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RUSSIA: INTERNATIONAL ENVIRONMENTAL AGREEMENTS AND CHALLENGES

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**RUSSIA: INTERNATIONAL ENVIRONMENTAL
AGREEMENTS AND CHALLENGES**

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Abstract

Nowadays, climate change and environmental degradation are highly debated topics. Solutions to these issues need to be found, but, to do so, it is important to know what has already been done: therefore, examining how a key international actor such as Russia has been dealing with environmental protection implementing domestic policies and cooperating internationally is so relevant. Even if the environment hasn't always been among its top policy priorities, Russia has often addressed the matter. *What is Russia's role in international environmental agreements?* This dissertation aims at exploring the environmental challenges Russia had to go through, analyzing the reasons behind and the effects of its participation in international environmental regimes through theoretical frameworks, i.e. game theory, cost-benefit analysis, etcetera. Previous literature tends to study either specific treaties through a theory lenses, or large periods in the absence of a relevant theory: this research will try to fill this gap by analyzing development trends within an extended time-frame while applying theories on the international environmental agreements and national domestic policies under scrutiny. The dissertation will be divided in three chapters: the first will focus on the Soviet period, the rising environmental degradation and the beginning of international cooperation on nature preservation issues in 1970s–1980s; the second section will be devoted to the 1990s, considering national tendencies such as de-ecologization and examining Russia's role in international environmental agreements, from Rio Conference to Kyoto Protocol; in the third and last chapter, the stances of Russia over Paris Agreement will be explored and its current domestic environmental policies will be taken into account. In conclusion, the findings of this thesis will show why Russia joined and successfully implemented certain treaties while others were not as effectively complied with, and it will demonstrate how its national environmental policies are sometimes unrelated to international environmental agreements.

Key Words

Russia, USSR, Russia Federation, international environmental agreements, Kyoto Protocol, Paris Agreement, environmental degradation, de-ecologization, environmental deinstitutionalization, best available technology, environmental movements.

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Introduction

The importance of Russian natural environment and the country's participation in international environmental agreements.

The Russian Federation is the vastest country on the planet, occupying 17 125 191 square kilometers of the Earth surface, and it is characterized by an outstanding diversity in natural resources, vegetation and climate. Its predecessor, the Soviet Union, could claim an even greater diversity, since its territory expanded over 22 402 200 square kilometers. Although this is not the place to describe the variety of ecosystems, biodiversity and physical geography of this land, it is important to mention the climate zones shaping the different areas of this enormous territory. In order to understand the peculiarities of the regions described later in the dissertation, it is key to take a glance at their characteristics. The Russian Federation is dominated by continental climate, while the former Soviet Union regions of Central Asia and Caucasus present arid and semiarid climate zones. In all those areas, droughts prove to have catastrophic consequences both for the land, leading to crop failures in the agricultural production, and for the population, causing famine. As for the different ecosystems, Russia harbors tundra, taiga and steppe while the CIS countries of Central Asia host arid regions. The tundra can be described as an arctic desert, characterized by short trees and deep permafrost, located in the northeastern Russia and rich in fossil fuels; the taiga is identified with coniferous forests and permafrost, it covers most of Siberia and the Russian Far East and it offers timber for wood products and paper; while the steppe is extended on the Southern part of the European Russia, it distinguishes itself for its fertile soils and it produces a vast variety of seeds' plants. In the arid regions of Central Asia desert is predominant in the mountains and in the flat land and it provides with different sorts of crops.

This initial description has the purpose of giving an idea of the wealth in natural resources of Russia and it wants to underline the fact that such resources faced with, and are still facing, great problems of degradation and pollution due to direct human actions and climatic changes. In fact, due to its size and the heterogeneity of its territory, implementing national and international environmental policies, while taking into consideration all the positive and negative consequences, happens to be very complicated in Russia.

The Russian environment, from the tsarist past to the Soviet decades up to the present days, has undergone several changes that lead to the usurpation of its natural resources and compromised the living conditions of its citizens. One of the main reason behind this is that the conditions of the natural environment were never a top priority for both the former Soviet Union or the present

Russian Federation. During Soviet times, for instance, the government gave precedence to programs of quick industrialization and agricultural collectivization, then it boosted the production of nuclear, chemical and biological weapons, in order to face the Second World War and Cold War: these policies and actions had long-term, wide-ranging environmental consequences. With the breakup of the Soviet Union and the emergence of the Russian Federation and CIS countries, environmental protection remained far from being a priority, since political and economic issues such as poverty, inequality and other social conflicts became of utmost importance. For these reasons, the Russian Federation preferred to focus on the development of mineral resources production and export to foster economic growth over environmental protection action.

It is nevertheless imprecise to assume that Russia has done nothing to address environmental issues concerning air and water pollution, land and forests exploitation, illegal fishing and hunting and waste disposal. Besides taking domestic action with the aim of protecting the environment, in the latest decades, countries have been signing an increasing number of international environmental agreements, and Russia is no exception. Indeed, since the early 1970s, when awareness over the state of environment gained global significance, the Soviet Union started participating actively in international conferences and contributing to their programs and organizations. In in the 1960s, the USSR signed bilateral agreements aimed at the protection of wildlife, while from the 1970s onwards it promoted environmental cooperation on ozone depletion and global climate change. The Russian Federation too has been involved in international environmental agreements from its very emergence, as its participation in the Rio conference, ratification of the Kyoto Protocol and signature of the Paris agreement testify.

Research question.

While a lot has been written on the environmental degradation in Soviet times, less has been discussed about the measures that Russia has taken in order to deal with its vast land environmental threats. The analysis of the steps the country adopted, both through national doctrines, acts and policies and through participation in international conferences and treaties are key to understand Russian environmental policy, its current role in the international arena and its stances on a debated topic such as environmental protection in the light of climate change.

How is Russia involved in international environmental agreements? What are the reasons behind Russia's participation in such agreements and how have they evolved over time? Which deeds is the country taking to tackle national environmental issues and how are they linked to global environmental action? This dissertation shows how, despite that environmental protection is not

among the top priorities in Russia, the country has been involved in cooperation, conferences and agreements at the international level and it explores if its international commitments are translated in national policies. This paper investigates the ways in which, often, Russia does take national initiative for the protection of the environment but it is not always directly linked to treaties, agreements or conventions. Moreover, it will provide with some evidence of the difficulty to act in order to preserve the environment due to size and heterogeneity of its territory and due to the conditions of degradation it inherited as Soviet legacy.

Focus and aims of the research.

The focus of the dissertation is on the role that Russia has had over the years in the development of international environmental agreements, from their negotiations, to their signature and implementation. From the 1972 UN Conference in Stockholm to the 2015 Paris Agreement, Russia has been a major actor in the area of environmental protection and its decisions had a major influence on the overall successful implementation of agreements, as it was the case for the Kyoto Protocol. In fact, in order for the protocol to come into force, it needed that 55 per cent of the emissions of the participating countries were covered under the agreement. As the US stepped out of the game and the EU states were committed, Russia had a prominent role for the protocol ratification as its emissions accounted for 17.4 per cent of the total emissions of the participating countries, making it the only state with sufficient emission percentage to bring the protocol into effect.

The scope of this paper is to try to provide the reader with a comprehensive view of Russian actions in the environmental protection framework, not only in the international sphere, but also at the domestic level, from its Soviet past to the present: in fact, it will deal with national policies, trends and tendencies, movements and public perceptions concerning the environment in the Russian national context. The paper aims at contributing to the debate on environmental protection and climate change, providing with an historical overview of one of the key international actors: it does so framing the topic with the theories of international environmental agreements through different methodologies, such as the game theory and the cost-benefit analysis approach, to cite two of them.

Due to limits in space and the decision to narrow the research around the very specific topic of *Russia in the context of environmental protection*, this paper does not cover certain issues. Even if the role of Russia during Soviet times in international environmental conferences, bilateral and multilateral agreements is analyzed, this does not imply that the Cold War historiography will be

discussed: in fact, the topic will be mentioned only in the case in which it has direct links to environmental protection. Moreover, from the breakup of the Soviet Union on, CIS countries will not be under the inquiry of the research. Their territories, their environmental issues and the environmental policies under which they were subjected will be a matter of concern only in the chapter dedicated to the Soviet period. Finally, the role of other countries in international environmental agreements will not be studied unless it has some consequences in the decision of Russia to take part in an agreement or not. In this case, the decision of the US to withdraw from the Kyoto Protocol has implications for Russia, and will therefore be analyzed.

Scientific relevance.

Climate change, environmental degradation and international cooperation aimed at coping with new challenges of nature are currently debated topics, since such phenomena and countries' measures to deal – or not to deal – with them have direct effects on people, nations and ecosystems in general. Finding a solution to environmental issues is a challenging task and being able to come up with a formula on which all countries agree on is even a more challenging one. In order to move forward and find future solutions, it is important to have solid bases on what has been done in the past, which measures worked and which did not, why some international agreements were implemented effectively and why some haven't achieved their goals, why certain countries easily contribute to this cause and why others have difficulties. This dissertation contributes to the scientific debate since it provides with an overview on how Russia, a key international actor, has been dealing with environmental protection and climate change through the implementation of domestic policies and the participation in international environmental agreements.

Nature of previous literature.

The participation of Russia in international environmental agreements from the Soviet times to the latest years in the broader context of the conditions in which its environment is, what policies the country implements and how the Russian public is involved with them is quite an extensive topic: this might be the reason why past literature have the tendency to deal with a particular aspect or a specific time of the environmental protection in Russia.

As regards to monographs, the tendency is either to cover an extensive period of time or to focus on a specific subject matter. Josephson et alii (2013),¹ for instance, focus their research on the Soviet period, thoroughly analyzing each aspect relating to the environment, its conditions, the policies each Soviet leader adopted to shape or preserve it, USSR's participation in international agreements and the role of environmentalism. On the other side, Martus (2017)² centers her book on present times and on the policies the Russian Federation adopted in three sectors: forest preservation, sea protection and development of 'best available technology'.

Review articles can be divided into different groups depending on the particular issue they cover.

The dissertation employs a variety of academic articles in order to support the thesis with a consistent theoretical framework: these articles and monographs' chapters provide with information about the characteristics of international environmental agreements, the stages of treaty-making and the different approaches through which they can be achieved and applied. Mitchell (2003)³ offers an exhaustive definition of the term 'international environmental agreements' and makes a distinction between bilateral and multilateral ones. Cerdá-Tena (2011),⁴ after distinguishing the different stages of treaty-making, explores game theory and applies it to international environmental agreements. Another source worth mentioning is Caney (2010),⁵ which, albeit briefly, provides with other approaches, i.e. cost-benefit analysis, human rights, security and ecological approach.

A great part of review articles is focused on a specific act or policy adopted by Russia, its features and its effectiveness. Isakov (1984)⁶ describes the approaches used by the USSR in the 1980s to enhance natural protection as defined in the document *Main Guidelines for the economic and the social development of the USSR in 1981–1985 and for the period ending in 1990*, while Malmendier (2011)⁷ analyzes the 2009 *Energy Efficiency Act* in all its features, determining whether or not it is related to the Kyoto Protocol.

¹ Paul Josephson, Nicolai Dronin, Ruben Mnatsakanian, Aleh Cherp, Dmitry Efremenko, & Vladislav Larin. 2013. *An Environmental History of Russia* (Studies in Environment and History). New York: Cambridge University Press.

² Ellie Martus. 2017. *Russian Environmental Politics: State, Industry and Policymaking*. New York: Routledge.

³ Ronald B. Mitchell (2003) International Environmental Agreements: A Survey of Their Features, Formation, and Effects Annual Review of Environment and Resources. Vol. 28, No. 1, pp. 429–461

⁴ Cerdá-Tena, Emilio. "International Environmental Agreements and Game Theory", in *Modern Mathematical Tools and Techniques in Capturing Complexity. Understanding Complex Systems*. Ed. Pardo, Leandro; Balakrishnan, Narayanaswamy & Gil, Maria Angeles (Springer, Berlin, Heidelberg, 2011) pp. 287–300

⁵ Simon Caney. "Climate Change, Human Rights, and Moral Thresholds" in *Climate Ethics: essential readings*. Ed. Gardiner, Stephen M. et alii (Oxford University Press: New York, 2010) pp. 163–177

⁶ Yury A. Isakov (1984) The Protection of Nature in the USSR: Scientific and Organizational Principles. *Geoforum*. Vol. 15, No. 1, pp. 89–94

⁷ Bertrand Malmendier (2011) New Russian Energy Efficiency Act. *Journal of Energy & Natural Resources Law*. Vol. 29, No. 2, pp. 177-208

Other papers deal with the general tendencies in the Russian environmental policy framework, such as environmental deinstitutionalization and de-ecologization, examining their potential causes, providing with evidence of such tendencies and proposing some measures to invert them. Mol (2009)⁸ deals with environmental deinstitutionalization, going through the steps that caused it and exploring the possibility of a decentralization of institutions to solve the issue, while Tynkkynen (2014)⁹ considers the chances for ecological modernization in Russia in light of de-ecologization.

Some review articles are specifically devoted to the role of Russia in international environmental agreements, some consider the ones adopted under the USSR while others focus on the Russian Federation's role in the 1990s cooperation, reserving particular attention to Kyoto Protocol. Examples are Hayashi (1972)¹⁰ analyzing Soviet participation in international treaties for the protection of marine fauna, Oldfield, Kouzmina and Shaw (2003),¹¹ who considers the overall engagement of Russia in such agreements in the 1990s and Henry and McIntosh Sundstrom (2012),¹² exploring Russia' climate change policy after Kyoto.

The use of primary sources has been limited to original documents such as international treaties, USSR and Russian Federation Constitutions and international organization reports: these documents are specifically useful as the research is focused on international environmental agreements.

The problems concerning the availability and accessibility of resources are mainly tied to the fact that some databases did not consent a full access to a number of academic articles, but the quantity and quality of literature collected allowed for a deep analysis nevertheless. Moreover, as the research was conducted between Moscow and Rome, it should be mentioned that some resources were available thanks to MGIMO library while others from LUISS library: both significantly contributed to the development of this final work. The accessibility of resources in Russian was limited by the fact that I do not completely master the Russian language, therefore I read and included in the literature only a few selected sources.

⁸ Arthur P.J Mol (2009) Environmental Deinstitutionalization in Russia. *Journal of Environmental Policy & Planning*. Vol. 11, No. 3, pp. 223–241

⁹ Nina Tynkkynen (2014) Prospects for Ecological Modernization in Russia: analysis of the Policy Environment. *Demokratizatsiya. The Journal of Post-Soviet Democratization*. Vol. 22, No. 4, pp. 575–603

¹⁰ Moritaka Hayashi (1972) Soviet Policy on International Regulation of High Seas Fisheries. *Cornell International Law Journal*. Vol. 5, No. 2, pp. 144–160

¹¹ Jonathan D. Oldfield; Anna Kouzmina & Denis J. B. Shaw (2003) Russia's Involvement in the International Environmental Process: A Research Report. *Eurasian Geography and Economics*. Vol. 44, No. 2, pp. 157-168

¹² Laura A. Henry & Lisa McIntosh Sundstrom (2012) Russia's Climate Policy: International Bargaining and Domestic Modernisation. *Europe-Asia Studies*. Vol. 64, No. 7, pp. 1297–1322

In general, there is a gap in a comprehensive work studying international environmental agreements in a broader context: earlier literature either focus solely on a specific aspect of the Russian environmental stances and applies to it a specific theory, or, when considering a longer period, it does not frame it with theories. The ambitious goal of the present research is to try to fill the gap, therefore presenting the role of Russia from the Soviet times to the present, not only taking in consideration international environmental agreements but taking into account Russian domestic policies, tendencies and public perceptions on the issue of nature preservation too, while not forgetting to supply the research with a theoretical framework.

In the composition of the bibliography, attention has been drawn in including both Russian and Western sources, to give as a balanced as possible view of the analyzed subject matter. In the course of the dissertation, it will be often mentioned whether a cited scholar is Western or Russian, in order to specify the view over the discussed topic. When possible, documents in Russian language have been considered to expand the literature and give information that could have not been provided with the use of English sources alone.

Theoretical framework: international environmental agreements.

Before presenting the theoretical framework, it is essential to clarify what we mean in this dissertation with the expression *international environmental agreement*. The definition of international environmental agreement describes “an intergovernmental document intended as legally binding with a primary stated purpose of preventing or managing human impacts on natural resources.”¹³ The term *agreement* refers to Article 2(1) of the 1969 Vienna Convention on the Law of Treaties, which defines a treaty as “an international agreement concluded between States in written form and governed by international law”¹⁴: the definition adopted here is used in its broad sense, as it includes not only the original agreement, but the various modifications relating to it as well. The adjective *international* describes its intergovernmental nature, referring to both bilateral and multilateral agreements. *Environmental* clarifies that such agreements aim at the prevention of negative human influence on natural resources as their primary purpose. This last elucidation is designed to exclude those agreements that refer in the first place to other issues, for instance the weather, transportation or conflicts, while having some spillover effects on the environmental protection cause.¹⁵

¹³ Mitchell (2003), p. 432

¹⁴ Art. 2(1), United Nations Convention on the Law of Treaties (Vienna, 23 May 1969)

¹⁵ Mitchell (2003), p. 433

There are three main reasons why countries decide to come together and sign a treaty conceived for the solution of an environmental issue. The first reason involves effectiveness. For the sake of tackling a problem with efficacy, efforts by a single country or a small number of countries is not sufficient: only the engagement of a great portion of actors will grant the effectiveness of the proposed solutions. Efficiency is the second reason. Taking international measures is often less costly and produces better results compared to unilateral actions perpetrated by countries, resulting therefore in efficient solutions. The third and last reason for a global environmental action is welfare. In general, cooperation implies higher total net benefits for all the participating countries if compared to measures adopted outside of a cooperative framework.¹⁶ Notwithstanding the valuable reasons behind the conclusion of international environmental agreements, their creation is limited by just as many factors. Indeed, no supra-national authority has the power to coerce countries to guarantee efficient environmental protection.¹⁷ Since countries are sovereign, cooperation must have certain characteristics to be effective. First, international environmental agreements are required to be profitable for all the involved parties: participation must be comparably more beneficial than non-participation. Second, the detailed blueprint of the treaty needs to be agreed on by the involved countries by consensus. This point often requires long negotiations, since countries have different interests and will have to find a compromise with one another during the talks. Third, in order to be effective, international environmental agreements must be self-enforcing through a mechanism of punishments and rewards.¹⁸

The making of treaties is characterized by five different stages, namely: pre-negotiation, negotiation, ratification, implementation and renegotiation.¹⁹ In mentioning these steps, it is crucial to make some distinctions between the adopted terminology for the understanding of the topics discussed in the present dissertation. The phase of pre-negotiation involves parties that make an initial diagnosis exploring with attention whether a zone of agreement is possible and profitable. At this point, parties are not sure if an agreement is preferable for their interests, therefore they opt not to be involved in formal talks yet. At the negotiation stage, countries discuss different proposals for the general provisions of the agreement, while they have to choose whether to be signatories or non-signatories. Hence, it is important not to overlap the negotiation phase with the signature of the treaty: during the negotiations, countries contemplate the possibility to be parties to the agreement, while with its signature they formalize this decision under international law.²⁰

¹⁶ Cerdá-Tena (2011), p. 289

¹⁷ Ulrich J. Wagner (2001) The design of stable international environmental agreements: economic theory and political economy. *Journal of Economic Surveys*. Vol. 15, No. 3, p. 378

¹⁸ Cerdá-Tena (2001), pp. 289 – 290

¹⁹ Cerdá-Tena (2001), p. 290

²⁰ Scott Barrett. “The Theory of International Environmental Agreements” in *Handbook of Environmental Economics, Volume 3*. Ed. Mäler, Karl-Göran & Vincent, Jeffrey R. (Elsevier B. V.: The Netherlands, 2005) p. 1495

The ratification, that is the expression by a country of the consent to be bound by an agreement,²¹ is strongly conditioned by legalization and flexibility. In fact, with regard to legalization, soft agreements are more likely to be ratified than hard commitments, because a country will think twice before applying an agreement whose objectives are difficult to meet, while it will be more prone to ratify an agreement whose general provisions can be easily met. Flexibility can help resolve the legality dilemma, as the possibility to benefit from flexibility provisions can give a push to ratification.²² When discussing implementation, this phase should not be overlapped with compliance. The implementation stage entails “the measures undertaken at the national and sub-national levels to bring the behavior of target groups into accordance with the particular state’s international commitments.”²³ Implementation, therefore, concerns the concrete actions taken by the agreement signatories in order to comply with provisions stated in the treaty and it is instrumental. On the other hand, compliance refers to the achievement of the goals stated in the international agreement and it can be accidental. A concrete example of “compliance without implementation” is the case of post-Communist states, which complied to the early 1990s environmental agreements aimed at emissions reduction more due to contracted industrial activity than due to direct implementation measures. If implementation is successful or compliance is reached through different means, an international treaty is considered to be effective and its objectives are met.²⁴ Finally, the renegotiation phase allows countries to modify the agreement once they have learned more about their partners and their environment.²⁵

Based on which theories and approaches are international environmental agreements reached and applied? The aforementioned stages of treaty-making, especially ratification and implementation, can be influenced by different ways in which the issue is framed. In the last part of this section, a brief overview of theories and approaches to international action towards environmental protection will be drawn.

