

In terms of **individual and collective** deterrence, prison has very modest effects on crime.⁵⁶² It isn't that incarceration does not work, but rather that it works very reticently. Hence, the prison system should only be an option in cases where the seriousness of the crime justifies the investment.

Regarding **rehabilitation**, although prison can rehabilitate, its actual structure both in Brazil and in the United States of America is not favorable for that goal; there are not enough educational and work programs to in fact achieve rehabilitation.⁵⁶³ Further, imprisonment is not necessary to provide education and labor training, what makes it not a reason for using imprisonment.

In terms of **incapacitation**, imprisonment is more effective in cases where the offender personally performs the crime.⁵⁶⁴ As long as the offender is in prison, he cannot reoffend again. This does not recommend, per se, the use of prison because there are cheaper ways to incapacitate this same offender, like electronic monitoring and house arrest. If the offender is not the executioner, but instead the mastermind behind the offense, his term in the prison system

⁵⁶² See subsections 2.3.3.1, 2.3.3.2.

⁵⁶³ See subsection 2.3.4.

⁵⁶⁴ See subsection 2.3.2.

may not totally remove him from communication with the outside world. The communication will be more difficult, although still possible. Therefore, prison does not entirely incapacitate the offender, and carries with it high costs.

Incarceration is effective in terms of **retribution**, because imprisonment generates pain.⁵⁶⁵ It is important to consider, however, whether the crime is proportionate to the pain (segregation), for purposes of preserving the legitimacy of the system.⁵⁶⁶ In cases of serious harm or risk of harm to the environment, or harm to human beings, imprisonment is likely proportionate to the crime. In the case of recidivism, proportionality is also present, because alternative means of punishment have proven ineffective.

Based on the conclusions above, if the intent of segregation is to prevent new crimes, imprisonment is not the best solution, because of its demonstrably limited effects on crime prevention (deterrence, rehabilitation and incapacitation). Making the punishment more swift and certain should provide better results for a better price. The example of sniffing dogs in airports to avoid wildlife smuggling is telling. It would be possible to apprehend more offenders and avoid border exchanges, while requiring significant less investment than prison. If shelter dogs were used, even further costs could be saved (and at the same time a life of a canine would be saved).

Imprisonment, therefore, should be relegated just for the exceptional situation, in which the limited preventions effects are justified by the seriousness of the conduct and dangerousness of the offender. In those cases, sentencing the offender will also fulfill the purpose of retribution. Remember the case of a corporate offender who pollutes a river causing the massive death of wildlife and contaminating water for human consumption; there, it is important to be sure this cannot happen again. Consequently, even the limited deterrent and incapacity effects that

⁵⁶⁵ See subsection 2.3.1.

⁵⁶⁶ Robinson, *supra* note 155, at 1106.

imprisonment has are worth the investment. The seriousness of the facts would also justify severe punishment. The legitimacy of the system would depend on a painful punishment to avoid the sense of impunity.⁵⁶⁷ The use of segregation would be a natural choice.

In sum, prison's limited effectiveness toward prevention and its high costs explain why Joseph Stiglitz, a Noble Prize awarded economist, said it is pointless to continue wasting resources on imprisonment.⁵⁶⁸ On the other hand, the need for retribution and to prevent (the little possible) the most serious crimes rationalizes why humanity still needs prisons, including for environmental crimes.

The conclusion of this thesis, hence, is not for abolishing prisons, because it remains necessary for the most serious crimes, including environmental ones. However, if environmental crime needs to be prevented with urgency, governments should not invest in segregation, but instead in tools that increase the certainty and swiftness of punishment. We should not repeat past mistakes, like those made by Brazil and the United States of America in the "war" on drugs. There is hope that those countries will act wisely with respect to environmental crimes, especially because, at least for some species, there is no time for bad choices.

⁵⁶⁷ *Id.*

⁵⁶⁸ ROEDER, *supra* note 321, at 2.