One way to look at international environmental agreements is through the lenses of *game theory*. Game theory is a mathematical method which studies interdependent decision-making, and it provides with “techniques for analyzing situations in which two or more individuals (or groups of individuals) make decisions that will influence one another’s welfare.”²⁶ This approach is

²¹ Art. 11, United Nations Convention on the Law of Treaties (Vienna, 23 May 1969)

²² Jana Von Stein (2008) *The International Law and Politics of Climate Change. Ratification of the United Nations Framework Convention and the Kyoto Protocol*. Vol. 52, No. 2, pp. 246–250

²³ Geir Hønneland & Anne-Kristin Jørgensen (2003) *Implementing International Environmental Agreements in Russia: Lessons from Fisheries Management, Nuclear Safety and Air Pollution Control. Global Environmental Politics*. Vol. 3, No. 1, p. 74

²⁴ Hønneland & Jørgensen (2003), pp. 74–77

²⁵ Von Stein (2008), p. 249

²⁶ Cerdá-Tena (2001), p. 290

considered particularly well-suited for international environmental agreements because it gives countries some insights on how to deal with a public good with transboundary externalities²⁷ when no supranational authority with power to enforce environmental protection policies exists. Since countries are sovereign, external enforcement is not a possibility, and the only way they can deal with such an international common property dilemma is through a self-enforcing agreement.²⁸ In the context of environmental protection, game theory is divided in two sub-branches: *cooperative game theory* and *non-cooperative game theory*. Usually, the decision to participate in an agreement is taken in a non-cooperative framework. On the other hand, participating countries decision on the aims of the treaty normally follows the dynamics of a cooperative game.²⁹ The non-cooperative game requires that the agreement should be self-enforcing. Self-enforceability is conditioned by two variables: profitability and stability. For countries to desire to take part to an agreement, it must be profitable, meaning that the benefits of participation exceed its costs. For the sake combating free-riding or deviant behavior, an agreement must be stable, meaning that participation makes the best alternative for countries.³⁰

For what reasons does a country comply with an international environmental agreement? If we want signatories to fulfill their obligations, we need to create opportunities for enforcement: this is the case of a *repeated game*. If the game of making international environmental standards is repeated, the players – namely the signatories – meet again and again, and in those further meetings deviations from participation or incomppliance of the agreement can be punished. The credibility of punishment allows enforcement and consequently, provides countries with a reason to comply.³¹ Another reason concerns *reputation*. In fact, if a signatory fails to meet his duties, it gains a negative reputation that will compromise the way in which other parties will see its commitment in future negotiations, not only concerning international environmental agreements specifically, but other treaties as well. In order to avoid this situation and keep a good profile in the international relations arena, countries make efforts towards compliance.

In the framework of game theory, some additional measures have been applied to contrast the phenomenon of free-riding, to wit when a country benefits from an international environmental agreement without being a part of it or when it is a non-complying member. Even if this is not the place to thoroughly describe such measures, it is the case to mention a few of them: the minimum participation clause establishes the minimum number of countries that must ratify an agreement in

²⁷ Cerdá-Tena (2001), pp. 290–291

²⁸ Wagner (2001), p. 378

²⁹ Barrett (2005), pp. 1466–1467

³⁰ Wagner (2001), p. 384

³¹ Barrett (2005), p. 1469, p. 1489

order for it to entry into force, side payments transfer monetary or in-kind resources among participants or from participant to acceding countries³² and trade restrictions serve as punishment for non-compliance. The graph below illustrates selected international environmental agreements and some of the measures to combat free-riding.

Table 1
Selected international environmental agreements

Agreement	Environmental problem	Date of adoption	Entry into force	Minimum participation	Number of signatories	Trade restrictions	Side payments
Montreal Protocol	Ozone depletion	1987	1989	11 countries; 2/3's of global consumption	175	Yes	Yes
Kyoto Protocol	Climate change	1997	Not yet in force	55; 55% of emissions of selected countries	84	No	Yes
Helsinki Protocol	Acid rain	1985	1987	16	22	No	No
MARPOL	Marine pollution	1978	1983	15; 50% of world tonnage	113	Yes	No
Atlantic Tunas Convention	Fisheries conservation	1966	1969	7	35	Yes	No
Rhine Chlorides	River pollution	1976	1985	5 named countries	5	No	Yes

Source: Barrett (2003)³³

There are four more normative frameworks that can be employed to approach global environmental issues: cost-benefit analysis approach, human rights approach, security approach and ecological approach.

The *cost-benefit analysis approach*, in this case, is aimed at comparing the gains and the losses in the application of a policy, such as the setting of an environmental standard or the application of an international environmental agreement.³⁴ Costs are defined as decreased human wellbeing, while benefits refer to increased human utility. On the basis of this approach, a policy is adopted if benefits exceed costs. This method has been used for the 'Stern Review', which entails a long and detailed report of the costs and benefits of climate change and a program to counter it: it presents the negative impacts of climate change for development and it proposes the adoption of

³² Wagner, pp. 392–394

³³ Scott Barrett. 2003. *Environment and Statecraft: The Strategy of Environmental Treaty-Making*. Oxford: Oxford University Press.

³⁴ David Pearce (1998) Cost-benefit Analysis and Environmental Policy. *Oxford Review of Economic Policy*. Vol. 14, No. 4, pp. 84–100

mitigation and adaptation policies through international collective action.³⁵ In the implementation of environmental protection measures, the costs are certain, they can be quite high for some countries and are easily located to a specific economic sector, while the benefits derived from imminent climate action seem diffuse, uncertain and with positive consequences only in a distant future. For instance, adopting a specific policy under a framework convention involves costs such as the requalification of production and the adoption of newer and more costly technologies, while the future benefits derived from living in a healthier environment appear blurred.³⁶ Under this approach, two main responses to climate change are adopted: mitigation and adaptation. Mitigation aims at keeping the changes of the environment at a minimum level, while adaptation involves adjustment of human institution in order to minimize the harms of environmental problems.

The *human rights approach* assumes that anthropogenic climate change is a threat harming human rights, in particular three of them. First, the right to life is at risk due to severe weather events and heat waves. The formers – namely earthquakes, floods, tornadoes etc., – lead to direct loss of life while the latters can indirectly cause respiratory and cardiovascular problems that result in death, too. Second, environmental issues can compromise the right to health, exposing humanity to dangerous diseases and injuries. Third, the right to subsistence is undermined as well, since changes in climate with no counter-action can jeopardize food security through droughts, crop failures, rise of sea-levels and consequent land loss.³⁷ The human rights approach supporters endorse this method because it protects the vulnerable, unlike the cost-benefit analysis approach which fails to do so due to its aggregative logic. Moreover, this approach does not only entail mitigation and adaptation, but it contemplates compensation too, which occurs when a right is not protected.³⁸

According to the *security approach*, international cooperation for the development of effective environmental policies should be pursued in order to minimize or neutralize the impact of climate change on security matters. In fact, tensions over the scarcity of resources, the loss of land, disputes over who pays for the consequences of environmental problems and who is responsible for them, the availability of energy resources and migration are at the basis of many modern conflicts. International cooperation aimed at reducing environmental issues is therefore seen as essential to lower the possibility of tensions and instabilities that can potentially lead to armed confrontations.

³⁵ Nicholas Stern (2007) *The Economics of Climate Change: The Stern Review*. Cambridge, UK: Cambridge University Press

³⁶ Hønneland & Jørgensen (2003), p. 75 and Barrett (2005), p. 1507

³⁷ Caney (2010), pp. 164–169

³⁸ Caney (2010), pp. 170–172

Finally, the *ecological approach* plants its roots in the environmentalist movements, strongly supporting the making of international environmental agreements for the intrinsic value of nature itself.

Who is responsible to act in order to protect the environment and under which principles? When addressing environmental issues in general and emission reduction to prevent global warming in particular, the debate focuses on allocating the costs of prevention, coping and emissions through fair bargaining. Two different principles can be applied to solve these matters: the first is the no-fault principle, stating that costs for international environmental action have to be covered according to “ability to pay”; the second is the fault-based principle, which requires the polluters to pay since they are responsible for the present state of affairs.³⁹ When discussing whether citizens are individually responsible for the protection of the environment, there is no moral principle that proves that they are obliged to fight global warming, but governments can be considered to have this duty, because, unlike single individuals, they have the power to make a difference.⁴⁰

Dissertation’s outline.

The dissertation will be divided into three chapters, each of them covering a major topic yet following a similar structure. Every section will consist of an introductory overview on the years under inquiry, an examination of the tendencies present in Russia, a review of the national measures taken in response to environmental issues, a detailed analysis of the international environmental agreements in which the country was involved for what concerns different stages of treaty-making and finally a part dedicated to mass attitudes and movements in the environmental context.

The *first chapter* will deal with the environmental challenges of Soviet times and will focus on the USSR’s participation in international agreements from the late 1970s to its breakup. After a short

³⁹ Henry Shue. “Subsistence Emissions and Luxury Emissions”, in *Climate Ethics: essential readings*. Ed. Gardiner, Stephen M. et alii (Oxford University Press: New York, 2010) p. 219

⁴⁰ Walter Sinnott–Armstrong. “It’s Not My Fault: Global Warning and Individual Moral Obligations” in *Climate Ethics: essential readings*. Ed. Gardiner, Stephen M. et alii (Oxford University Press: New York, 2010) pp. 343–344 In his paper, Sinnott-Armstrong explores the possible general principles under which we should not engage in an act that contributes to global warming, namely wasteful driving in the form of a Sunday afternoon joy ride. He tries to apply this case to four groups of general principles. The *actual act principles* cannot apply because the joy ride did not hurt nor did it risk hurting others, directly or indirectly. The *internal principles* are not appropriate either, since wasteful driving just for leisure does not go against some universal principles, is not vicious nor it has the intention to use others as means to achieve fun times. As for the *collective principles*, they would apply if the act of driving wastefully were illegal or if the joy ride were making me a part of a group whose actions cause harm: but neither of the aforementioned assumptions holds, therefore such principles cannot enforce a moral obligation not to drive wastefully. The *counterfactual principles* cannot be implemented either, because they’re mainly based on moral intuitions.

overview on the environmental history of the Soviet Union, it will be clear that the territory has undergone a vast number of issues, from droughts to irrigation problems, from resources exploitation to pollution and that concrete action to prevent such phenomena was seriously taken only when the environment became a matter of global awareness. The tendencies Soviet leaders and public had towards issues concerning nature and its resources were the following: nature was viewed as something science was supposed to master and its resources were considered infinitely abundant. This explains why grave environmental conditions were often overlooked. National environmental policies at that time involved emergency measures aimed at repairing the damages more than preventative action until the 1970s and the 1980s, when nature protection became a policy objective and Soviet leaders introduced environmental laws standards and fines. In the same period, the USSR took part in bilateral agreements and cooperation with other Western countries, including the UK, France, Sweden and the USA, and then participated in international conferences such as the 1972 UN Conference in Stockholm. The reasons behind cooperation and its results will be thoroughly explored in the chapter. Finally, it is interesting to take a glance at the environmentalist movements of the Soviet period from Lenin's times, as the Movement for the Protection of Nature, their purposes, the difficulties they had to overcome and their evolving role in environmental protection policies.

In the *second chapter*, the attention will be drawn on the role of Russia in 1990s international environmental agreements, from its participation at the 1992 Rio Earth Summit to its decision to ratify the Kyoto protocol in 2004. When assessing the Soviet legacy concerning environmental issues in the Russian Federation and in CIS countries, we can observe that, despite the reduction of pressure, problems linked to air pollution, land degradation, worse water quality, illegal logging etc., did not disappear with the breakup of the USSR. During these years, greater priority was given to economic and social issues over environmental ones. The main trends involved de-ecologization, environmental de-institutionalization and de-centralization. At the national level, two main environmental policy tools were adopted: the first consisted of a system of experts' assessment involving regular collection and dissemination of information on the state of the natural realm, the second entailed a system of charges aimed at collecting payments to produce pollution and to use natural resources. At the international level, Russia participated in the cooperation for environmental protection in different ways, from taking part in the Rio Earth Summit in 1992 to implementing Agenda 21, from engaging in the 1997 New York Earth Summit+5 conference to signing the Kyoto protocol in 1999. The role of Russia in the international environmental protection framework will be the focus of the chapter. To conclude, the smaller public perception on the importance of environmental issues and the difficulties encountered by activist in general and the druzhina movement in particular will be given some space.

The *third chapter* will be devoted to the latest developments regarding the role of Russia in international environmental action, with the focus being its contribution to the 2015 Paris Agreement. After looking at the current state of affairs of the natural and urban environment of Russia and turning our attention to the threats the country has to face, such as deforestation, nuclear contamination, water and land degradation, we will focus on general tendencies. Priority is still given to the economic investments over environmental consideration, but, at the same time, measures are taken to face the issue and prevent further degradation. The trend of de-centralization and the consequent process of regional re-institutionalization will be covered in this chapter. At the national level, various pieces of legislation address environmental issues in the spheres of production and energy, such as the 2009 Energy Efficiency Act and the 2014 Federal Law 219: the first concerns energy savings' regulation while the second aims at introducing the use of best available technology in production. In the international arena, the Russian Federation still plays an important role, as it signed the Paris Agreement. The reasons behind this decision, the national action taken and the possibility for its ratification will be central in the analysis. At the end of the chapter, some words will be spent on the Russian public's perception on environmental issues and climate change.

On the basis of the collected information, general conclusions will be drawn on the role environmental protection and climate change have on Russian domestic policies and participation in international cooperation.

CHAPTER 1

Environmental challenges and international agreements during Soviet times

1.1 Environmental degradation in the Soviet period

The great territory of the Soviet Union underwent general degradation due to two main factors, one caused by the nature of its geography while the other induced by policies perpetrated in the past century. As a matter of fact, climate and geography posed significant challenges for the development of resources since raw materials – timber, fossil fuels and mineral resources – were located far from population centers, in the zones characterized by harsh climatic conditions, namely Siberia, the Far East and the Far North. The heterogeneity and vastness of the territory complicated the task: each area required an ad hoc policy and the construction of infrastructures to reach the natural resource. Leaders, government officials, scientists and engineers faced some difficulties in developing policies aimed at managing these resources and often failed to promote rational, low-impact policies in favor of practices that significantly harmed the state natural and urban areas.⁴¹

This section aims at presenting the environmental degradation the territory of the Soviet Union had to go through, from man-caused issues to natural disasters, in the period between the First World War and USSR breakup.

According to Feshbach and Friendly, what happened in the USSR can be referred to as *ecocide*, the widespread, severe and long-lasting environmental harm caused by anthropogenic or natural agents. The policies adopted for the development and the exploitation of natural resources had, directly or indirectly, crucial costs across all ecosystems, as flora was despoiled, fauna's diversity shrank and human well-being declined.⁴² A concrete example of man-caused ecocatastrophe can be found in the 1984 Chernobyl disaster, when one of the reactors of the nuclear power station exploded and released extremely high quantities of radiations in the environment, causing great financial, health and environmental costs.⁴³

As Josephson et al. have noted, “World War I, the Russian Revolution, and civil war led to unimaginable human and environmental costs to the Russian Empire over the period of 1914 to

⁴¹Josephson et alii. 2013, p. 4, p. 24

⁴²Josephson et alii. 2013, p. 5, p. 317

⁴³Murray Feshbach & Alfred Friendly. 1992. *Ecocide in the USSR: Health and Nature under siege*. New York: Basic Books, p. 376

1921. Millions of people died from battle, starvation, and disease. The natural environment fared little better. World War I led to the degradation of lands along the western front and ultimately the ‘perdition’ of such species as the European bison.”⁴⁴ When the Bolsheviks gained power with the October Revolution, the newly formed government declared by decree the nationalization of industry and land, which resulted in the confiscation of private property. The purpose of nationalization was the rational use of means of production and of natural resources, but the implementation of this measure led to anarchy and political and economic turmoil putting at risk the environment. First, *zapovedniks*,⁴⁵ i.e. nature preserves, and other natural areas such as parks, forests, *dachas*⁴⁶ and parts of the virgin steppe were seized by peasants and plundered of any raw material that could serve either as food or fuel. Not only did these actions cause the destruction of a number of *zapovedniks*, but they also left scars across the whole natural landscape.⁴⁷ Second, fisheries were targeted, depredated and destroyed, too. As famine hit the population, more and more displaced persons decided to find their source of sustenance in fish and they were willing to obtain it at every cost, even if that meant assaulting the fisheries. This caused many fish industries to close or to illegally fish in natural reserves: the direct consequences involved the rapid decline of catches and the end of the Russian monopoly over sturgeon and caviar industries.⁴⁸

Stalin’s policies of industrialization, urbanization and agricultural collectivization were part of the ‘Great Break’ program and were aimed at Soviet self-sufficiency and military strength. Those policies had a major impact on the environment, which was merely considered as a resource for the industrial development. During his first three Five-Year Plans, between 1929 and 1941, 9 000 major industrial enterprises were established with the sole aim of increasing production and without considering workers’ safety, protection of the surrounding ecosystems nor pollution controls. In the same years, industry and construction accounted for 64 per cent of the total national economy. The Dnieper hydroelectric power station is a clear proof of how great project, if not accompanied by scrupulous assessments, can have significant negative consequences. In fact, the construction of dams and reservoirs can be useful as they provide with water for urban, agricultural and industrial purposes, flood control and hydroelectricity production, but they can have negative consequences for the riparian ecosystems, as decreasing water volumes, increased salinity, loss in fisheries, inundations and serious problems of pollution derived from human activity. Lakes as the

⁴⁴ Josephson et alii. 2013, p. 60

⁴⁵ from the Russian language заповедник: reserve, reserved area where rare species of plants and animals are protected. Definition by the Dictionary Сергей Иванович Ожегов. 1964. Тальковский словарь русского языка. 28-е издание, Москва мир и образованию 2018; с. 333

⁴⁶ from the Russian language дача: cottage, country summer house. Definition by the Dictionary Ожегов. 1964, с. 237

⁴⁷ Josephson et alii. 2013, p. 62

⁴⁸ Николай Михайлович Книпович. 1923. Каспийское море и его промыслы. Берлин: Государственное издательство. сс. 82–83

Aral Sea and rivers as the Danube, Dnieper and Dniester were all subjected to those long-lasting, often irreversible, alterations.⁴⁹ According to Stalin's plan for agricultural collectivization, the countryside was needed for industrial purposes at the expenses of the agricultural sector, which, at the time of the third Five-Year Plan, accounted for only 45 per cent of the total national economy. With the mechanization of agriculture and the creation of collective farms, great project had disastrous environmental consequences in this sector as in the industrial one. Irrigation projects in Central Asia are concrete examples of those results: in the Goldnaia steppe, the irrigated area was supposed to be covered by a system of canals that would have permitted the expansion of crops production. But the project was expanded as far as to the moisture-deficient lands, causing drastic water shortages and undermining the crop production even in the fertile areas. By the 1970s, the Amu Darya and Syr Darya river were almost dry and the Aral Sea dangerously shrank. Such resource mismanagement put further pressure on environment and contributed to an increase in the incidence of episodes of droughts, crop failures and famine.⁵⁰

In Stalin's years, the Soviet Union had to face the Second World War and all its catastrophic consequences. Not only did the USSR suffer from the greatest casualties of the war, but it also had to deal with immeasurable environmental costs. In fact, the conflict took place in the territories inhabited by 40 per cent of the Soviet citizens, where the greatest portion of industries and productive agricultural lands were located. As Josephson et alii state, "millions of civilians died; their cities became rubble and ash; and the industrial, chemical, and other materials poisoned the environment."⁵¹ Moreover, "the invasion of the Soviet Union led to the destruction of forests, farms, transport systems, and irrigation systems."⁵² The Second World War accelerated the process of conquest of Siberia and of the Far North. In fact, in order to find means of subsistence and expand the industry in the territories distant from the front, productive forces started investing in the resources of East Siberia, namely timber, fossil fuels, minerals and water. The construction of great hydroelectric power stations to power the extraction of oil, gas, coal and metals and the diversion of rivers through canals to boost Central Asian agriculture,⁵³ together with the development of infrastructures, entailed long-term ecological costs for the tundra, taiga and steppe of Siberia. Cold War practices such as the production of nuclear, chemical and biological weapons

⁴⁹ Christer Nilsson & Kajsa Berggren (2000) Alterations of Riparian Ecosystems Caused by River Regulation: Dam operations have caused global-scale ecological changes in riparian ecosystems. How to protect river environments and human needs of rivers remains one of the most important questions of our time. *BioScience*. Vol. 50, No. 9, 1 September pp. 783–792.

⁵⁰ Josephson et alii. 2013, pp. 93–99

⁵¹ Josephson et alii. 2013, p. 114

⁵² Josephson et alii. 2013, pp. 114–115

⁵³ The rivers Ob, Irtysh, Enisei, Angara and Amur were planned to become planned waterways. For a detailed analysis of the topic see Андрей Николаевич Вознесенский. 1967. *Гидроэлектрические Ресурсы СССР*. Москва: Наука. с. 16

contributed to serious environmental degradation, too. In fact, the toxic waste resulted from those industries was dumped in the land and in rivers, destroying ecosystems all over the Southern Urals, Kazakhstan and the Arctic.

In the Stalin era, the widespread, severe and long-lasting environmental degradation was caused by the industrialization imperative and the agricultural collectivization, which compromised the Soviet landscape forever.

In Khrushchev's years, the centrally planned economy continued to deliver large-scale projects characterized by inefficiency and high pollution levels, worsening the environmental degradation. When applying new policies, geographical and climatic variables were rarely considered, as the numerous projects developed during Khrushchev's years testify. In the sector of agriculture, the Virgin Lands campaign and the Corn campaign had a devastating impact on the land, causing crop failures, wind erosion, droughts, destruction of biodiversity, loss of soil fertility and reduction of grassland areas. The Virgin Lands campaign (1954–1963) aimed at plowing up 40 million hectares of Kazakh and western Siberian steppe, by nature inadequate territories for growing harvest due to their severe climatic conditions characterized by dry and windy extremes.⁵⁴ The misuse of land and droughts caused the grain production to drop significantly. With the Corn campaign (1954–1963), Khrushchev aimed at expanding the corn crop area in central and northern regions of the Soviet Union but, as for the Virgin Lands campaign, the zones chosen were ill-suited due to unfavorable climate conditions. In the energy production sector, projects for the development of hydroelectric power stations had irreversible environmental costs on the Don and Volga rivers' ecosystems, not only harming their basins, but causing a loss of arable land too. The construction of dams on the Volga river had consequences for the Caspian Sea as well, as it altered its water balance and curtailed the sturgeon population.⁵⁵ The greatest problem consisted in heavy pollution caused by the industrial centers of Siberia, which put in jeopardy rivers, lakes, air, soil, forests and urban centers.

In the following twenty years, Brezhnev for the longest time, Andropov and Chernenkov for a few years, had to deal with increasing problems of air, land and water pollution, mainly caused by the heavy industry legacy. In the agricultural sector, the Brezhnev Food Program, launched in 1982, aimed at improving production through great investments: this program had significant environmental consequences because of the overuse of chemical fertilizers and pesticides which led to the ruination of farmland. In fact, Soviet lands were damaged by soil poisoning, erosion and

⁵⁴ William Arthur Douglas Jackson (1956) The Virgin and Idle Lands of Western Siberia and Northern Kazakhstan: A Geographical Appraisal *Geographical Review*. 46, no. 1, p. 3

⁵⁵ Josephson et alii. 2013, p. 5, pp. 168–172

ill-designed irrigation systems. Years of policies allowing for the rapacious use of water contributed to the irreversible degradation of Soviet lakes and rivers caused by irrigation systems, hydroelectric power stations, dams, uncontrolled fishing and pollution. Brezhnev’s “hero projects” have their share of responsibility in the deterioration of inland waters conditions. For instance, the Baikal Lake ecological balance was altered by the construction of a pulp and paper combine, the Caspian Sea receding water and pollution contributed to the destruction of its sturgeon population, while the Aral Sea was destroyed by large-scale irrigation projects. The situation in urban areas wasn’t less worrisome, since waste and pollution were a widespread plague of Soviet cities. Both factories and municipalities discharged untreated waste in the environment, contributing to degradation.⁵⁶

During Gorbachev’s leadership, the Soviet Union was the theater of the biggest nuclear power station accident of the latest century: the Chernobyl disaster. On 26 April 1986, the fourth reactor of the power station exploded. The causes are debatable, they can be either attributed to a flaw in the design of the reactor or to a mistake of the personnel while conducting an experiment, but the consequences are clear and they involve the spread of radioactive material all over the territories of Ukraine, Belarus and Russia, for a total area of 140 400 kilometers.⁵⁷ The radioactive contamination compromised people’s health and provoked millions of deaths by cancer, destroyed nature and triggered the land degradation, as the table below shows, and caused the loss of electrical energy production.

TABLE 2. *Land Removed from Various Uses Because of Chernobyl Contamination (square km)*

	Ukraine	Belarus	Russia	Total
Agricultural land	5,120	2,640	170	7,930
Forest	4,920	2,000	20	6,940
Total	10,040	4,640	190	14,870
<i>Percent of the country area</i>	1,66%	2,24%	0,001%	

Source: United Nations, The Human Consequences of the Chernobyl Nuclear Accident. A Strategy for Recovery (Minsk: United Nations, 2002).

In conclusion, the combination of policies and different projects in the spheres of industry, agriculture, urbanization and power generation aimed at mastering nature under economic plans resulted in irreversible environmental degradation. Not only were natural landscapes and resources compromised, but the health of the citizens was negatively impacted too.

⁵⁶ Josephson et alii. 2013, pp. 207–236

⁵⁷ United Nations, *The Human Consequences of the Chernobyl Nuclear Accident: A Strategy for Recovery*. (Minsk, United Nations, 2002)

1.2 The need to master nature and to exploit its infinite natural resources

One issue concerning the management of natural resources is that neither Marx and Engels nor Lenin had clarified a position on the issues of environmental protection and sustainability. This gap between theory and practice gave considerable space to intellectuals, planners, specialists and party leaders to develop their own theories over time.⁵⁸

According to some scholars, such as Weiner (1988) and Senatore (2014), there is some evidence that Lenin was actively involved in conservation matters and cared about the relationship between man and nature, even if he often touched these themes only by inference. As Weiner observed, Lenin's essential view on socialism was the following: "planning, state ownership and control, and modernization. For Lenin, socialism's foremost virtue was its efficiency. (...) Although Lenin's emphasis was on increasing Russia's productive power, it was to be accomplished within observance of the laws of nature."⁵⁹ Senatore notices how, even if Lenin never directly dealt with the conservation and safeguard of nature, he always kept in mind that the expansion of industrial production needed to be achieved within the framework of sustainability, namely natural resources protection and rational use.⁶⁰ These remarks may explain why in Lenin's times scientists and the party were strongly interlinked in the development of policies.

During Stalin's era, pressures to meet production targets, promote industrialization and agricultural collectivization prevailed over any concern for the protection of natural resources. The theoretical gap was filled with the exploitation of the environment over its preservation in order to achieve the "socialist reconstruction". Only by mastering nature – i.e. manipulating the available resources according to a plan like any other sector of the economy – could the Soviet Union achieve its goals.⁶¹

During Khrushchev's and Brezhnev's times the tendency to consider nature as something to be mastered remained present, as the implementation of "hero" projects continued with no particular preventive action nor preliminary assessment. Nevertheless, due to the blossoming 1970s global awareness over environmental protection, this trend started to slightly reverse: not only was the Soviet Union concerned with the preservation of nature at the national level, but it started to take action in the international arena as well. According to the scholar Isakov (1984), in the 1980s

⁵⁸ Josephson et alii. 2013, p. 5, p. 240

⁵⁹ Douglas Weiner. 1988. *Models of Nature: Ecology, Conservation and Cultural Revolution in Soviet Russia*. Bloomington, Indiana University Press, pp. 22–23

⁶⁰ Gianluca Senatore (2014) Sostenibilità e conflitti ambientali in Russia tra il 1918 e il 1973. *Sociologia, Rivista Quadrimestrale di Scienze Storiche e Sociali*. Anno XLVIII, No. 2 bis.

⁶¹ Josephson et alii. 2013, p. 61, p. 74

“caring for nature conservation is acquiring a nation-wide character in the Soviet Union. Here is a guarantee of success in solving the many still unresolved problems.”⁶²

In the second half of the 1980s the tendency shifted from reparation to prevention: during Gorbachev’s leadership, environmental concerns gained a prominent position in policies’ decision-making, both at the national and at the global level. At that time, preventative measures were accompanied by rehabilitation policies required for environmental catastrophes, such as Chernobyl disaster in Ukraine or the Spitak earthquake in Armenia.

1.3 Soviet environmental policies: from rehabilitation to prevention

After exploring the state of degradation of the natural and urban environments and understanding the general tendency to treat nature as an object that ought to be mastered, it is appropriate to analyze how natural protection was dealt with during Soviet times. This section aims at studying how national policies addressing environmental challenges changed over time, assuming first a remedial character and later becoming more and more preventative in their nature.

When Bolsheviks raised to power following the success of the October Revolution, the first law they promulgated in November 1917 was the *On Land* decree, which established the nationalization of all natural resources. Since the immediate result of this policy led to anarchy and to irrational exploitation of forests, soils and waters, the government responded to the problem with the promulgation of two decrees: *On Forests* in 1918 and *On Hunting Seasons and the Right to Possess Hunting Weapons* in 1919. On the one hand, the decree *On Forests* aimed at the creation of the Central Administration of Forests of the Republic to manage the woodlands and their planned reforestation, and it established the division of forests in exploitable and preserved areas; on the other hand, the *On Hunting* decree was designed to handle the issue of fauna preservation.⁶³ These were not the only steps Lenin took for the protection of nature: in 1919, the State Committee for the Protection of Monuments of Nature was instituted; the first state-founded protected natural area, namely the *Ilmenskii zapovednik*,⁶⁴ was opened in 1920; and in 1921 the decree *On Protection of Monuments of Nature, Gardens and Parks* was promulgated.⁶⁵ Even if the adoption of the aforementioned policies demonstrates Lenin’s attention to environmental matters, their

⁶² Isakov (1984), p. 94

⁶³ Weiner. 1988, pp. 24–26

⁶⁴ from the Russian language Ильменский заповедник: Ilmen Reserve.

⁶⁵ Senatore (2014)

implementation was not always an easy task and in Stalin's era a great number of these natural protection measures went through significant changes or were repealed altogether.

As it was mentioned in the two previous sections, Stalin was not at all concerned with the protection of nature: on the contrary, the policies perpetrated during those years always favored natural resources exploitation over their conservation. The first three Five-Year Plans clearly show how economic expansion held greater policy priority than environmental matters. After WWII, the fourth Five-Year Plan (1946–1959) was approved, but the inaccurate prediction of its costs and a year of bad harvest made the objectives of this plan difficult to achieve.⁶⁶ In fact, in 1946, the key Soviet agricultural regions situated in Ukraine, in the Volga and Don rivers basins and in the Central Black Earth regions were hit by droughts. This, combined with the authorities' establishment of excessive grain procurement in other relatively productive areas, caused a widespread famine.⁶⁷ In 1948, the *Stalinist Plan for the Transformation of Nature* was adopted in order to avoid future droughts and famine: this was the only time over Stalin's years that a preventive measure to deal with environmental problems was approved, even if its scope was not nature preservation itself but the modeling of nature serving industrial and agricultural purposes. The plan entailed the creation of artificial forests, water canals and lakes to fight water shortages, droughts and resulting crop failures. Some of the projects connected to the *Stalinist Plan for the Transformation of Nature* involved the deviation of the Siberia river Ob for irrigation purposes and the creation of the Forest Defense Belt, aimed at protecting agricultural lands from dry winds.⁶⁸ Overall, these policies did not fully achieve the expected results, rather they contributed to the worsening of environmental degradation.

Khrushchev's "hero projects", as the Virgin Lands campaign, the Corn campaign, and the construction of hydroelectric and nuclear power plants described in the first section of the chapter,⁶⁹ proved to have negative consequences on the environment. During these times, government officials approved projects without carrying out a full *cost-benefit analysis*, and often great economic benefits were the only foreseen effect, while the role of social and environmental costs was shadowed or completely ignored. As in Stalin's times, nature was viewed as something that must be shaped according to the needs of the socialist society, this is why, when dealing with environmental issues, rehabilitation policies prevailed over preventive policies. A concrete example of this attitude is the 1960 resolution *On Measures to Put in Order the Utilization and*

⁶⁶ Senatore (2014)

⁶⁷ Josephson et alii. 2013, p. 119

⁶⁸ Senatore (2014)

⁶⁹ Virgin Lands campaign, Corn campaign, hydroelectricity: **1.1 Environmental degradation in the Soviet period**, p. 24

Strengthen the Conservation of Water Resources of the USSR. Both in Stalin's and in Khrushchev years, great emphasis was put on the construction of plants, especially heavy industry ones, but only when they reached sky-high levels of pollution was a policy devoted to the installation of pollution treatment facilities and the use of filters before dumping waste in rivers and lakes. When action was finally taken, the quality of the majority of inland waters was already compromised by the discharge of untreated industrial waste and, even with the aforementioned measures in place, industries kept producing without adopting the 1960 resolution.⁷⁰ Heavy industry pollution was not the only environmental issue Khrushchev's government had to come to terms with: in 1957, the first nuclear catastrophe of the world took place in Kyshtym, in the Urals. The accident, at that time, was covered under strict censorship, but the explosion caused the dispersal of huge quantities of radioactive materials for a range of hundreds of kilometers. To contain the damages, the towns surrounding the Kyshtym nuclear power station were evacuated while the utilization of East Urals Radioactive Trace (EURT) territories was banned until 1961.⁷¹

When Khrushchev resigned in 1964, Brezhnev started adopting both rehabilitation environmental policies and preventative ones. Efforts for the promulgation of environmental legislation can be based on two main grounds: the problems caused by pollution, misuse of natural resources and aggressive industrialization could not be ignored anymore as they were damaging the quality of citizens' lives, and nature's preservation was then gaining global momentum as the international arena was looking for solutions to the issue, which the Soviet Union wanted to give through its "developed socialism".⁷² That is why, from the second half of the 1960s to the 1980s, many laws on nature's protection, industrial and agricultural regulations and pollution limitations were adopted and, in the same period, international regimes were joined, like the next section will show. As Isakov (1984), one of the leading Soviet biologists, points out, environmental matters went from being approached with emergency measures to being treated with preventative actions. From 1981 to 1985, the key document which addressed the goals of preservation of nature, from protection of natural holdings to air and water quality controls, from national parks' opening to emissions' reduction, is the *Main Guidelines for the economic and the social development of the USSR in 1981–1985 and for the period ending in 1990*.⁷³ In this context, two approaches were followed: the first entailed the implementation of countermeasures against man-caused

⁷⁰ Josephson et alii. 2013, p. 177

⁷¹ Scott Buttinger (22/02/2017) The Kyshtym disaster. Submitted as coursework for PH241, Stanford University, Winter 2017. <http://large.stanford.edu/courses/2017/ph241/buttinger1/>

⁷² Josephson et alii. 2013, p. 185

⁷³ Isakov (1984), p. 89

environmental degradation, the second implied the distinction of such issues into categories, depending on the actions needed to tackle the problem.⁷⁴

Not only did Brezhnev mention environmental rights in Article 18 and 67 of his Constitution,⁷⁵ but he also adopted various laws on the issues, such as the *On Additional Measures to Intensify the Conservation of Nature and Improve the Utilization of Natural Resources* in 1978, establishing environmental offices in different ministries, *On the Protection of the Atmosphere*, setting air quality standard and *On the Protection of Animals*, establishing the grounds for fauna protection, in 1980.⁷⁶ In the same years, the damages of soil were dealt with through new methods of cultivation, which paved the way for a slow process of soil recovery.⁷⁷ The steps for nature preservation were many and they were promising but, unfortunately, they were not always as efficient as they aimed to be. The main problem was that the system lacked a central environmental protection agency, therefore different ministries had to cooperate in order to solve environmental problems, which made the implementation process slower.

Gorbachev's years were characterized by an intense activity in the sphere of nature preservation, including the promulgation of environmental laws and the creation of ad hoc government bureaucracy. In fact, in 1984, the Interministerial Council on Environmental Science and Technology was formed in order to find solutions to environmental degradation. The Council was involved in the drafting of a document for the analysis of the environmental impact of projects, namely the *Environmental Impact Statement*, with the purpose of modifying or repealing plans already in place or future ones, if their consequences were to be detrimental for the environment. This tool was useful, but public participation was limited, while the contribution of government-led "ecological experts", committees of scientists and engineers, was preferred.⁷⁸ In 1988, Decree No. 32, *On the Radical Perestroika of Nature Protection*, was adopted. The effectiveness of the decree and of the institution derived from it, *Goskompriroda* – the State Committee for Nature

⁷⁴ Isakov (1984), p. 90–94. The categories defined by the Soviet biologist are six, namely: (1) maintenance of a favorable ecological balance of the biosphere and its large regions; (2) conservation, reproduction and rational use of renewable resources; (3) conservation of as complete a gene pool of organisms as possible (4) conservation of model natural ecosystems and geosystems; (5) protection and optimization of the natural environment; and (6) provision of opportunities for recreation.

⁷⁵ Constitution (Fundamental Law) of the Union of Soviet Socialist Republics, adopted at the Seventh (Special) Session of the Supreme Soviet of the USSR Ninth Convocation (October 7, 1977)

Article 18. In the interests of the present and future generations, the necessary steps are taken in the USSR to protect and make scientific, rational use of the land and its mineral and water resources, and the plant and animal kingdoms, to preserve the purity of air and water, ensure reproduction of natural wealth, and improve the human environment.

Article 67. Citizens of the USSR are obliged to protect nature and conserve its riches.

⁷⁶ Josephson et alii. 2013, pp. 197–200

⁷⁷ Josephson et alii. 2013, p. 152

⁷⁸ Aleg Cherp & Svetlana Golubeva (2004) Environmental assessment in the Russian Federation: evolution through capacity building. *Impact Assessment and Project Appraisal*. Vol. 22, No. 2, pp. 122

Protection – was limited for two main reasons: first, the committee was the central national agency in charge of reviewing projects with possible environmental impacts and, due to great amount of work, the quality of its reviews could be compromised; second, since environmental issues were never a priority before 1988, there were not many formed experts which could carry out this task.

1.4 Soviet international cooperation on environmental issues

International environmental agreements have been adopted for more than a hundred years, but they have been increasingly used only in the latest decades.⁷⁹ This does not mean that, in the absence of treaties, environmental protection measures were not implemented: it was just not as widespread as it is now and it assumed different forms. From the 1970s on, public concern over environmental protection and sustainable development started to gain significance, especially following the publication of different scholarly researches dealing with the state of the environment. Two examples of environmental science and sustainability works which gave rise to global awareness on these matters are *Silent Spring* (1962)⁸⁰ and *Limits to growth* (1972)⁸¹. The former book dealt with the negative effects of pesticides used by chemical industries, while the latter entails a report on how, if the present rates of population growth, agricultural and industrial production, resources exploitation and pollution continue, planet Earth will reach the limits to growth and will decline.

As in many other countries, environmental concerns gained space at the policy-making table of the Soviet Union too, not only in the domestic sphere, but in foreign affairs as well. In the 1970s, the country began to be involved in different international environmental organizations and programs and started signing some multilateral agreements in different spheres of environmental protection.⁸²

Before considering the USSR's role in the international arena on nature protection, it is worth mentioning that the country has been actively involved in bilateral environmental agreements in the field of wildlife conservation.⁸³ Some examples are the Northwest Pacific Fisheries Convention (1956), signed between the USSR and Japan, which laid down regulations on salmon, herring and king crab fisheries; the agreement between the Soviet Union and Norway to suspend Greenland

⁷⁹ Von Stein (2008), p. 244

⁸⁰ Rachel Carson. 1962. *Silent Spring*. New York: Fawcett Crest.

⁸¹ Dennis Meadows et alii. 1972. *Limits to Growth: A Report for the Club of Rome's Project on the Predicaments of Mankind*. New York: Universe Books.

⁸² Josephson et alii. 2013, p. 190

⁸³ Josephson et alii. 2013, p. 192

seal hunting for five years, namely the Northeast Atlantic Seals Agreement (1964); and the Agreement Related to Fishing of King Crab (1965) between the USSR and the USA, aimed at the conservation of this species.⁸⁴ Multilateral conventions on the protection of the sea and its resources were signed too.⁸⁵ If we apply to the implementation of wildlife conservation treaties the *cost-benefit analysis approach*, it will be clear that the such treaties were adopted because the gains exceeded losses: in fact, protecting endangered species required more vigilant poaching controls while the benefits involved growth in such species' population and possible earnings from exports of precious goods derived from them (i.e. sable fur). Overall, such treaties were effectively implemented and reached their scope.

Meanwhile, at the domestic level, the Soviet Union shifted from restorative environmental policies to preventing ones, it endured in a new international attitude, one of cooperation and collaboration. The reasons behind this decision are manifold and their interpretation changes according to the position we take. One may think the government signed agreements aimed at protecting the environment in order to have an external factor stimulating an internal policy: since a preventative approach in the sphere of natural resources was needed to avoid the economic and social costs of degradation and diminishing resources, the Soviet Union committed to international environmental agreement to be bound by an external constrain to take action against its domestic issues. Another way to explain those reasons involves the Cold War dynamics: in the era of détente, as the environment gained global momentum, the involvement in policies for its protection became a political matter of competition between socialism and capitalism.⁸⁶ Notwithstanding the intrinsic causes behind this, the attention shall now be turned to the action of the Soviet Union in in the international environmental action arena.

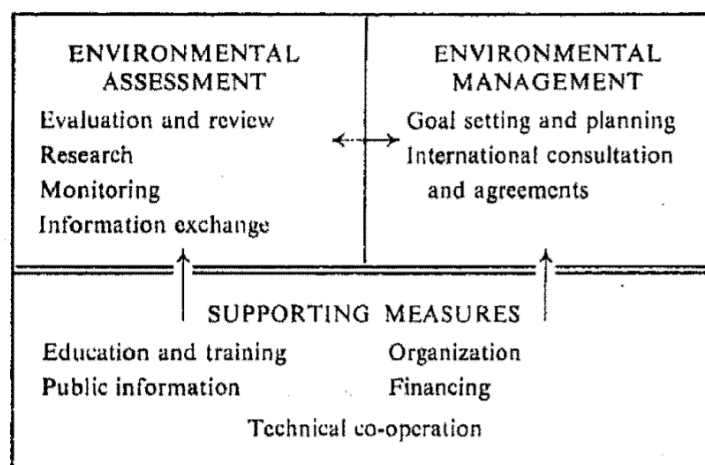
It was during the Brezhnev era, which the leader himself proclaimed as the time of “developed socialism”, that the Soviet Union started taking part in international regimes. At the 1972 UN Conference on the Human Environment held in Stockholm, the discussion was mainly focused on international measures for the support of nations in the task of environmental protection, but the Cold War dynamics took over and compromised the participation of the USSR and of Warsaw Pact countries in the conference. In fact, since the official participation at the conference was granted only to UN agencies members, West Germany could join while East Germany was excluded. The USSR threatened to boycott the conference if East Germany was not given the chance to participate and the Western Bloc nation refused, considering this a pretext for the

⁸⁴ Hayashi (1972), pp. 144–146

⁸⁵ Hayashi (1972), pp.138–144

⁸⁶ Josephson et alii. 2013, p. 190–191

recognition of the DGR.⁸⁷ Even if the Soviet Union was on the organizing committee and actively participated for the preparation of the conference, the country decided not to take join the actual conference. Nevertheless, not long after adopting the action plan for the human environment, the USSR was offered membership and it accepted the position of vice president of the UN environmental program.⁸⁸ To shortly address it, the main principles of the conference stated that “man has the fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits a life of dignity and well-being, and he bears a solemn responsibility to protect and improve the environment for present and future generations. (...)”⁸⁹ and insisted on the fact that “the natural resources of the earth, including the air, water, land, flora and fauna and especially representative samples of natural ecosystems, must be safeguarded for the benefit of present and future generations through careful planning or management, as appropriate.”⁹⁰ The environmental Action Plan entailed environmental assessment and management supported by certain measures, as the table below clarifies.



Source: Report of the United Nations Conference on the Human Environment⁹¹

For a final remark, we can state that, during the conference, the USA used the occasion to discuss about environmental safeguard in order to build important international relationships, while the USSR had to deal with a territory devastated by pollution and other problems.⁹² In fact, while the USA had the opportunity to take part in the conference, draw its principles and provide with its

⁸⁷ Democratic Republic of Germany, part of the Soviet occupation zones during the Cold War.

⁸⁸ Josephson et alii. 2013, pp. 191–192

⁸⁹ Principle 1, United Nations Conference on the Human Environment (Stockholm, 5 – 16 June 1972)

⁹⁰ Principle 2, United Nations Conference on the Human Environment. (Stockholm, 5 – 16 June 1972)

⁹¹ United Nations, Report of the United Nations Conference on the Human Environment (Stockholm, 5 – 16 June 1972) Action Plan for the Human Environment, Framework for Environmental Action, p. 6

⁹² Senatore (2014)

guidelines for the Action Plan, the Soviet Union joined only when the game had been already played and could only do its part by implementing environmental policies domestically.

Before continuing with the analysis on the Soviet participation in international environmental cooperation, it is interesting to observe how, from 1972 on, in the same year in which the USSR boycotted the Stockholm conference, the Soviet Union and the United States started engaging in a series of bilateral environmental agreements. This historical moment is particularly significant since environmental concerns become tightly linked to issues related to economic growth and international relations.⁹³ By 1971, it was clear that both the USSR and the USA were perpetrating domestic actions for a more effective protection of nature and for more suitable pollution controls.⁹⁴ Therefore, in May 1972, the American president Nixon and the Soviet president Podgorny, in the effort of cooperating to face environmental challenges, signed the Agreement on Cooperation in the Field of Environmental Protection. This bilateral treaty was divided into six articles, establishing the areas of cooperation (from matters of pollution to nature preservation, from climate change to natural disasters)⁹⁵ and including the creation of a Joint Committee on Environmental Protection.⁹⁶ The creation of a committee of experts achieved cooperation in a series of matters, including measures to manage air and water pollution, discover seismic activity and lay the grounds for further agreements, as the 1976 US-USSR Convention for the conservation of migratory birds and their environment: overall, the goals of the bilateral agreement were met.⁹⁷ This cooperation in the environmental sphere can be seen as a means the Cold War actors used to give international politics a new path: not only did the collaboration help the two countries in dealing with their respective environmental issues, but, as the US scholar Brian (2016) stated, they perpetrated their ideological competition and, by doing so, “the contest not only motivated both countries to accede to international pressure, but also generated direct support for new agreements, so that the initiator could demonstrate environmental and hence moral superiority.”⁹⁸

In 1975, the USSR partook in the Helsinki Conference on Security and Cooperation in Europe. This conference touched many areas involved with security, from economic to humanitarian issues, and referred to different environmental fields as well: air and water pollution, protection of

⁹³ Senatore (2014)

⁹⁴ Nicholas A. Robinson & Gary R. Waxmonsky (1988) The U.S.-U.S.S.R. Agreement to Protect the Environment: 15 Years of Cooperation, *Environmental Law*, Vol. 18, No. 3, pp. 405–406

⁹⁵ Art. 2, Agreement on Cooperation in the field of environmental protection between the United States of America and the Union of the Soviet Socialist Republics (Moscow, 23 May 1972)

⁹⁶ Art. 5, Agreement on Cooperation in the field of environmental protection between the United States of America and the Union of the Soviet Socialist Republics (Moscow, 23 May 1972)

⁹⁷ Josephson et alii. 2013, p. 195

⁹⁸ Stephen Brain (2016) The appeal of appearing green: Soviet-American ideological competition and Cold War environmental diplomacy. *Cold War History*. Vol. 16, No. 4, p. 459

the marine environment, soil utilization, nature conservation, monitoring and forecasting environmental changes, developing and implementing national policies and participating in international cooperation.⁹⁹ The section on environmental issues entailed measures to protect inland and sea waters, which were later developed nationally by the Soviet Union for dealing with pollution problems in the Baltic Sea, the Black and the Azov Sea, hence implementing the multilateral treaty. Even if the Helsinki Final Act is not an international environmental agreement as we defined it in the **Introduction**,¹⁰⁰ it was worth a mention for two reasons: first, because its environmental section saw the implementation of Soviet domestic law to comply with the agreement; and second, because the Final Act refers to environmental issues as human rights and calls for the protection of nature and its resources to safeguard the interest of present and future generations, following the *human rights approach*.¹⁰¹

In 1979, the Soviet Union became a party to the Convention on Long Range Transboundary Air Pollution (LRTAP), which was aimed at achieving reductions in sulfur dioxide emissions and the consequent high levels of acid rain, to reduce their grave consequences on lands, waters and human health. LRTAP issue is intrinsically international in its nature, since, due to currents and winds, the emissions produced in one country could easily impact another one.¹⁰² As the heaviest polluters were located in the Eastern Bloc and the currents transported polluted air from the West to the East, the Soviet Union was the first victim of transboundary air pollution and, for this reason, it became particularly interested in reducing the emissions. If we look at the LRTAP Convention through the lenses of the *cost-benefit analysis approach*, we can see how the costs of not taking any action against transboundary pollution are much higher than the costs of implementing policies to limit sulfur dioxide emissions, therefore the USSR was among the firsts to ratify and implement the convention. As Kotov and Nikitina (1995) notices, “domestic implementation of this international regime coincided with considerable structural changes in the Soviet energy policy.”¹⁰³ This means that the successful implementation of the convention throughout the 1980s was not only the result of active national policies for air protection, the establishment of pollution monitoring, norms and standards and the installation of air purification measures on industries, but also the outcome of the energy policy shift from coal to natural gas and nuclear energy and of

⁹⁹ Helsinki Final Act on the Conference on Security and Cooperation in Europe (Helsinki, 1 August 1975), Section 5: Environment.

¹⁰⁰ Definition of *environmental* in the concept of *international environmental agreements*, **Introduction: Theoretical framework**, p. 12–13

¹⁰¹ Human rights approach, **Introduction: Theoretical framework**, p. 17

¹⁰² Art. 1(b), Convention on Long-Range Transboundary Air Pollution (Geneva, 13 November 1979)

¹⁰³ Vladimir Kotov & Elena Nikitina (1995), ‘Russia and International Environmental Cooperation’, in Helge Ole Bergesen, Georg Parmann, and Øystein B. Thommessen (eds.), *Green Globe Yearbook of International Cooperation on Environment and Development 1995* (Oxford: Oxford University Press), p. 23

diminished industrial production.¹⁰⁴ In the case of this international environmental convention, it is interesting to notice how its implementation derives both from direct implementation and from external factors: the achieved results can be considered effective, since the Soviet Union dropped significantly in the 1980–1990 decade.

In the 1984 Geneva Protocol on Long-term Financing of the Cooperative Program for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (EMEP), the issue of transboundary air pollution was addressed again. This time, the forty parties to the protocol not only pledged for measures to shrink the emissions of sulfur dioxide, but they were bound to commit to mandatory or voluntary contributions based on a specific cost-sharing system.¹⁰⁵ The Soviet Union signed the Protocol, but, even if it reduced its emissions, it did not achieve the specific targets of the Protocol's Annex.¹⁰⁶

If during Brezhnev era the implementation of international environmental agreements and the adoption of national policies aimed at limiting pollution and protecting the environment passed without having to fight for attention with economic and social policies, during Gorbachev's years the situation was quite different. In fact, at the times of *perestroika*¹⁰⁷ and *glasnost*,¹⁰⁸ environmental issues did gain importance, but the international commitments taken during those years were rarely met. The reasons behind this is the fact that environmental reforms, notwithstanding their position among the top priorities, were always competing with other issues of social and economic reform.¹⁰⁹ Moreover, the government at that time had to deal with the Chernobyl disaster, therefore it was more preoccupied with repairing the enormous damages than preventing degradation in other environmental fields.

Thanking this context into consideration, we can understand the reasons for the scarce compliance with international environmental agreements during the final years of the Soviet Union. As regards the 1985 Vienna Convention for the Protection of the Ozone Layer and the 1987 Montreal Protocol on Substances that Deplete the Ozone Layer, the USSR participated in the negotiations, signed the international environmental agreements but did not comply to them effectively. In fact, in the mid-1980s, the country was involved in the creation of these two international regimes and, after signing the agreements, it attempted their implementation through the adoption of national programs but these measures have been realized rather vaguely. Since no specific national goal

¹⁰⁴ Kotov & Nikitina (1995), p. 23

¹⁰⁵ Annex referred to Art. 4, Geneva Protocol on Long-term Financing of the Cooperative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (EMEP) (Geneva, 28 September 1984)

¹⁰⁶ Josephson et alii. 2013, p. 221

¹⁰⁷ from the Russian language *перестройка*, renovation.

¹⁰⁸ from the Russian language *гласность*, openness.

¹⁰⁹ Robinson & Waxmonsky (1988), p. 446

concerning the emission reduction targets had been developed nor appropriate government budget had been established, the treaties' obligations were met only partially.¹¹⁰

According to several scholars both with Western and Eastern backgrounds, the reasons behind the Soviet Union's participation in international environmental organizations, forums and agreements are not confined merely in the concerns for nature's preservation, but they extend to diplomatic matters as well. As Josephson et alii (2013) reported, "Soviet environmental policy at the international level was geared to achieve diplomatic success rather than solve domestic or such international environmental problems as trans-border pollution."¹¹¹ According to Kotov and Nikitina (1995), behind numerous environmental commitments there were goals of declarative character, while the real reasons were politicized and linked to foreign priorities. As the USSR committed to environmental cooperation often without assessing the possibility for compliance and its effects at the national level, there were limits to its effectiveness.¹¹² Moreover, Josephson et alii (2013) stress that the real grounds for this decision are tightly linked to Cold War dynamics: at the time of détente, the Soviet Union tried to find any means to cut back on the arms race. Since the Soviet military budget was far smaller than the USA's one and the USSR found it difficult to continue competing with a lack of finance and resources, the country used every opportunity to discuss disarmament, especially during environmental conferences. In those occasions, they linked environmental protection problems with disarmament and proposed that by reducing arms' production nature preservation would be enhanced, but the Western countries generally dismissed such initiatives, considering them as inappropriate for the conferences' scope.¹¹³

Even if it is not possible to thoroughly analyze Soviet participation in every single international environmental agreement, this section aimed at taking a glance of the main regimes, conferences and treaties the USSR partook in from the early 1970s to the late 1980s, exploring the reasons behind its choice to participate, the causes of their effective – or ineffective – implementation and the differences between agreements signed during Brezhnev's leadership and Gorbachev's one. What stands out throughout the analysis is that more often than not, the decision to cooperate was not linked to environmental interests only, but it involved other matters of diplomatic significance too.

¹¹⁰ Kotov & Nikitina (1995), pp. 23–24

¹¹¹ Josephson et alii. 2013, p. 192

¹¹² Kotov & Nikitina (1995), p. 17

¹¹³ Josephson et alii. 2013, pp. 196–197

1.5 Environmental movements, scientists, public perception and environmentalism

When talking about environmental movements and the perception of the public and of scientists on the topic during the Soviet period, it is important to clarify that the notion of *environmentalism* referred to in the first part of the twentieth century is quite different from the one utilized from the 1970s on. Before the 1970s, scientists and experts acknowledged the importance of the preservation of nature, but they lacked the fully developed concepts and theories to advance their considerations on the matter. From the 1970s on, scientists and the public could base their claims on the significance of environmental concerns based on a great number of scientific studies on the impact of human activities on their surroundings: in those years, both the public and the government became more sensitive to environmentalism.¹¹⁴

The October Revolution was welcomed by many scientists as a sign of renovation from the tsarist inadequate measures to preserve nature: they view it as a possibility to relaunch policies for nature's safeguard and the need to establish a connection with the new government. In fact, Lenin's years were characterized by a collaboration between the Bolsheviks and the scientific community, as the proliferation of initiatives entailing environmental protection going hand in hand with the growth of civil societies demonstrates. Thanks to an agreement between the government and the Academy of Science, scientists could carry out different projects such as the protection and expansion of *zapovedniks* and spread the notion of conservation of nature.¹¹⁵ Besides opening new *zapovediniks*, scientists could realize ecological studies and take part in organizations such as the VOOP, the All-Russian Society for the Protection of Nature (*Vserossiiskoe Obshchestvo Okhrany Prirody*),¹¹⁶ which happened to become the most influential voluntary membership civil society devoted to environmental preservation with its own established journal, Protection of Nature (*Okhrana Prirody*),¹¹⁷ all this with minimal party interference.¹¹⁸

With Stalin's rise to power, the connection between the government and conservation movements started assuming a different form. In fact, Stalin forced scientists and activists to subdue their activities to Soviet economic and political plan: their scope was not nature preservation anymore, but it became its use as a resource of economic development. The role of ecology lost importance in national policies as the ties between the government and civil societies went from collaboration to subjugation, so that no independent movement for the protection of nature could hamper the

¹¹⁴ Josephson et alii. 2013, p. 56

¹¹⁵ Senatore (2014)

¹¹⁶ from the Russian language Всероссийское Общество Охраны Природы.

¹¹⁷ from the Russian language Охрана Природы.

¹¹⁸ Weiner. 1988, pp. 31–53

Five-Year Plans. This process took place in three ways: one method involved the extortion of false confession and the set-up of show trials to get rid of scientists and activists whose ideas were too eradicated in the concept of nature as valuable in itself through exile, prohibitions from teaching and dismissal from working in reserves; the second technique involved the strict state control over the activity of environmental movements; and the last one was censure.¹¹⁹ How did the VOOP manage to survive in such a hostile context? VOOP members could continue pursuing their activities thanks to the tactic of *protective coloration*: like chameleons, they assumed the colors required in the situation they found themselves in as a defense mechanism. In other words, they continued promoting the independence of scientists while swearing loyalty to the government and its policies. This compromise for survival didn't come without a price: the movement was relegated to an increasingly marginal role, as issues for the protection of endangered species, i.e. the conservation of the European bison.¹²⁰

During Khrushchev's years, civil societies involved in the protection of nature were kept under close political supervision. In theory, environmental movements, VOOP included, were supposed to be consulted in the course of the drafting of policies with potential consequences in the natural sphere, but it did not happen. In 1951, scientists had to deal with the decision of a commission to shut down almost 70 per cent of *zapovedniks*, which were later devoted to illegal exploitation of the resource therein. In all the Soviet Republics, mobilization for the restoration of old reserves and the establishment of new ones took place: from 1953 to 1960 the number of *zapovedniks* more than doubled. The battle between the government's policies and civil societies' goals was now on and open.¹²¹

From 1960 to 1985, during the long leadership of Brezhnev and the short years of Andropov and Cherenkov, social activism in the environmental arena expanded and started to gain a voice in the global debate on how to solve the issues of the preservation of nature and transnational pollution via international collaboration. As for civil societies, while VOOP continued growing recruiting members through schools, it is worth mentioning the *druzhina* movement and the 'Ecopolis' model of settlement. The students' Nature Protection Corps (*druzhinnoe dvizhenie*)¹²² entailed civic initiatives to protect flora and fauna, combat illegal hunting and fishing and increase environmental awareness among Soviet citizens. Established in the 1960s, the movement was organized by recruiting in the faculties of biology, geology and geography and it was supplied by universities themselves and by scientific institutions. 'Ecopolis' was a 1980 program aimed at

¹¹⁹ Josephson et alii. 2013, pp. 106–112

¹²⁰ Senatore (2014)

¹²¹ Josephson et alii. 2013, pp. 172–181

¹²² from the Russian language дружинное движение: corps movement.

creating a model ecological settlement with the aim of saving the town of Pushchino and push its ecologisation throught the joint action of researchers, the town's administration and its inhabitants. The project never witnessed its full implementation, but it inspired many following programs.¹²³ In the same period, the average citizens started to become environmentally aware as they witnessed the effects of pollution in first person, since the conditions of the urban and agricultural surroundings were worsening.¹²⁴

During the brief leadership of Gorbachev, movements for the protection of nature gained back their prominent role. As Yanitski (2012) points out, "Soviet society became more and more sensitive to violation of basic human rights, as well as seriously concerned about the environment."¹²⁵ By the end of the 1980s, the citizens of the Soviet Republics came to realize that they lived in polluted environment and that action to solve the situation was necessary. In this context, the media had a decisive role in the mobilization of these movements, as it reported about socio-ecological conflicts. Such groups were organized either under the umbrella of the Socio-Ecological Union (SoEU), which gathered two hundred *druzhinas*, or entailed informal organizations. Environmental movements were supported by a variety of people and their resource mobilization was possible thanks to member themselves. It is important to notice, though, that once the economic situation of the Soviet Union worsened, the priorities of the public changes as well: their interests shifted from environmental concerns to national policies criticism.¹²⁶

After analyzing the different environmental movements throughout Soviet times, considering the roles and positions of scientists and regular citizens and minding how civil societies covered a greater or smaller role under different leaderships, it is useful to spends some words about the rise of *econationalism* in the Soviet Republics. When the Soviet Union was on the verge of its breakup, in many republics environmental concerns became tightly linked to nationalist ones. The main reason behind these movements lies in the fact that some of the republics felt that the degrading environmental conditions they found themselves in were both caused by the socialist system and by Moscow's plan to weaken certain republics. After the Chernobyl disaster, the movement only grew stronger, as anti-nuclear sentiments started pervading it: the citizens of the Republics, Russia included, were worried that a similar episode could take place in their territories too, since their nuclear power plants possessed reactors as Chernobyl's ones.¹²⁷ Econationalism appeared in its

¹²³ Oleg Nikolaevich Yanitsky (2012) From nature protection to politics: the Russian environmental movement 1960–2010. *Environmental Politics*. Vol. 21. No. 6, pp. 923–925.

¹²⁴ Josephson et alii. 2013, p. 246

¹²⁵ Yanitsky (2012), p. 925

¹²⁶ Yanitsky (2012), pp. 925–927

¹²⁷ Jane I. Dawson. 1996. *Eco-Nationalism: Anti-Nuclear Activism and National Identity in Russia, Lithuania, and Ukraine* (Durham: Duke University Press), pp. 220 – 221

stronger form in the Baltic countries, but it had a crucial role in Ukraine and Belarus too, and it contributed to independents' stances at the USSR's breakup dawn. As Josephson et alii report, "similar to the advocates of radical political and economic reforms, econationalists assumed that environmental degradation would be automatically reversed by achieving independence from Moscow."¹²⁸ In the 1990s, the reality turned out to be quite different, as matters of national, economic and social security became of utmost importance while environmental problems persisted unresolved in the Russian Federation and in and in former Soviet Bloc countries.

¹²⁸ Josephson et alii. 2013, p. 283

CHAPTER 2

The Russian Federation in 1990s international environmental agreements: from Rio to Kyoto

2.1 Environmental issues of the Russian Federation: not only a Soviet legacy

Even if many observers were expected that, with the breakup of the Soviet Union, the environmental conditions of the Russian Federation and of the NIS (Newly Independent States) would have improved, the reality of the 1990s differed substantially from these hopes. In fact, official statistics reported that 15 per cent of the 17 125 191 square kilometers belonging to the Russian Federation's territory was classified as 'environmental disaster zones'. Only well-designed policies and prompt action could have changed the situation, and the public believed that the late 1980s emphasis on environmental matters was going to stay among the top priorities, even if the USSR was experiencing radical transformations. Nevertheless, citizens' *ecological euphoria* didn't last for long: political and economic issues soon occupied government and population concerns, while no space was left for the environmental question.¹²⁹

According to both Western¹³⁰ and Russian¹³¹ scholars, the environmental problems faced by the Russian Federation in the last decade of the XX century were caused by a combination of two factors: the Soviet environmental legacy and the politico-economic transformation causing general instability. As regards to the Soviet environmental legacy, it was thoroughly described in the first section of the **Chapter 1**,¹³² but it is appropriate to point out that the Russian Federation inherited the environmental difficulties that the former Soviet Union struggled with. Natural and urban degradation were caused by the plans for quick industrialization, involving primarily heavy and military industries, the use of obsolete industrial equipment and the high levels of localized pollution.¹³³ Moreover, misuse of land, waste disposal and uncontrolled exploitation of natural resources contributed to the deterioration of the territory, too. For what concerns the political and

¹²⁹ Vladimir Kotov & Elena Nikitina (1993) Russia in Transition: Obstacle to Environmental Protection. *Environment: Science and Policy for Sustainable Development*. Vol. 35, No. 10, p. 12

¹³⁰ Josephson et alii. 2013; Jonathan D. Oldfield (2000) Structural Economic Change and the Natural Environment in the Russian Federation. *Post-Communist Economies*. Vol. 12, No. 1, pp. 77–90; and Kris Wernstedt, (2002) Environmental Protection in the Russian Federation: Lessons and Opportunities. *Journal of Environmental Planning and Management*. Vol 45, No. 4, pp. 493– 516.

¹³¹ Josephson et alii. 2013; Kotov & Nikitina (1993); and Sergei M. Govorushko (1997) Environmental Impact Assessment in Russia. *Impact Assessment*. Vol. 15, No. 2, pp. 195–201.

¹³² **Environmental degradation in the Soviet period**, pp. 21–25

¹³³ Wernstedt, (2002), pp. 495–496

economic transformations that Russia went through in the 1990s, they are believed to have deeply shaped the conditions of the natural environment in the post-Soviet period.

Kotov & Nikitina (1993) notice, already at the beginning of the decade, that “environmental policy has become increasingly dependent on economic and political trends and on general instability. The transition to a developed market economy and democracy, which will take place over many years, poses serious problems and threats to the environment.”¹³⁴ The scholars point out how, due to the phenomenon of governmental decentralization and to the difficulties federal authorities encountered in controlling that environmental legal norms were complied with and natural resources protected, poaching was on the rise. Moreover, they notice how the deep recession causing decline in production negatively affected the environment too since, as more and more factories closed, emissions were not reducing in proportional patterns, on the contrary, they were decreasing only slightly. The reasons behind this trend tied with deindustrialization are twofold: first, the industrial sector which was the least affected by recession was the heavy industry, a major contributor to pollution; and second, industries were forced to use obsolete and unsafe technology, causing accidental discharges to reach numbers as dangerously high as 2 000 in 1992.¹³⁵ Oldfield (2000) deeply analyzes the phenomenon of deindustrialization up to 1997 and he finds out that the 1990s market contraction provoked an alteration in the mix of economic activities: the secondary sector based on natural resources extraction and the tertiary sector – trade, catering and finance – became dominant, while processing and manufacturing industries and agricultural sector shrank. The fall in production levels resulted in an overall decline in pollution discharges, as shown in the table and in the graph below, but the change in the balance of economic activities had effects on their proportions, as for every unit of production output more pollution was created.¹³⁶

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Air emissions from stationary sources, (mill. tons)	34.1	31.8	28.2	24.8	21.9	21.3	20.3	19.3	18.7	18.5	18.8
Air emissions from automobile transport, (mln tons)	21.0	17.3	22.0	19.0	13.5	11.0	11.0	11.3	11.8	12.2	...
Discharges of polluted waters (bill.cub .meters)	27.8	28.0	27.1	27.2	24.6	24.5	22.4	23.0	22.0	20.7	20.3
Water use from water bodies (bill.cub.meters)	106.1	107.5	99.6	94.9	86.9	86.6	82.6	81.3	76.9	77.9	...
Industrial production (% from previous year)	...	-8	-18	-14	-21	-3	-4	0	-5	+8	+9

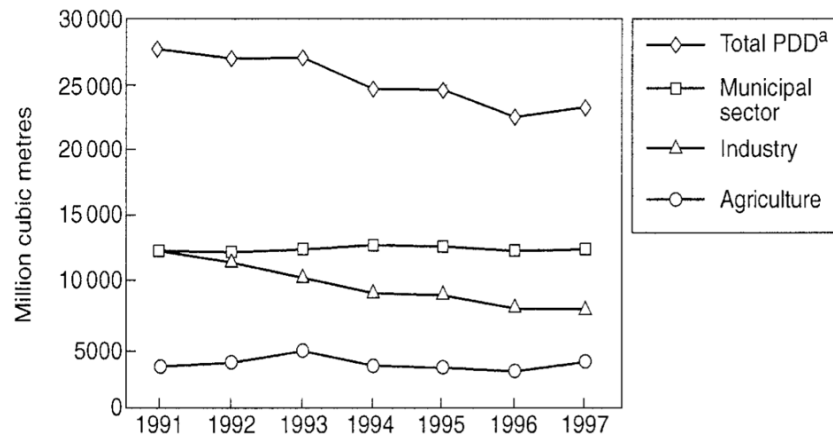
Source: RF National Environmental Reports (for a number of years); *Ohrana okruizhauishey sredy v Rossii*, Moscow, Goskomstat 2001; Rossiisky Statistichesky Ezhegodnik, 2000, Moscow, RF Goskomstat

Dynamics of environmental indicators and GNP in Russia

¹³⁴ Kotov & Nikitina (1993), p. 12

¹³⁵ Kotov & Nikitina (1993), pp. 13–16

¹³⁶ Oldfield (2000), pp. 77–80



Notes: ^aPDD – Polluted drainage discharge
 Source: Goskomekologiya, 1998(c), p. 11

Polluted drainage discharge according to different sectors of the economy

A significant consequence of natural environment degradation is its negative effects on health: in fact, it is deemed responsible for respiratory and cardiovascular diseases and consequent lower life expectancy.¹³⁷ Govorushko (1997), in his Environmental Impact Assessment in Russia, provides with some data on late 1990s degradation, pointing out that the quality of in-land waters was undesirable, since only 18 per cent of wastewater discharged was treated; 25 per cent of Russian soil had been subjected to erosion; and many natural resources were lost in the process of mining and wood cutting.¹³⁸ Even if, after the breakup of the USSR, environmental pressure diminished significantly and carbon dioxide emissions shrank, this did not imply better air quality: air pollution was still an issue and it was caused not only by industrial emissions but also by the great number of circulating motor vehicles. As for waste disposal, it is interesting to notice how industrial waste had overall decreased while municipal waste experienced the opposite trend. Last but not least, flora and fauna were under direct threat as well. As state reforestation policies ceased, the quantity of forests declined due to illegal logging for profit purposes, while illegal fishing and hunting destroyed endangered species.¹³⁹

To conclude this overview on the general environmental conditions of the Russian Federation in the aftermath of the Soviet Union breakup, it is convenient to provide with a concrete example showing the effects of the energy extraction industry on its surroundings. In the *oblasts*¹⁴⁰ of Khanti Mansi and Nizhnevartovsk, in Western Siberia, oil and gas production are key sectors for the economy and, in those regions, both Soviet legacy and the 1990s economic trends had

¹³⁷ Govorushko (1997), p. 196

¹³⁸ Govorushko (1997), p. 197

¹³⁹ Josephson et alii. 2013, pp. 307–312

¹⁴⁰ from the Russian language область, region.

consequences on the environment. The way in which fossil fuels were extracted during Soviet times caused the contamination of in-land waters, air and forests: these extracting practices contributed significantly to the worsening health conditions of the *oblasts*' residents, in fact, 74 per cent of them accused some chronic disease in 2000. As oil production decreased, pollution levels did not follow the same pattern. This trend can be explained by the fact that the declining profits of the oil industry did not allow for investments aimed at the pipelines' maintenance, causing illegal spills in the lands and rivers of the Nizhnevartovsk *oblast*. In fact, between 1994 and 1995, the Nizhnevartovsk Environment Committee detected as many as 3 000 illegal oils spills and pipeline leaks, which compromised water quality. Even if residents had access to treated drinking water, no testing had been carried out by the authorities due to limited or absent budgets for monitoring.¹⁴¹

2.2 De-ecologization and environmental deinstitutionalization? A matter of priorities

As it was mentioned in the previous section, the national policies of the 1990s prioritized economic and political matters over environmental ones.¹⁴² After having taken into consideration the economic factors that shaped the environment in that period, the attention now shifts to the political trends that contributed to the conditions of the Russian territory. If the transition to market economy caused recession and significant deindustrialization with non-proportional reduction in pollution, the transition to democracy implied decentralization, de-ecologization and environmental deinstitutionalization.

In the newly formed Russian Federation, the process of decentralization consisted in the transfer of administration and management activities from central government to regional authorities. At the beginning, this process was welcomed with great enthusiasm and the general expectation was that environmental conditions were going to improve. As Kotov and Nikitina (1993) observed, "it was assumed that decentralization would put an end to the center's destructive interference in the environmental sphere, bring the decision-making process close to the objects in need of protection, and create owners on the local level who would have incentives to preserve nature and natural resources. (...) On the contrary, in some cases, decentralization has aggravated environmental problems."¹⁴³ Often, local authorities gained control of natural resources and made use of them without restrictions, without following environmental norms and ignoring their duty of

¹⁴¹ Wernstedt, (2002), pp. 497–500

¹⁴² Josephson et alii. 2013, p. 283

¹⁴³ Kotov & Nikitina (1993), p. 13

accountability to the federal government and to the citizens. Another trend linked to decentralization is the initial weakness of the federal government, which had no means to exercise natural protection policies nor to ensure their implementation.¹⁴⁴

Decentralization was not the only political trend with unfavorable consequences for the environment: in the last decade of the past century, de-ecologization and environmental deinstitutionalization could be considered as two sides of the same coin. Ecological modernization, namely the process involving social and institutional practices transformations concerning the environment, was making very slow progresses in the 1990s, since principles and regulations were adopted but environmental policies did not improve: rather than ecological modernization, the Russian Federation was going through the opposite trend, referred to as de-ecologization or environmental subversion.¹⁴⁵ Environmental deinstitutionalization is “when institution building for environmental reform is eroding and even reversing”¹⁴⁶ or, more specifically, “a process of continuing stagnation, erosion, decline or even disappearance of environmental institutions, without the emergence of new institutions that fulfil similar functions and have similar strengths.”¹⁴⁷

The 1990s process of environmental deinstitutionalization went through different stages and it mainly entailed the transfer of responsibilities over environment matters from ad hoc ministries to a comprehensive environmental authority.¹⁴⁸ As described in the third section of **Chapter 1**, *Goskompriroda*, the State Committee for Nature Protection, was established in 1988, during Soviet times, and it was in charge of regulation and enforcement of environmental standards and the organization of nature protection activities.¹⁴⁹ In 1991, it was transformed in the State Committee for Ecology, *Goskomekologiya*, which had to enforce pollution charges and to collect the environmental funds. In 1993, president Yeltsin upgraded the status of the committee to the Ministry of Environmental Protection and Natural Resources, but, only three years later, he reduced the environmental protection sector of the ministry to a subordinate Committee for Environmental Protection. After Putin’s election, in 2000, this committee was removed and its responsibility were given to the Ministry of Natural Resources.

¹⁴⁴ Kotov & Nikitina (1993), pp. 13–14

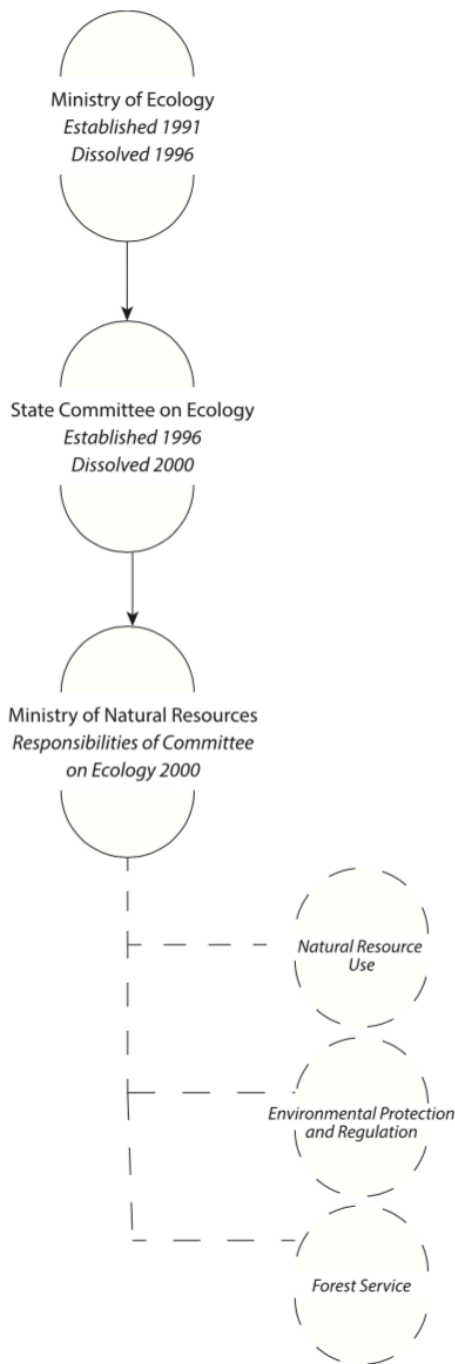
¹⁴⁵ Cherp & Golubeva (2004), p. 123 and Tynkkynen (2014), p. 576

¹⁴⁶ Mol (2009), p. 225

¹⁴⁷ Mol (2009), p. 228

¹⁴⁸ Mol (2009), pp. 229–230

¹⁴⁹ **Soviet environmental policies: from reparation to prevention**, p. 30



Source: Newell & Henry (2016)¹⁵²

The transfer of responsibilities from ministry to ministry and federal authorities' removal confirmed the trend of de-ecologization, as economic issues were given priority over nature protection and contributed to rising exploitation of resources at the national level.¹⁵⁰

While at the federal level environmental deinstitutionalization was the main trend, at the regional and private levels, some forms of decentralization of environmental institutions were taking place in the 1990s. At the regional level, it is interesting to notice how *oblasts* kept their own environmental institutions and, some of them, had active local authorities responding to problems of environmental nature. In the private sector, most enterprises were not concerned with the issue, but international companies gave their contribution to the process of ecological modernization in the Russian Federation, even in their limited sphere of action.¹⁵¹

The picture on the side shows the different steps of environmental deinstitutionalization through the 1990s.

¹⁵⁰ Wernstedt, (2002), pp. 496–497

¹⁵¹ Mol (2009), pp. 234–236

¹⁵² Joshua P. Newell & Laura A. Henry (2016) The state of environmental protection in the Russian Federation: a review of the post-Soviet era. *Eurasian Geography and Economics*. Vol. 57, No. 6, p. 784

2.3 National environmental policies, expert assessments and fines

In the 1990s and in the early 2000s, several federal laws and decrees established or reinforced institutions and policy tools for the protection of nature: this section aims at taking a glance over the measures the newly formed government adopted and at exploring whether their implementation has been successful.

One of the first laws passed in 1991 was the RSFSR (Russian Soviet Federal Socialist Republic) *Law On the Protection of the Natural Environment*¹⁵³: it was approved during a period of transition from the USSR to the Russian Federation and it resulted from the collaboration between two environmental institutions, namely a ministry and a university faculty.¹⁵⁴ The Law was divided into 15 sections, therefore it referred to a variety of sectors of application. Section I was devoted to the General Principles, which included the objectives and the jurisdiction of the Law. As Bond and Sagers (1992) report, its objectives were comprehensive as they entailed “preserving or stabilizing (and ultimately improving) the quality of the human habitat and public health, preventing environmental damage and dealing effectively with natural hazards, promoting rational resource use, balancing economic and ecological interests (with the priority, according to the framers, accorded to the latter), and promoting *glasnost*’ and inter-state cooperation in environmental affairs.”¹⁵⁵ As for jurisdiction, nature preservation was under the control of both federal and regional governments. Section II entailed the rights and duties of citizens over the environment: Article 11 claimed that “every citizen has the right to health protection from adverse environmental effects caused by economic or other activities, accidents, disasters, natural disasters”¹⁵⁶, but Article 12 clarified that “citizens are obliged to take part in the protection of the environment”¹⁵⁷, nevertheless.

Sections III-VII and X provided with policy tools through which nature preservation could be carried out. In particular, Section III listed all the economic measures for environmental protection, which included their planning and financing, setting of a limit for the use of natural resources, establishing quotas for emissions, pollution and waste disposal, and determining fees, payments

¹⁵³ RSFSR (Russian Soviet Federal Socialist Republic) Law 2060-1 “On the Protection of the Natural Environment” (19 December 1991) Закон РСФСР ОТ 19.12.91 N 2060-1 «Об Охране Окружающей Природной Среды»

¹⁵⁴ The Russian Federation Supreme Soviet’s Committee on Ecological Issues and the Rational Use of Natural Resources and Moscow University’s Faculty of Environmental Law.

¹⁵⁵ Andrew R. Bond & Matthew J. Sagers (1992) Some Observations on the Russian Federation Environmental Protection Law. *Post-Soviet Geography*. Vol. 33, No. 7, p. 464

¹⁵⁶ Art.11(1), RSFSR Law 2060-1

¹⁵⁷ Art.12(1), RSFSR Law 2060-1

and compensation mechanisms.¹⁵⁸ Even if the taxation system entailed the collection of pollution charges in order to create a fund dedicated to government's environmental expenditures, the introduction of high charges proved to be impossible during the time of political transition and economic recession. This is why neither fines nor taxes were able to change the actions of enterprises: they kept exploiting resources unpunished and they frequently avoided to pay fines.¹⁵⁹ Section IV established the norms on maximum permissible levels of emissions of harmful substances beyond which fines were applied. Section V entailed another important policy tool: the institution of a state ecological expertise. As stated in Article 36, expert assessment was "(...) an obligatory measure of environmental protection prior to the adoption of an economic decision, the implementation of which can have a harmful effect on the environment"¹⁶⁰ and, according to Article 35, it was "conducted with the purpose of checking the compliance of economic and other activities of the environmental safety of the company."¹⁶¹ Each project was supposed to be subject to environmental impact assessment in all its stages, from its preplanning to its execution.¹⁶² Even if environmental impact assessment had been applied to a variety of projects and rejected the ones not in conformity with environmental standards, the effectiveness of this policy tool can be questioned because large environmentally dangerous projects were still carried out.¹⁶³

The introduction of policy tools such as the system of permits and pollution charges and the state ecological expertise were designed to achieve high environmental standards, but those instruments encountered a few difficulties in their implementation. In fact, the success of environmental policies did not only depend by their design, but it was strongly interlinked to "situational factors", namely economic and political circumstances described in the first two section of the chapter. In the case of the Russian Federation, the early 1990s government weakness both at federal and regional levels, the economic crisis, corruption and a general climate of uncertainty negatively affected the effectiveness of environmental policies.¹⁶⁴

RSFSR Law *On the Protection of the Natural Environment* was not the sole piece of legislation referring to environmental issues: the Constitution of the Russian Federation, approved in 1993, covers this subject matter too, establishing rights and duties of citizens, as the following Articles

¹⁵⁸ Правовые документы по охране природы – Правовые документы по охране биосферы http://www.abouteology.ru/pravovaya_ohrana_biosferyi/organizatsiya_ohranyi_biosferyi/pravovyye_dokumentyi_po_ohrane_biosferyi.html

¹⁵⁹ Kotov & Nikitina (1993), p. 18 and Josephson et alii. 2013, p. 298

¹⁶⁰ Art. 36(1), RSFSR Law 2060-1

¹⁶¹ Art. 35(1), RSFSR Law 2060-1

¹⁶² Govorushko (1997), p. 198

¹⁶³ Josephson et alii. 2013, p. 297

¹⁶⁴ Vladimir Kotov & Elena Nikitina (2002) Reorganisation of Environmental Policy in Russia: The Decade of Success and Failures in Implementation and Perspective Quests. *FEEM Working Paper No. 57.2002*, pp. 3–4

show. Article 42 states that “every citizen is guaranteed the right to a favorable natural environment, reliable information about her condition, as well as compensation for damage caused to health or property by environmental offenses and a natural disaster”¹⁶⁵, while Article 58 stresses that “every citizen is obliged to protect nature, habitat and take care of natural resources.”¹⁶⁶

As we will explore in the next section, in the 1990s the Russian Federation continued to take part in international environmental action, from the Rio Conference to the Kyoto Protocol. The participation of Russia in the 1992 Rio Convention and its support for Agenda 21 entailed the adoption of a number of decrees aimed at sustainable development and environmental protection. Even if this is not the place to list them all, it is appropriate to name a few decrees to keep in mind that Russia was addressing environmental issues not only through ad hoc laws, but also in wider legislation. In 1994, the Presidential Decree *Concerning the Strategy of the Russian Federation for the Protection of the Environment and the Ensuring of Sustainable Development* testified the country’s official commitment to the cause and created a basis for future legislation. Two years later, in 1996, the *Concept for the Transition of the Russian Federation to sustainable Development* considered four prerequisites for the effectiveness of environmental legislation, namely the creation of a legal basis, the diffusion of the concept of sustainable development, the need to stimulate economic activity and the ability to quantify what regional ecosystems could sustain. Federal Laws too were directly concerned with nature preservation, as the laws on wildlife protection and the regulations on waste production and consumption show.¹⁶⁷

Before taking a look at the 2002 Federal Law *On Environmental Protection* and assessing the overall effectiveness of Russian domestic environmental policies, it should be pointed out that the Russian Federation has been giving increasing space to nature preservation in its Foreign Policy Documents. The 1993 *Basic Provisions of the Concept of Foreign Policy of the Russian Federation* is the first example, as it mentions two reasons for ecological threats emergency: first, the harm of waste disposals the territory had to suffer for decades; and second, the potential negative effects that environmental disasters in neighboring countries could have in Russia. In the list of national vital interests, the maintenance of regular ecological conditions for the well-being of the citizens makes its entrance as the last bullet point.¹⁶⁸ A few years later, the environment is given even more space in the 1997 *Russian National Security Blueprint* as it becomes one of the priorities of national security. This foreign policy document addresses environmental issues such

¹⁶⁵ Art. 42, Constitution of the Russian Federation (12 December 1993)

¹⁶⁶ Art. 58, Constitution of the Russian Federation (12 December 1993)

¹⁶⁷ Jonathan D. Oldfield (2001), Russia, Systemic Transformation and the Concept of Sustainable Development. *Environmental Politics*, Vol. 10, No. 3, pp. 96–98

¹⁶⁸ Basic Provisions of the Concept of Foreign Policy of the Russian Federation (23 April 1993)

as the management of waste discharges and air, land and nuclear pollution, the rational use of natural resources and the creation of environmental-friendly technologies. The Blueprint also refers to the need to establish a fund, to adopt legislative acts and to implement studies for the ecological feasibility of projects.¹⁶⁹ In 2000, *Foreign Policy Concept of the Russian Federation* did not devote to the environment so much space, it mentioned it only in the context of international economic relations, with this statement: “Taking into account the growing threat of global disasters of a natural and man-made nature, the Russian Federation calls for an expansion of international cooperation to ensure environmental security, including with the use of state-of-the-art technologies, in the interests of the entire international community.”¹⁷⁰

The different weight environmental matters have in the 1990s Foreign Policy Documents exemplifies the importance such issues had both at the domestic and at the international level, somehow connecting the two policy areas. In fact, in 1993, when the first document was approved, the Russian Federation has been an independent actor in the environmental scene for only two years, therefore it had to state clearly its national security priorities. Though, in 1992 the country participated in the Rio Conference and was carrying the environmental legacy of the Soviet Union, therefore it needed to address nature preservation. The 1997 *Russian National Security Blueprint* was adopted the same year in which the Kyoto Protocol was signed and one year after Russia adopted the Presidential Decree *Concept for the Transition of the Russian Federation to sustainable Development*: in these years environmental concerns had high priority both at the foreign and domestic levels. The last Foreign Policy Document of that decade was adopted in 2000, a time in which national interest gained predominance over environmental ones: it is not a case that, in the same years, the newly elected president Vladimir Putin repealed *Goskomekologiya* domestically while, in the international arena, the USA refused to ratify the Kyoto Protocol while the Russian Federation was still debating over its ratification.

In 2002, the RSFSR Law *On the Protection of the Natural Environment* has been substituted with the Federal Law *On Environmental Protection*:¹⁷¹ this is the place to notice that the new law has substantially the same structure of the previous one, therefore it addresses the same goals, but some General Provisions’ Articles have been repealed and there is an extra section, Sections 16, containing concluding remarks and, most importantly, it refers explicitly to the concept of

¹⁶⁹ Russian National Security Blueprint (17 December 1997)

¹⁷⁰ Foreign Policy Concept of the Russian Federation (approved by the President of the Russian Federation Vladimir Putin on June 28, 2000)

¹⁷¹ Federal Law 7. On Environmental Protection. (January 10, 2002). Федеральный закон 7. Об охране окружающей среды. (10 января 2002 г.)

sustainable development in the spheres of environmental monitoring and control, economic regulation, expert assessment and environmental rights.¹⁷²

After having provided with an overview of the main environmental policies and mechanism – i.e. pollution charges and expert assessment – adopted at the domestic level and having presented the Foreign Policy Documents of this decade, our attention turns on whether the aforementioned legislation has been successfully implemented. One year after the 1991 Law *On the Protection of the Natural Environment* was signed, Bond and Sagers (1992) concluded that “the new law is more an indication of the current state of Russian environmental thinking than any precise blueprint of actual outcomes or even ultimate policy”¹⁷³ and, more than twenty years later, Newell & Henry (2016) agreed and noticed that “large gaps exist between Russia’s formal environmental laws on the books and state agencies’ capacity to and interest in carrying them out.”¹⁷⁴ In theory, the Russian Federation has the proper legislative framework to carry out policies addressing environmental matters, but in the 1990s the country lacked the practical means to do so: the systems of charges and of expert assessment gave some positive answers to environmental problems but they were not fully implemented due to the economic and political circumstances in which the country found itself. However, another policy tool was successful and proved to be a significant improvement from the Soviet times, namely the annual “state of the environment” reports, which regularly collected environmental information and allowed for the open dissemination of the data.¹⁷⁵

2.4 Russia and international environmental agreements: a great role in Kyoto

With the breakup of the Soviet Union, the Russian Federation and the Newly Independent States had to pursue their foreign policies as independent international actors. Despite the practical difficulties, both Russia and the NIS managed to participate in international environmental cooperation. On the one hand, the Russian Federation inherited all the Soviet embassies and diplomatic means of the Soviet Union after 1991 but, due to the “situational factors” described earlier in the chapter,¹⁷⁶ the country encountered some problems in the effective participation in environmental regimes. The NIS, on the other hand, did not benefit from diplomatic infrastructures

¹⁷² Oldfield, Kouzmina & Shaw (2003), p. 162

¹⁷³ Bond and Sagers (1992), p. 473

¹⁷⁴ Newell & Henry (2016), pp. 782–783

¹⁷⁵ Josephson et alii. 2013, p. 298

¹⁷⁶ “Situational factors”, economic and political circumstances of the Russian Federation in the 1990s, described thoroughly in **2.1 Environmental issues of the Russian Federation: not only a Soviet legacy** and in **2.2 De-ecologization and environmental deinstitutionalization? A matter of priorities**.

but they still committed to international environmental action, even if the actual implementation faced some domestic obstacles.¹⁷⁷ In this section the focus will not be on the NIS, but on the different ways in which Russia participated in the cooperation for environmental protection, from engaging in the Rio Earth Summit in 1992 to taking part in the Kyoto Protocol in 1997. Great attention will be given to the role of Russia in the Kyoto Protocol, the reasons behind its ratification and whether the country undertook measures for the treaty's implementation.

As Makarov (2016) notes, “in the 1990s, Russia as the USSR's successor state became a party to 30 bilateral environmental agreements and to 25 international environmental protection regimes.”¹⁷⁸ Not only did the country continue to comply with the commitment subscribed by the Soviet Union, but it also started to take part in other international environmental agreements. In fact, as the USSR engaged in the preparation for the United Nations Conference on Environment and Development (UNCED), the Russian Federation perpetuated this commitment and took part in the conference held in Rio in June 1992.¹⁷⁹ The Rio Conference, also referred to as Earth Summit, was aimed at finding solutions to socio-economic and environmental issues such as poverty, the growing gap between industrialized and developing countries, nature preservation and climate change. The participating countries signed five agreements, the first three had non-binding effects while the last two had binding effects: Agenda 21, Rio Declaration, Statement of Forest Principles, Framework Convention on Climate Change, Convention on Biological Diversity.¹⁸⁰

During the negotiations, the Russian delegation had only twelve representatives – not many compared to the 200 members of the American delegation – and president Yeltsin did not personally take part in the meetings. Russia's marginal participation in the negotiation process can be explained by the fact that the country had to deal with domestic socio-economic issues, while environmental concerns were considered to be of greater priority among wealthier countries.¹⁸¹ Nevertheless, Russia signed the Statement of Forest Principles, the Convention on Biological Diversity and the Framework Convention on Climate Change and supported Agenda 21, which entailed commitments on development and environment matters for the implementation of the agreements negotiated at the Rio Conference.¹⁸²

The participation in this international conference stimulated domestic responses: the concept of sustainable development became the foundation of Russia's environmental policy, as the

¹⁷⁷ Josephson et alii. 2013, p. 299

¹⁷⁸ Igor A. Makarov (2016) Russia's Participation in International Environmental Cooperation, *Strategic Analysis*, Vol. 40, No. 6, p. 536

¹⁷⁹ Kotov & Nikitina (1995), p. 19

¹⁸⁰ Oldfield, Kouzmina & Shaw (2003), pp. 157–158

¹⁸¹ Josephson et alii. 2013, p. 300

¹⁸² Oldfield, Kouzmina & Shaw (2003), p. 159

numerous decrees adopted in this field testify. The Russian Federation did not only address environmental issues in the decrees such as the aforementioned 1994 Presidential Decree *Concerning the Strategy of the Russian Federation for the Protection of the Environment and the Ensuring of Sustainable Development* commitment to the cause and created and the 1996 *Concept for the Transition of the Russian Federation to sustainable Development*¹⁸³, in the Constitution¹⁸⁴ and in the 1990s Foreign Policy Documents¹⁸⁵, but the country also developed a series of Federal Target Programs aimed at tackling specific environmental issues. These programs were used to put in practice the sustainability principles of the environmental policy: some examples are the 1996 Federal Target Program *Revival of the Volga* and the 1999 Federal Target Program *For the Protection of the Russian Natural Environment*.

As Kotov and Nikitina (1995) point out, “despite the abundance of official government documents regulating the country’s international environmental cooperation, there is yet no clear and comprehensive concept on the issue.”¹⁸⁶ In fact, the Russian Federation adopted several policies to implement international environmental agreements, but the absence of a single environmental concept with clear general guidelines made implementation more difficult. Moreover, the implementation of the agreements signed at the Earth Summit is characterized by a gap between policy and practice. A great deal of legislation has been devoted to the issue but action in this sphere has been undermined by different factors: the domestic problems hindering the effectiveness of implementation entailed financial shortfalls and administrative inefficiencies. Even if the Russian Federation showed its willingness to implement, in practice it lacked the means to do so as funds and efforts needed to be invested for the solution of political and economic issues such as poverty, inequality and other social conflicts.¹⁸⁷

In 1997, a new international environmental agreement was adopted under the United Nations Framework Convention on Climate Change (UNFCCC): the Kyoto Protocol, which required developed countries to stabilize or reduce their green-house gas emissions by 6-8 per cent by 2008-2012 in comparison with 1990 baseline emissions. The goal was meant to be achieved through different mechanisms, characterized by flexibility,¹⁸⁸ namely: Joint Implementation (JI), a

¹⁸³ These decrees are described in **2.3 National environmental policies, expert assessments and fines**, p. 50

¹⁸⁴ The Articles of the Russian Federation Constitution are quoted in **2.3 National environmental policies, expert assessments and fines**, pp. 49–50

¹⁸⁵ 1993, 1997 and 2000 Foreign Policy Documents’ references to environmental concerns are thoroughly described in **2.3 National environmental policies, expert assessments and fines**, pp. 50–51

¹⁸⁶ Kotov & Nikitina (1995), p. 20

¹⁸⁷ Oldfield, Kouzmina & Shaw (2003), pp. 159–161

¹⁸⁸ Von Stein (2008), pp. 245–246

combined target for two or more countries (bubbling), the Clean Development Mechanism (CDM), and international emission trading.¹⁸⁹

Russia decided to join the negotiation table because the circumstances granted the country with profitable conditions for signing an agreement. During the economic crisis of the transitional period, the process of deindustrialization caused a decline in emissions by almost 40 per cent compared to 1990 levels: if Russia were to sign the Kyoto Protocol, this condition implied the opportunity for the country to be able to comply with the agreement without making any emission cut, instead, it could increase its emissions up to 1990 levels. Moreover, due to its ability to comply with the Protocol having such low emission, this condition allowed Russia to sell emission quotas to other participating countries through the mechanism of international emission trading.¹⁹⁰ Therefore, if the *cost-benefit analysis* approach is applied to the negotiation phase of the Kyoto Protocol, it is evident that the benefits of joining widely exceeded the costs: in fact, if Russia decided not to sign the agreement, it would have lost the possibility to make quick economic profits without the need to adopt particular measures to reduce emissions. For the aforementioned reasons, Russia signed the treaty in 1999.¹⁹¹

Even if the country had sometimes adopted a passive attitude to international environmental cooperation, Russia played a major role in a key treaty such as the Kyoto Protocol: its decision to ratify or not had a major influence on the overall successful implementation of the agreement. In fact, in order for the protocol to come into force, it required that 55 per cent of the total emissions of the participating countries was covered. As the US – which accounted for 36 per cent of the emissions – stepped out of the game and the EU states were committed, Russia was the only state with sufficient emission percentage to bring the protocol into effect, as its emission accounted for 17 per cent of the total emissions of the participating countries.¹⁹² When the US left the treaty, the conditions faced by the Russian Federation for its ratification were not as profitable as they were before: in fact, Russia was counting on making high profits by selling emission quotas to the US but, in its absence, economic benefits drastically shrank.¹⁹³ This less profitable cost-benefits ratio, together with the high degree of uncertainty implied in the prediction of long-term climate change, opened a long debate over Russian ratification.¹⁹⁴

¹⁸⁹ Kyoto Protocol to the United Nations Framework Convention on Climate Change (Kyoto, 11 December 1997)

¹⁹⁰ Makarov (2016), p. 537

¹⁹¹ Josephson et alii. 2013, p. 300

¹⁹² William Chandler & Ilya Popov (2003) Russia's Decisive Role in the Kyoto Protocol. *Pacific Northwest National Laboratory*, PNNL-14302. Richland, Washington, p. 1

¹⁹³ Alain Bernard, Sergey Paltsev, Marc Vielle & Laurent Viguier (2003) MIT Joint Program on the Science and Policy of Global Change, Russia's Role in the Kyoto Protocol. Report No. 98, p. 2

¹⁹⁴ Robert Falkner (2016) The Paris Agreement and the new logic of international climate politics, *International Affairs*, Vol. 92, No. 5, pp. 1107–1125

When the Bush administration declared its withdrawal from the treaty in 2001, Putin assured that the Russian Federation was committed to the Kyoto Protocol but did not ratify until 2004. The reasons behind this delay in ratification are manifold and derive from a process of bargaining during which the country was assessing whether Kyoto was offering enough economic benefits to give Russia a reason to ratify. Using the *cost-benefit analysis* approach, we can observe how even if the US abandonment of the Protocol significantly reduced the profits Russia could make by selling emission credits, the country could still profit from the flexible mechanism of emissions trading by selling quotas to other participating countries. Moreover, if Russia ratified and used measures to implement the Kyoto Protocol, it could promote the adoption of energy efficiency policies, not only assuring compliance with the treaty but also improving the Russian economy by making it more efficient and therefore more competitive. According to Chandler and Popov (2003) “ratification would probably lead to greater European demand for Russian natural gas because gas is the least carbon intensive of the fossil fuels, Russia already ranks among Europe’s largest suppliers of natural gas, and Russian gas exports could be sustained for decades at an even higher level due to its very large reserve base.”¹⁹⁵ Ratification could, on the one hand, strengthen Russia-EU relationship, but, on the other, it could do so at the cost of straining the Russia-US relations.¹⁹⁶ Another cost was related to Russian economic growth: the industrial sector in general and the energy production branch in particular believed that the emission limits established by the protocol could hinder growth, perpetrating the period of recession.¹⁹⁷ Since the other participating countries feared that Russia would follow the US example and abandon the treaty, they considered the consequences of a “mini-Kyoto” and the relative costs of such an option.¹⁹⁸

Eventually, the Russian Federation ratified the Kyoto Protocol in November 2004: as the minimum participation requirement was met, the treaty entered into force. Although it was never declared officially, speculators believe that Russia finally agreed to the ratification only in exchange for an agreement by the EU on a smoother process for the admission in the World Trade Organization (WTO).¹⁹⁹ The implementation of the Kyoto Protocol in Russia encountered several difficulties: even if Russia was supposed to be one of the main sellers under the emission trade mechanism, significant delays in the development of monitoring strategies, in the adoption of national registries

¹⁹⁵ Chandler & Popov (2003), p. 2

¹⁹⁶ Chandler & Popov (2003), p. 9

¹⁹⁷ Anna Firsova & Roslyn Æ. Taplin (2008) A Review of Kyoto Protocol Adoption in Russia: Joint Implementation in Focus. *Transition Studies Review: Environment, Climate and Global Warming*, No. 15, p. 486

¹⁹⁸ Bjart J. Holtsmark & Knut H. Alfse (2004) "Implementation of the Kyoto Protocol without Russian participation" Discussion Papers 376, *Statistics Norway, Research Department*, pp. 1–22.

¹⁹⁹ Josephson et alii. 2013, p. 301

and in the implementation of other legislative and institutional frameworks diminished this opportunity for profits.

It can be concluded that the Kyoto protocol was not effectively implemented by Russia but, as some could argue, the treaty was flawed in its structure. As Rosen (2015) claims, “design failure means that even perfect compliance by all parties would have failed to meet the objectives of the regime, because the specific structures of the regime itself are unlikely to produce the necessary results.”²⁰⁰ Therefore, the Kyoto Protocol was destined to fail for four reasons: first, a five-year commitment did not promote long-term policies needed for fundamental social and economic changes; second, the small emission reduction targets limited incentives for innovation in the field of green-house gases reduction practices; third, measuring reductions using net rather than gross emissions hindered state’s efforts to embrace sincere cuts; and fourth, the possibility for future commitments was still focused on short-term periods, undermining the possibility for true improvement in emission reductions.²⁰¹

The implementation of policies for the compliance to international environmental agreements is regulated by Article 72 of the Constitution, which states: “The joint jurisdiction of the Russian Federation and the subjects of the Russian Federation includes: (...) nature utilization, protection of the environment and ensuring ecological safety; specially protected natural territories, protection of historical and cultural monuments.”²⁰² This implies that the implementation of international environmental agreement in Russia is under both federal and regional jurisdictions. Even if federal law has priority over regional law, in many cases power is delegated to regional authorities as the management of fisheries, air pollution controls and nuclear safety testify. The implementation of international environmental commitments finds other difficulties within those governmental organs due to a lack of horizontal integration and conflicts involving the bureaucracy.²⁰³

After having explored the role of Russia in the 1990s international environmental agreements and having assessed the effectiveness of their implementation, we should take a look at the reasons why the country took part in regimes and signed treaties on these matters. According to Makarov, “Russia treated such international accords as means of a full-scale integration into the international community rather than an instrument of solving environmental problems.”²⁰⁴ According to Henry

²⁰⁰ Amanda M. Rosen (2015) *The Wrong Solution at the Right Time: The Failure of the Kyoto Protocol on Climate Change*. *Politics & Policy*, Vol. 43, No. 1, p. 40

²⁰¹ Rosen (2015), pp. 40–43

²⁰² Art. 72(1e), Constitution of the Russian Federation (12 December 1993)

²⁰³ Geir Hønneland & Anne-Kristin Jørgensen (2002) *Implementing Russia’s International Environmental Commitments: Federal Prerogative or Regional Concern?* *Europe-Asia Studies*, Vol. 54, No. 8, pp. 1230–1236

²⁰⁴ Makarov (2016), p. 536

and MacIntosh Sundstrom (2012), through international environmental collaboration Russia aimed at achieving a “great power status” with regards to climate policy, not only to be a world leader whose decisions had significant weight in the international environmental arena,²⁰⁵ but also to promote and achieve its national interests.²⁰⁶ Newell and Henry (2016) suggest that the country participates in international environmental cooperation in order to extend its soft power internationally.²⁰⁷ As regards to the Kyoto Protocol, the reasons behind ratification do not find their roots in the application of the *ecological* approach to the treaty, but they derive rather from the benefits of the *cost-benefit analysis* approach: economic and status benefits exceeded the costs of ratifying, as Henry and McIntosh Sundstrom notice, “ratification was based on a more instrumental view of the protocol as a means of realizing other desirable goals at the international level, while simultaneously enhancing Russia’s image on the international stage.”²⁰⁸

2.5 The decline of environmental activists and of the druzhina movement

In his remarks at the 2003 World Climate Change Conference in Moscow, a year before the ratification of the Kyoto Protocol, president Putin commented: “In Russia, you can often hear, either in joke or seriously, that Russia is a northern country. If it was two or three degrees warmer, this would be no big deal. Maybe it would even be a good thing – we would spend less money on fur coats and other warm items.”²⁰⁹ The president’s remarks express the public perception on climate policy in the 1990s: in fact, a wide part of the population believed that global warming did not have many negative consequences for a country as cold as Russia and preferred that the government prioritized policies aimed at the solution of economic issues such as poverty and unemployment over environmental action.²¹⁰

In this regard, Whitefield has studied the attitude of masses on environmental matters from 1993 to 2001, distinguishing between two kinds of explanations for the support to environmentalism, namely the demand-side perspective and the supply-side perspective. In the first instance, environmental concerns are linked to the economic interests of the citizens; while in the second,

²⁰⁵ Henry & McIntosh Sundstrom (2012), p. 1301

²⁰⁶ Cherp & Golubeva (2004), p. 124 and Tynkkynen, Nina (2010) A great ecological power in global climate policy? Framing climate change as a policy problem in Russian public discussion. *Environmental Politics*. Vol. 19, No. 2, p. 189

²⁰⁷ Newell & Henry (2016), p. 788

²⁰⁸ Laura A. Henry & Lisa McIntosh Sundstrom (2007) Russia and the Kyoto Protocol: Seeking an Alignment of Interests and Image. *Global Environmental Politics*, Vol. 7, No. 4, p. 59

²⁰⁹ Vladimir Putin. Opening Address at the International Conference on Climate Change (Moscow, 29 September 2003)

²¹⁰ Bernard et alii (2003), p. 4

environmental issues are connected to the ways in which political actors mobilize public opinion. Whitefield's findings indicate that on the demand-side framework, willingness to pay environmental costs and social class were connected so that those with lower income – and most likely to undergo the effects of environmental degradation – were most likely not supporting environmental policies, while those belonging to higher social classes were likely to prioritize environmental issues. This trend can be explained by the fact that lower-income classes were mostly concerned with economic issues and material interests such as jobs and income, while the upper-classes already satisfied their material needs and could devote their attention to post-material interests such as the environment. The findings on the supply-side framework indicate that those who supported environmentalism promoted market economy but did not endorse Western involvement in Russian affairs. The reasons behind the former trend of the supply-side perspective is that environmentalism supporters blamed the socialist planned economy for the state of degradation of nature, therefore they had to support another economic model; while the reason for the latter trend is the result of the late 1980s link between environmental movement and nationalism, namely econationalism.²¹¹

Even if in Gorbachev's years environmental movements gained a prominent role, their prominence drastically diminished in the aftermath of the USSR breakup. In the 1990s, environmental movements and organizations faced difficulties for three main reasons: the first entailed the decline in public perception on environmental issues, the second referred to the difficulties of organizing voluntarily in a time of economic trouble, and the third was linked to the increasingly hostile atmosphere faced by activists in the governmental sphere.²¹² In this period, environmental movements had to pursue different strategies in order to survive and they did so in several ways. Mass protest movements understood that they needed to give their demands for a clean and safe environment a political overtone if they wanted to be heard, therefore they started to become allies with environmental decision-makers at the local and federal governmental levels. Moreover, they endorsed the internationalization of their organizations for two reasons, namely the need for funds and the fruitful cooperation in the collection and dissemination of information, in raising environmental concern and in encouraging the participation of the public.²¹³ Many Russian environmental NGOs were able to carry on with their activism thanks to their contacts with their Western counterparts.²¹⁴ Environmental movements, in order to achieve their goal of self-preservation and survival in a hostile and uncertain context, adopted a self-limiting behavior and

²¹¹ Whitefield, Stephen (2003) Russian Mass Attitudes Towards the Environment, 1993-2001, *Post-Soviet Affairs*. Vol. 19, No. 2, pp. 96–108.

²¹² Josephson et alii. 2013, p. 302

²¹³ Yanitsky (2012), pp. 927–928

²¹⁴ Josephson et alii. 2013, p. 305

bureaucratization. Indeed, to improve their chances in the competition for resources at the national level, they needed to be seen as respectable and responsible.²¹⁵

The *druzhina* movement, which had gained great momentum in the late 1980s, significantly shrank in the 1990s. The reasons behind its decline can be explained by the diminished networking among the students of the different republics and by the difficult economic situation which characterized that period. In fact, many students that were still involved in environmentalist movements were forced to work part-time in order to continue their voluntary activism, while a great number of them disengaged from environmental issues to the point where they became politically inactive or conservative.²¹⁶

²¹⁵ Yanitsky (2012), pp. 931–932

²¹⁶ Yanitsky (2012), p. 928 and Josephson et alii. 2013, p. 303

CHAPTER 3

Russia's role in the current global environmental arena: the Paris Agreement

3.1 The latest environmental threats in Russia

Nowadays, the natural environment of the Russian Federation is facing a variety of problems. Since the turn of the millennium, the country has been dealing with old and new environmental challenges derived, on the one hand, from the Soviet environmental legacy, and, on the other, from recent trends and phenomena. This section will describe the different sectors in which the Russian environment is facing threats and it will address their causes.

Deforestation is one of the most important environmental issues in today's Russia. As mentioned by Martus (2017), "Russia's forests are of global ecological significance in terms of biodiversity, climate stabilization and carbon dioxide absorption."²¹⁷ It is not a coincidence that the country holds one fifth of the total Earth's forests and that their area covers more than 45 per cent of the total territory of Russia.²¹⁸ The woodland is divided into three categories: the first category refers to the forests used for exploitation and it occupies half of the total woodland; the second regards the 'protected forests' – areas that must remain untouched – and it covers a quarter of the total; the third category concerns the last quarter of woodland described as the 'reserve forests', which are neither protected nor exploitable, but they will be available for timber cutting in twenty years from now. These areas are plagued with deforestation, a phenomenon caused by a number of factors. Large-scale logging, especially in its illegal form, is the first cause of deforestation: official national statistics estimates that illegal logging accounts for 1 per cent of the total harvested timber, but other non-governmental bodies, such as WWF Russia, claims that this figure reaches 20 per cent of total logging.²¹⁹ The causes of illegal logging are attributed to the phenomenon of decentralization, namely the transfer of power from federal to regional authorities. As we have explored in **Chapter 2**, often, local authorities gained control of forest and exploited them without restrictions nor following environmental norms.²²⁰ Logging is not the only activity threatening forests, in fact mineral and energy exploitation, the construction of infrastructures and settlements

²¹⁷ Martus. 2017, p. 52

²¹⁸ Природа Мира|NatWorld.info – Экология России: список проблем и защита окружающей среды в стране. <https://natworld.info/raznoe-o-prirode/osnovnye-jeologicheskie-problemy-rossii-i-puti-ih-reshenija>

²¹⁹ Martus. 2017, pp. 52–53

²²⁰ The phenomenon of decentralization is described in Chapter 2: 2.2 De-ecologization and environmental deinstitutionalization? A matter of priorities, p. 52–53

and the transformation of woodlands in agricultural land compromise the status of forests too.²²¹ Summer fires causes damages as well.²²² The consequences of deforestation are manifold: soil erosion, landslides, floods and green-house effect. In fact, trees absorb carbon dioxide, contributing at keeping its levels stable in the atmosphere but, if they are cut and not substituted, CO₂ is not absorbed, causing the green-house effect, which is responsible to the phenomenon of global warming, namely “a gradual increase in the overall temperature of the earth's atmosphere generally attributed to the greenhouse effect caused by increased levels of carbon dioxide, CFCs, and other pollutants.”²²³

Another environmental problem concerns pollution in its different forms. Air pollution is caused mainly by power plants and industrial enterprises: overall, there are 30 thousand plants in Russia regularly emitting gases in the atmosphere. Thermal power plants are one of the largest sources of air pollution, since energy production requires fossil fuels to be burned and this procedure causes the emissions of green-house gases contributing to global warming.²²⁴ Fossil fuels' exploitation greatly contributes to air pollution too, due to the phenomenon of gas flaring, which entails the burning of gas during the process of oil and gas extraction and the release of CO₂, methane and black carbon.²²⁵ Exhaust gases – carbon dioxide, lead, soot, nitrogen oxide – emitted by motor vehicles are another cause of air pollution. Water pollution is for its greatest part provoked by industrial production, as factories discharge their waste, often untreated, in the in-land waters. Harmful substances are dissolved into the water and penetrate in groundwater, making it unsuitable for drinking or for watering purposes. If used for agriculture, it poisons the products and if it is drunk, it provokes diseases to the population. Power plants and factories contribute to the phenomenon of acid rain, which negatively affects soils, flora and fauna and are detrimental for the human health. Industrial and households waste, together with acid rain, are the main causes of land pollution and soil erosion. Chemical fertilizers and mismanagement of agricultural resources have contributed to damages on the soil as well. Furthermore, nuclear waste and nuclear power plant accidents have heavily contributed to the overall degradation of the environment.²²⁶

Every ecosystem of the Russian Federation is hit by a specific sort of environmental degradation. The tundra has been negatively affected by pollution derived from extraction and transportation of natural resources such as minerals and fossil fuels, since oil spills and natural gas leakages are

²²¹ Природа Мира|NatWorld.info – Экология России: список проблем и защита окружающей среды в стране.

²²² Martus. 2017, p. 53

²²³ Oxford English Dictionary, definition of “global warming”
https://en.oxforddictionaries.com/definition/global_warming

²²⁴ Природа Мира|NatWorld.info – Экология России: список проблем и защита окружающей среды в стране.

²²⁵ Martus. 2017, p. 95

²²⁶ Природа Мира|NatWorld.info – Экология России: список проблем и защита окружающей среды в стране.

destroying the delicate balance of this ecosystem. The taiga experiences phenomena such as deforestation, mining operation, mismanagement of agricultural lands, water and air pollution, which are slowly but steadily destroying the forests, eroding soil and compromising water quality. In the forest-steppe and the steppe, Soviet agricultural plans and poorly designed irrigation systems severely undermined soil fertility.

Some of the aforementioned environmental challenges are part of the Soviet legacy the Russian Federation has to come to terms with. Examples of such issues include land erosion and decreased land fertility, nuclear radiations, air and water pollution. Other environmental problems, although they find their roots in Soviet times, were exacerbated in the latest thirty years. In this case, Air pollution caused by fossil fuels extraction and plants emissions and illegal logging ought to be mentioned. The latter examples contribute to a phenomenon of international concern, that is climate change: “a change in global or regional climate patterns, in particular a change apparent from the mid to late 20th century onwards and attributed largely to the increased levels of atmospheric carbon dioxide produced by the use of fossil fuels.”²²⁷

3.2 Economic priorities over environmental protection?

The new millennium environmental protection trends do not substantially differ from the 1990s ones, even if a few recent initiatives prove the contrary. The 1990s trends of de-ecologization and environmental de-institutionalization continued in the first decade of 2000, as Yablokov (2010) reports: “The logic of *de-environmentalism*, which is often seen in official documents, is that Russia will start dealing with environmental problems once it is rich, and that economic growth requires the use of all of Russia’s available natural resources, which necessitates lower standards of environmental practice (laws, norms, practices, ecological controls and monitoring).”²²⁸ This tendency, which started during Yeltsin’s presidency and continued during Putin’s and Medvedev’s years, exemplifies in practical terms how economic growth was prioritized over environmental protection. Environmental deinstitutionalization reduced significantly the power of federal bodies concerned with nature preservation and favored the development of natural resources as fossil fuels, minerals and timber. Resource-intensive industries, as we have explored in the former section of the chapter, threaten the environment and make the country sensitive to shifts in demand and preferences in the external market where it sells its resources.²²⁹

²²⁷ Oxford English Dictionary, definition of “climate change”

²²⁸ Alexei Yablokov. (2010) The Environment and Politics in Russia. *Russian Analytical Digest*. Vol. 79, No. 1, p. 3

²²⁹ Josephson et alii. 2013, pp. 316–318

The environment is therefore under threat because, in the last thirty years, decision makers have prioritized the solution of economic and social problems, which has driven them to endorse practices of exploitation of natural resources, i.e. fossil fuels. Since the export of gas and oil are one of the most important sources of revenues for the Russian Federation, this leads to two consequences: on the one hand, it makes Russia dependent on external markets and, on the other, it gives the industry a powerful position on the domestic environmental policy process.²³⁰

It was only in recent years that the environment started to gain more weight at the policy table, since Russia's perception on climate change acquired a different angle. Decision makers acknowledged that extreme weather events have been hitting Russia more harshly in the past twenty years and action must be taken in order to tackle their effects. Even if Russia committed to ratifying the Paris agreement in 2019-2020, no measure to cut emissions have been taken yet, nevertheless, industries are applying energy efficiency practices to produce at the lowest levels of emissions possible.²³¹

3.3 Energy saving and best available technology: the current national policies

Although it is impossible to address the whole environmental legislation concerning the various areas of ecology developed in the last two decades, this section will draw the reader's attention to a few significant policies that have been adopted during Putin's and Medvedev's legislations in order to give an idea of the current actions taken to solve environmental issues. From year 2000 on, the government has been approving legislation to deal with different environmental problems, for instance the protection of national forests or the prevention of oil spills in the seas,²³² but this section will deal mostly with policies aimed at reducing or keeping CO₂ emission at the lowest levels possible.

In 2009, Medvedev's government adopted Federal Law 261 *On Energy Saving and on Improving Energy Efficiency and on Amending Certain Legislative Acts of the Russian Federation*,²³³ here referred to as the new *Energy Efficiency Act*, which addressed the modernization tasks the Russian

²³⁰ Ellie Martus (2017) Contested policymaking in Russia: industry, environment, and the "best available technology" debate. *Post-Soviet Affairs*. Vol. 33, No. 4, p. 278

²³¹ Angelina Davydova. Russia wants to protect itself from climate change—without reducing carbon emissions (21/09/2017) *Science Magazine*.

²³² Martus. 2017, p. 52–150

²³³ Federal Law 261. On Energy Saving and on Improving Energy Efficiency and on Amending Certain Legislative Acts of the Russian Federation. (27 November 2009) Федеральный закон N 261-ФЗ «Об энергосбережении и о повышении энергетической эффективности и о внесении изменений в отдельные законодательные акты Российской Федерации» (23 ноября 2009 г.)

economy had to fulfil. Its aims were to end wasteful consumption and embrace the practices of energy efficiency and energy savings. This act represents a milestone in Russian energy policy, but it lacked some important features for its fully successful implementation. In fact, Malmendier (2011) observes that the *Energy Efficiency Act* was too generally worded and reduced the problem of efficiency to energy resources consumption only, excluding extraction, generation and transport. Moreover, it did not specify which governmental institutions were to be held responsible to for the Act's implementation and it did not express how economic actors were held accountable if they did not comply with the law. "In the end, the national energy efficiency policy, which already lacked substance, also lacked the organizational and mandatory implementation mechanisms necessary for its implementation."²³⁴ Nevertheless, this Act addressed a few key energy policy issues. First, it established a classification of goods based on their energy efficiency class: energy labelling became mandatory and it divided goods in 16 groups based on their characteristics. Second, it prohibited incandescent electric bulbs, forcing consumers to convert to energy-saving lamps and achieving a nationwide 2 per cent energy saving. Third, the *Energy Efficiency Act* established provisions on energy-savings construction and buildings: although a lot of provisions dealt with this issue, the great amount of legislation was not followed by the same zeal in its practice. Fourth, it provided for energy audits, a measure to verify energy class and improve energy efficiency: this measure was effectively applied. Fifth and last, it addressed the consequences of provisions' violation.²³⁵ The *Energy Efficiency Act* seems to fall between energy and environmental policies but it continues to separate energy efficiency measures from environmental implication: even if it was adopted after Russia ratified the Kyoto Protocol, no mention on CO₂ reduction nor on the country's international commitments was made. This might be a reason why this Act makes it difficult to endorse renewable energy, together with the cheap price of fossil fuels in Russia.²³⁶

In 2012, president Medvedev adopted the policy document *Principles of the State policy in the area of environmental development of the Russian Federation for the period up to the year 2030*, stating that "The strategic objective of State policy in the field of environmental development is the decision of the socio-economic goals for environmentally oriented economic growth, preservation of the environment, biodiversity and natural resources to meet the needs of present and future generations, the realization of the right of everyone to a favourable environment, strengthening of the rule of law in the area of environmental protection and environmental

²³⁴ Malmendier (2011), p. 182

²³⁵ Malmendier (2011), p. 183–200

²³⁶ Malmendier (2011), p. 182

safety.”²³⁷

In 2014, another step for energy efficiency was taken with Federal Law 219 *On Amendments to the Federal Law “On Environmental Protection” and certain legislative acts of the Russian Federation*.²³⁸ Even if the Law was discussed and approved under Putin presidency, it was seen as a push for environmental development as designed by Medvedev’s 2030 Environmental Development goals. In order to reduce hazardous emissions, the state gives incentives to enterprises that design, construct and install best available technologies (BAT), recycle, clean gases before emitting them in the atmosphere, and use equipment for the neutralization of waste. These incentives include reimbursing part of the cost of implementing BAT, the provision for investment credits and the removal of penalties for those enterprises that fully implement BAT. Enterprises operating in Russia have been divided into four categories, from significantly potential environmental polluters to minimal ones: the more they pollute, the greater administrative requirements they will need.²³⁹ This system should be fully implemented by 2022 and it is believed to be in line with the international regulatory framework for environmental saving activities, which, through the 2015 Paris Agreement, addressed bringing together nations in the efforts towards climate change that will be discussed in the next section.

Before taking a look at the latest action the government is taking on environmental protection and assessing the overall effectiveness of Russian domestic environmental policies, it should be pointed out that the Russian Federation has been giving increasing space to nature preservation in its 2000s Foreign Policy Documents. The 2008 and 2013 *Foreign Policy Concept of the Russian Federation*, all states that the country “stands for expanding international cooperation in order to ensure environmental security and to counter climate changes on the planet, including through the use of brand-new energy-saving and resource-saving technologies, in the interest of the entire world community.”²⁴⁰ The 2016 *Foreign Policy Concept of the Russian Federation* differs from the previous two documents as it mentions the importance of preserving and enhancing forests and it not only refers to the need to develop energy-saving technology. It furthermore mentions the

²³⁷ Утверждены основы государственной политики в области экологического развития России на период до 2030 года. Президент Дмитрий Медведев (30 апреля 2012 г.)

²³⁸ Federal Law 219. On Amendments to the Federal Law “On Environmental Protection” and certain legislative acts of the Russian Federation. (21 July 2014) Федеральный Закон о внесении изменений в Федеральный закон «Об охране окружающей среды» и отдельные законодательные акты Российской Федерации. (21 июля 2014 г.)

²³⁹ Martus (2017), pp. 278–280

²⁴⁰ Концепция внешней политики Российской Федерации (15 июля 2008 г.); and Concept of the Foreign Policy of the Russian Federation (approved by President of the Russian Federation V. Putin on 12 February 2013)

Paris Agreement as the solid regulatory framework the country can shape its long-term climate policy around.²⁴¹

As we have seen in **Chapter 2**²⁴² for the 1990s Foreign Policy Documents, the different weights environmental matters have in the relative 2000s documents exemplify the importance such issues had both at the domestic and at the international level, somehow connecting the two policy areas. In fact, 2008 and the 2013 Foreign Policy Documents were developed around the time in which Russia approved the 2009 *Energy Efficiency Act* and the 2014 *On Amendments to the Federal Law “On Environmental Protection” and certain legislative acts of the Russian Federation*, which dealt with energy-saving and resource-saving technologies mentioned in the documents. The 2016 *Foreign Policy Concept of the Russian Federation*, on the other hand, gives weight to the Paris Agreement and mentions its framework because the document was approved one year after Russia committed to this international environmental agreement.

President Putin has designated 2017 as the Year of the Ecology and approved an Action Plan aimed at addressing the environmental issues of the country in different areas in which the environment is at risk. In order to face the issue of pollution, a project for the development of implementation of the new waste management system and the BAT were adopted; while for the protection of wildlife and forests, specific plans for the different territories have been implemented. Overall, the Russian government works on matters of ecology are divided into different areas, namely: environmental safety (waste management), protection of nature (national reserves, national parks), forest conservation (timber industry complex), water complex, protection of the Baikal and Baikal natural territory, and ecology of the Volga.²⁴³

3.4 Russia signed the Paris Agreement, and now...?

In December 2015, Russia and the other 195 participants signed the Paris Agreement. This international environmental agreement, for the first time, brings together all nations into a common cause to undertake efforts towards climate. As stated in Article 2, the Paris Agreement aims at “holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels,

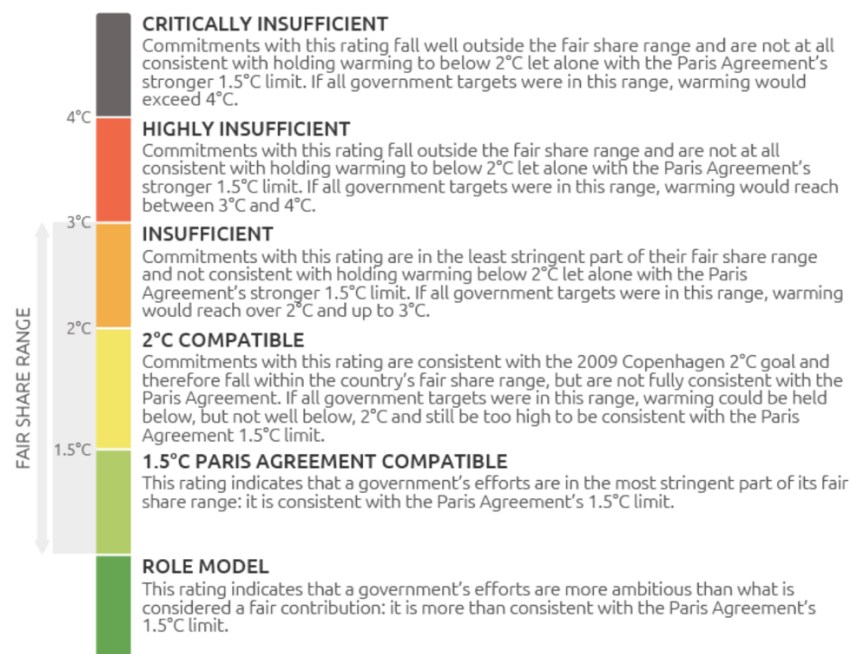
²⁴¹ Foreign Policy Concept of the Russian Federation (approved by President of the Russian Federation Vladimir Putin on November 30, 2016)

²⁴² See Chapter 2, p. 51: **2.3 National environmental policies, expert assessments and fines**

²⁴³ Правительство России: Работа правительства – Экология. <http://government.ru/rugovclassifier/section/2440/>

recognizing that this would significantly reduce the risks and impacts of climate change.”²⁴⁴ The treaty plans on achieving its goals through “nationally determined contributions” (NDCs) and it establishes a long term goal, namely to reduce green-house gases emissions at a ‘net zero’ between 2050 and 2100. The mechanisms in place to reach this ambitious goal are: NDCs reports every five years, transparency, inclusiveness, mitigation and adaptation efforts.²⁴⁵ The Paris Agreement differs from the Kyoto Protocol because it is based on a decentralized, bottom-up system of voluntary pledges, while Kyoto was based on top-down regulations. Since the Protocol was not successful, this new system aims at avoiding the shortfalls of the previous international environmental agreement.

Russia took an active role in the negotiation process of the Paris Agreement. In his intervention at the UN Climate Conference, president Putin acknowledged the need to address climate change: “Climate change has become one of the gravest challenges that humanity is facing. Its costs are global warming, hurricanes, floods, droughts and other anomalies. These challenges cause ever more tangible economic damages and they destroy the habitual human environment.”²⁴⁶ He then referred to how Russia actively contributed in addressing global warming problems reducing CO2 emissions and pledged that, by 2030, Russia would reduce green-house gases emission by up to 70 per cent compared with the base year 1990.²⁴⁷



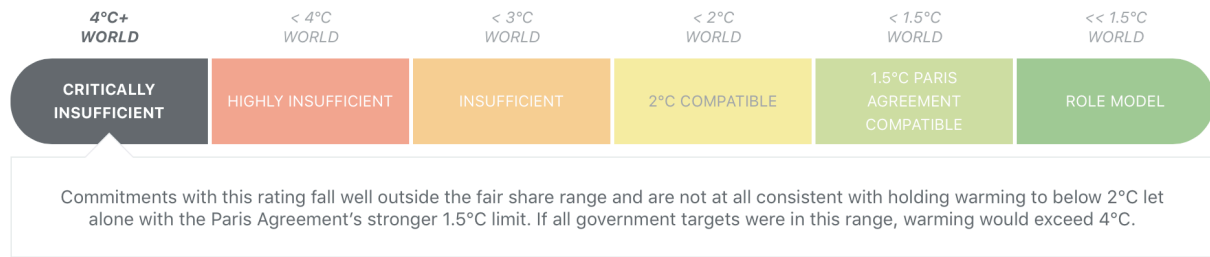
Climate Action Tracker's rating system.

²⁴⁴ Art. 2(a), Paris Agreement under the United Nations Framework Convention on Climate Change (Paris, 12 December 2015)

²⁴⁵ Falkner (2016)

²⁴⁶ Vladimir Putin. Speech of the Russian Federation president at the at the UN Climate Conference (Paris, 30 November 2015)

²⁴⁷ Newell & Henry (2016), p. 788



Progress in climate action implementation of the Russian Federation (updated on 30 April 2018)

Source: Climate Action Tracker (website: <https://climateactiontracker.org/countries/russian-federation/>)

But how is Russia dealing with the climate action implementation pledges the country made at the Paris Conference? According to the Climate Action Tracker rating system, as the two figures above show, the country has made small progress in implementation so far. The delay in the adoption of CO₂ emission targets and policies and of a national strategy to 2019 put the Russian economy at risk for its global economic competitiveness. Moreover, the NDC target adopted by the country is not strong enough, therefore it would not require a relevant green-house gas emission cuts. This is why the Climate Action Tracker classified as “critically insufficient” the climate action implementation in Russia.²⁴⁸

Since the Paris Agreement has not been ratified yet, we can only analyze under which conditions the treaty can be ratified and effectively implemented. Karlsson-Vinkhuyzen et alii (2017) came up with four different pathways that can be followed in order to guarantee the treaty implementation and effectiveness, unlike Kyoto. The first pathway entails mutual accountability: ‘assessment and review’ and non-compliance procedures are established, but material sanctions are not into place. The Paris Agreement relies on peer pressure and reputational damage, which should work as a lever for compliance. The three remaining pathways involve accountability to a third party: the second involves domestic institutions holding their government to account, while the third entails civil societies organizations and scientists, and the fourth governments holding themselves to account.²⁴⁹

The ratification of the Paris Agreement should be done by 2021 but on what theoretical basis should Russia ratify this treaty? According to the *non-cooperative* branch of *game theory*, for countries to desire to take part to an agreement, it must be profitable, meaning that the benefits of participation exceed their costs. For the sake of combating free-riding or deviant behavior, an

²⁴⁸ Climate Action Tracker: Russian Federation. <https://climateactiontracker.org/countries/russian-federation/>

²⁴⁹ Sylvia I Karlsson-Vinkhuyzen; Maja Groff; Peter A. Tamás; Arthur L. Dahl; Marie Harder & Graham Hassall (2017) Entry into force and then? The Paris agreement and state accountability, *Climate Policy*. Vol. 18, No. 5, pp. 593–599

agreement must be stable, meaning that participation makes the best alternative for countries. Ratifying the Paris Agreement would give Russia some benefits, such as good reputation in the international arena and the possibility for the removal of sanctions²⁵⁰ in the field of green technologies and project. As Makarov (2016) noticed, this could give the Russian Federation great incentives to adopt the treaty: “From the beginning of 2015, the commonly applied argument is that Russia is incapable of making contributions to solving environmental problems without sanctions lifting. Indeed, blocking of supplies of technologies used in the energy sector and limits to fundraising make many energy-saving projects difficult to implement. As a result, a number of experts, including those in the Russian delegation at the Paris conference, suggested (...) that all environmental and climate projects must be excluded from sanctions regimes, and in relation not only to Russia.”²⁵¹

As the US president Trump has declared his willingness to withdraw from the Paris Agreement and has dropped all the environmental commitments the Obama administration took, the other parties can either continue to commit to their targets or, as a big emitter as the US is withdrawing, they could drop their commitments too. As for Russia, it appears that the country is willing to respect its commitments, but, as reported by Davydova, “although Russia is bracing for climate change, it has shown little desire to rein in carbon emissions. It intends to ratify the Paris climate accord in 2019 or 2020, the president's climate adviser recently confirmed. But the country can afford to do little and still meet its emissions pledges for 2020 to 2030, which range from 25 per cent to 30 per cent below 1990 levels. Russia is already running 30 per cent below levels in 1990, the year before the Soviet collapse wiped out much heavy industry.”²⁵² In fact, Russia is still dependent on the export of oil and gas, therefore enterprises are reluctant to decrease emissions. It is likely that Russia will continue implementing energy efficiency measures until the ratification of Paris, to later focus on further reduce emissions.

The Paris Agreement, even though it adopts a different system to tackle the issue of climate change, risks falling in the same dynamics of the Kyoto Protocol and missing an opportunity for concrete action. Only the upcoming ‘facilitative dialogues’ of 2018 will tell whether this process is leading to a long-term solution or it will result in a dead end.²⁵³

²⁵⁰ In 2014, the EU, the USA, Norway, Canada and Australia imposed sanctions against Russia following the Ukrainian crisis and the Russian annexation of Crimea after the referendum to join Russia.

²⁵¹ Makarov (2016), p. 544

²⁵² Davydova (21/09/2017) Science Magazine.

²⁵³ Karlsson-Vinkhuyzen et alii (2017), p. 3

3.5 Russian public perception on environmental issues

Russian environmental movements continued their activism in the new millennium, even if they assumed different forms and the number of their participants significantly declined. According to Newell and Henry (2016), environmental organizations can be classified into three categories. The first category includes a small number of professional environmental organizations – i.e. WWF and Greenpeace – based in Moscow and in *oblasts*' capitals. The second one gathers grass-roots environmental organizations, namely small green groups operating at the local level on voluntary base. The third category is formed by government-sponsored environmental NGOs receiving funding from the government.²⁵⁴

Yanitsky (2012), observes that, after 2000, there was a trend that caused “the gradual split of the environmental movements into ‘transnationals’ and ‘locals’: locals with few resources have been more radical; big, resourceful and mainly umbrella organizations have pursued a moderate policy, the scope of interests of Russian ‘transnationals’ limited by the state border.”²⁵⁵ Local environmental NGOs, in particular, went through a processes of decentralization and regionalization: as the Socio-Ecological Union (SoEU) collapsed in the late 1990s and the *druzhina* movement lost its momentum, no other umbrella organization was able to merge the different interests of local organizations. Therefore, each environmental group was concerned with the specific priorities of the region they operated in and endorsed their particular interests. Since Russia is an ecologically diversified territory, each group of activists had different stances over different matters.²⁵⁶ Transnational environmental NGOs find themselves in a difficult position since they receive foreign support in the form of funds and technical assistance, but they have to deal with domestic constraints. Activists of such environmental groups tend to criticize the government’s policies and practices at the domestic level and claim that Russia’s international commitments on environmental matters are more often than not only symbolic, as they are not implemented through practical means.²⁵⁷ This is why, according to Henry (2010), “Environmentalists’ demands appear to challenge the natural resource orientation of Russia’s economy. In response, state actors have singled out environmentalists as political opponents. A number of environmental organizations have faced unexpected audits by the tax police and other inspections; several prominent environmentalists and scientists were brought to trial on charges of

²⁵⁴ Newell & Henry (2016), pp. 790–792

²⁵⁵ Yanitsky (2012), p. 933

²⁵⁶ Yanitsky (2012), p. 934

²⁵⁷ Laura A. Henry (2010) Between transnationalism and state power: the development of Russia's post-Soviet environmental movement. *Environmental Politics*. Vol. 19, No. 5, pp. 761–764

treason or revealing state secrets.”²⁵⁸ As the American scholars Newell and Henry (2016) reported, the situation was further exacerbated from 2012 onwards, as environmentalists who present stances against governmental plans targeted at economic development through resources extraction are classified as adversaries of the state and have no possibility to influence Russian policies.²⁵⁹

As regards to public concern on the environment, it appears that they remained high from the late 1980s to the present. According to a survey made in 2010, almost 80 per cent of respondent cared about the state of the natural environment of their region. Nevertheless, less than 1 per cent of them participated in local environmental NGOs.²⁶⁰

Almost 40 per cent of Russians do not believe in global warming, according to a survey made in 2017 by the All-Russian Center for the Study of Public Opinion²⁶¹ involving 1 200 respondents over 18. In fact, they believe that the negative consequences derived from global warming have been exaggerated by those who want to make money out of the human fear of natural catastrophes. On the other side, 55 per cent of the population views global warming as a severe threat having negative consequences on the nation. The latter portion of Russian citizens refers mainly to the unusual weather phenomena that took place in summer 2017, from storms to droughts.²⁶²

According to the Russian geologist Alexandr Nikonov, man-caused greenhouse gases emissions will have positive effects on Russia.²⁶³ He is not the only one with such opinion, as many scientists believe that rising temperatures will allow the cold and year-round covered by ice Russia to grow corn, wheat and other crops in greater portions of territory. Moreover, other economic activities such as constructions, transports and mining would be affected by the positive consequences of rising temperatures: in fact, those activities in winter have less potential, but thanks to global warming, they can experience economic benefits. According to a 2017 study carried out by the International Monetary Fund (IMF), if the temperatures rise by 1°C, the Russian Federation will experience a 0.83 per cent increase in per capita output. Last but not least, global warming would cause ice to melt in the Arctic, making it possible for ships to navigate in this Northern sea.²⁶⁴

Due to these views, even if we take as an assumption that the Russian Federation’s government has a moral obligation to pass laws and comply to international environmental agreements aimed

²⁵⁸ Henry (2010), p. 764

²⁵⁹ Newell & Henry (2016), p. 790

²⁶⁰ Тунккунен (2014), pp. 585–586 and Newell & Henry (2016), p. 791

²⁶¹ Всероссийского Центра Изучения Общественного Мнения (ВЦИОМ)

²⁶² Почти 40% россиян не верят в глобальное потепление (24/07/2017), МИР24.

²⁶³ Артем Кречетников, Россияне о глобальном потеплении: нам бы ваши заботы! (13/10/2009), Би-би-си, Москва.

²⁶⁴ Russia to Reap Benefits from Climate Change (03/10/2017), The Moscow Times.

at fighting global warming, the majority of the citizens do not feel morally obliged to take action against this phenomenon. In Sinnott–Armstrong (2010)’s opinion, when discussing whether citizens are individually responsible for the protection of the environment, there is no moral principle that proves that they are obliged to fight global warming, but governments can be considered to have this duty, because, unlike single individuals, they have the power to make a difference.²⁶⁵

²⁶⁵ Sinnott–Armstrong (2010), pp. 332–346.

Conclusion

When referring to Russia's role in international action for the protection of nature, a lot has been written on the environmental degradation of the country's territory, but less has been discussed about the measures that, both in Soviet and in present years, Russia has taken in order to deal with its vast land's environmental threats. As this dissertation has explored, the analysis of the steps the country adopted, both through national doctrines, acts and policies and through participation in international conferences and treaties are key to understand Russian environmental policies, its current role in the international arena and its stances on a debated topic such as environmental protection in the light of climate change.

How is Russia involved in international environmental agreements? What are the reasons behind Russia's participation in such agreements and how have they evolved over time? Which deeds is the country taking to tackle national environmental issues and how are they linked to global environmental action? This dissertation tried to give an overview on how, despite that environmental protection has not been among the top priorities for Russia, the country has been involved in cooperation, conferences and agreements at the international level and it explores if its international commitments are translated in national policies.

Before drawing general conclusions and answering to the research question it is appropriate to take a glance at what has been analyzed in the three chapters of the dissertation. Each chapter covered a major topic yet followed a similar structure. Every section consisted of an introductory overview on the years under inquiry, an examination of the tendencies present in Russia, a review of the national measures taken in response to environmental issues, a detailed analysis of the international environmental agreements in which the country was involved for what concerns different stages of treaty-making and finally a part dedicated to mass attitudes and movements in the environmental context. The *first chapter* dealt with the environmental challenges of Soviet times and focused on the USSR's participation in international agreements from the late 1970s to its breakup. In the *second chapter*, the attention was drawn on the role of Russia in 1990s international environmental agreements, from its participation at the 1992 Rio Earth Summit to its decision to ratify the Kyoto protocol in 2004. The *third chapter* was devoted to the latest developments regarding the role of Russia in international environmental action, with the focus being its contribution to the 2015 Paris Agreement.

The overview on the environmental degradation in the Soviet period clearly shows that the territory has undergone a vast number of issues, from droughts to irrigation problems, from resources

exploitation to pollution, and that concrete action to prevent such phenomena was seriously taken only when the environment became a matter of global awareness. In fact, the combination of policies and different projects in the spheres of industry, agriculture, urbanization and power generation aimed at mastering nature under economic plans, together with the difficulties posed by the climate and the geography of the territory, caused grave environmental degradation. According to Feshbach and Friendly, the USSR went through the phenomenon of *ecocide*, namely the widespread, severe and long-lasting environmental harm caused by anthropogenic or natural agents.

After the Bolsheviks took power, political turmoil put at risk the environment since *zapovedniks*, i.e. nature preserves, and fisheries were assaulted by the hungry population. Stalin's era witnessed severe environmental degradation as the leader's policies of industrialization through Five-Years Plans, agricultural collectivization and hydroelectricity and irrigation projects compromised the territory irreversibly. In the same years, the Second World War not only caused the destruction of a great part of the West of USSR, but it also accelerated the process of conquest of Siberia and Far North for the exploitation of their natural resources. The Khrushchev era was characterized by the development of "hero projects" such as the Virgin Lands and the Corn Campaigns, which had a devastating impact on land, causing crop failure and soil erosion. In Brezhnev's years, the Food Program caused land and water pollution, due to the overuse of chemicals and fertilizers aimed at improving farmland production. During Gorbachev's leadership, the Soviet Union experienced the greatest nuclear power accident of the century: the Chernobyl disaster, its radioactive contamination and its irreversible environmental and human consequences.

The tendencies Soviet leaders and public had towards issues concerning nature and its resources were the following: nature was viewed as something science was supposed to master and its resources were considered infinitely abundant, therefore they ought to be exploited for economic growth. This explains why grave environmental conditions were often overlooked. National environmental policies at that time involved emergency measures aimed at repairing the damages more than preventative action until the 1970s and the 1980s, when nature protection became a policy objective and Soviet leaders introduced environmental laws standards and fines.

As said before, Soviet policies addressing environmental challenges changed over time, assuming first a remedial character and later becoming more and more preventative in their nature. Lenin's times were characterized by some attention towards environmental matters, as the 1918 *On Forests* and the 1919 *On Hunting* decrees testify, but the implementation of these policies was not always an easy task and, in Stalin's era, a great number of these natural protection measures went through significant changes or were repealed altogether. In fact, Stalin's policies tended to favor natural

resources exploitation over their conservation: the Five-Year Plans clearly show how economic expansion held greater policy priority than environmental matters. In 1948, the *Stalinist Plan for the Transformation of Nature* was adopted in order to avoid future droughts and famine: this was the only time over Stalin's years that a preventive measure to deal with environmental problems was approved, even if its scope was not nature preservation itself but the modeling of nature serving industrial and agricultural purposes and, in the end, it did not achieve the expected results. In Khrushchev's years, great emphasis was put on the construction of plants, especially heavy industry ones, but only when they reached sky-high levels of pollution was a policy devoted to the installation of pollution treatment facilities, but the environment was already compromised. This trend changed from the second half of the 1960s to the 1980s, when many laws on nature's protection, industrial and agricultural regulations and pollution limitations were adopted and, in the same period, international regimes were joined. Not only did Brezhnev mention environmental rights in his Constitution, but he also adopted various laws on the issues, establishing environmental offices in different ministries, setting air quality standard and establishing the grounds for fauna protection. Gorbachev's years were characterized by an intense activity in the sphere of nature preservation, including the promulgation of environmental laws and the creation of ad hoc government bureaucracy.

As in many other countries, environmental concerns gained space at the policy-making table of the Soviet Union too, not only in the domestic sphere, but in foreign affairs as well. In the 1970s, the country began to be involved in different international environmental organizations and programs and started signing some multilateral agreements in different spheres of environmental protection. During Brezhnev's era, the 1972 UN Conference on the Human Environment was held in Stockholm. The USSR did not participate due to Cold War dynamics, but it became a member later. In the same years, the Soviet Union and the USA engaged in a series of bilateral environmental agreements: not only did the collaboration help the two countries in dealing with their respective environmental issues but it perpetrated their ideological competition. In 1979, the Soviet Union became a party to the Convention on Long Range Transboundary Air Pollution (LRTAP): as the heaviest polluters were located in the Eastern Bloc and the currents transported polluted air from the West to the East, the Soviet Union was the first victim of transboundary air pollution and, for this reason, it became particularly interested in reducing emissions. Many other agreements were signed but the overall tendencies were that the USSR participated without fully implementing the agreements and that often the decision to cooperate was not linked to environmental interests only, but it involved matters of diplomatic significance too.

In Soviet times, different environmentalist movements gained ground, advocated for nature preservation, faced difficulties and struggled for their survival assuming an evolving role in environmental protection policies. The first movement established in this period was the VOOB, the All-Russian Society for the Protection of Nature. Since its activity was under threat – especially in Stalin’s era –, its members had to adopt the tactic of *protective coloration*: they acted like chameleons, promoting the independence of scientists while swearing loyalty to the government and its policies. Between the 1960s, the students’ Nature Protection Corps (*druzhina* movements) were established and promoted civic initiatives to protect nature. In the 1980s these movements were gathered under the umbrella organization Socio-Ecological Union (SoEU).

Even if many observers expected that, with the breakup of the Soviet Union, the environmental conditions of the Russian Federation and of the NIS (Newly Independent States) would have improved, the reality was quite different: 15 per cent of the Russian Federation’s territory was classified as ‘environmental disaster zones’. Despite the reduction of pressure, problems linked to air pollution, land degradation, low water quality, illegal logging etc., did not disappear with the breakup of the USSR. The deep recession causing decline in production negatively affected the environment since, as more and more factories closed, emissions were not reducing in proportional patterns, on the contrary, they were decreasing only slightly. The reasons behind this trend tied with deindustrialization are twofold: first, the industrial sector which was the least affected by recession was the heavy industry, a major contributor to pollution; and second, industries were forced to use obsolete and unsafe technology, rising the number of accidental discharges.

In the 1990s, greater priority was given to economic and social issues over environmental ones. The main trends involved decentralization, de-ecologization and environmental de-institutionalization. Decentralization entailed the transfer of administration and management activities from central government to regional authorities, which negatively affected the environment because often legal authorities exploited natural resources without restrictions. De-ecologization implied the erosion of institution building for environmental reforms, while environmental de-institutionalization referred to the process of gradual transfer of responsibilities over environment matters from ad hoc ministries to a comprehensive environmental authority.

At the national level, two main environmental policy tools were adopted: the first consisted of a system of experts’ assessment involving regular collection and dissemination of information on the state of the natural realm, the second entailed a system of charges aimed at collecting payments to produce pollution and to use natural resources. In 1991, the law *On the Protection of the Natural Environment* was designed specifically to address these policies. The 1993 Constitution dedicated Articles 42 and 58 to rights and duties of the citizens on environmental matters. In 2002, the law

On the Protection of the Natural Environment was substituted with the Federal Law *On Environmental Protection*, which made explicit reference to the concept of sustainable development. In theory, the Russian Federation has the proper legislative framework to carry out policies addressing environmental matters, but in the 1990s the country lacked the practical means to do so: the systems of charges and of expert assessment gave some positive answers to environmental problems but they were not fully implemented due to the economic and political circumstances in which the country found itself.

In the 1990s, at the international level, not only did the Russian Federation continue to comply with the commitment subscribed by the Soviet Union, but it also started to take part in other international environmental agreements. In 1992, Russia took part in the United Nations Conference on Environment and Development (UNCED) held in Rio. Even if during the negotiations, the country had a low level of participation, it signed a number of treaties agreed upon during the Conference. This stimulated domestic response: the concept of sustainable development became the foundation of Russia's environmental policy and numerous decrees were adopted. However, the implementation of this agreement was characterized by a gap between policy and practice: since a great deal of legislation has been devoted to the issue but action in this sphere has been undermined by domestic problems. In 1997, the Russian Federation participated in the negotiations of the Kyoto Protocol, which required developed countries to stabilize or reduce their green-house gas emissions. When the country entered the negotiations, the circumstances granted profitable conditions for signing: Russia could comply to the agreement without making significant emissions cuts due to the deindustrialization process it was going through after the USSR breakup and it could sell emissions quotas to the other parties of the agreement. But, when the US left the treaty, the conditions became less favorable, therefore a debate over the ratification delayed the ratification to 2004. The implementation of the Kyoto Protocol encountered several difficulties: even if Russia was supposed to be one of the main sellers under the emission trade mechanism, significant delays in the development of monitoring strategies, in the adoption of national registries and in the implementation of other legislative and institutional frameworks diminished the opportunity for profits. The Kyoto protocol was not effectively implemented by Russia but, as some could argue, the treaty was flawed in its structure.

During this decade, a wide part of the population believed that global warming did not have many negative consequences for a country as cold as Russia and preferred that the government prioritized policies aimed at the solution of economic issues such as poverty and unemployment over environmental action. Consequently, environmental movements and organizations faced difficulties for three main reasons: the first entailed the decline in public perception on

environmental issues, the second referred to the difficulties of organizing voluntarily in a time of economic trouble, and the third was linked to the increasingly hostile atmosphere faced by activists in the governmental sphere. Many organizations were disbanded or significantly shrank, as it was the case for the *druzhina* movements.

Nowadays, the natural environment of the Russian Federation is facing with a variety of problems. Since the turn of the millennium, the country has been dealing with old and new environmental challenges derived, on the one hand, from the Soviet environmental legacy, and, on the other, from recent trends and phenomena. Deforestation is one of the most important environmental issues: illegal logging, mineral and energy exploitation, the construction of infrastructures and settlements and the transformation of woodlands in agricultural land compromise the status of forests through soil erosion, landslides, floods and green-house effect. Another environmental problem concerns pollution in its different forms. Air and water pollution is caused mainly by power plants and industrial enterprises: they contribute to the phenomenon of acid rain, which negatively affects soils, flora and fauna and are detrimental for the human health. Furthermore, nuclear waste and nuclear power plant accidents have heavily contributed to the overall degradation of the environment.

In the last two decades, priority has still been given to economic investments over environmental considerations, but, at the same time, measures are taken to face the issue and prevent further degradation. The environment is therefore under threat because, in the last thirty years, decision makers have prioritized the solution of economic and social problems, which have driven them to endorse practices of exploitation of natural resources, i.e. fossil fuels. It was only in recent years that the environment started to gain more weight at the policy table, since Russia's perception on climate change acquired a different angle. Decision makers acknowledged that extreme weather events have been hitting Russia more harshly in the past twenty years and action must be taken in order to tackle their effects.

At the national level, various pieces of legislation address environmental issues in the spheres of production and energy. In 2009, Medvedev's government adopted the new *Energy Efficiency Act*, which addressed the modernization tasks the Russian economy had to fulfil. Its aims were to end wasteful consumption and embrace the practices of energy efficiency and saving. Even if this is considered a milestone in Russian energy policy, it lacks some important features for its fully successful implementation. Moreover, this policy separates energy efficiency measures from environmental implications: even if it was adopted after Russia ratified the Kyoto Protocol, no mention on CO₂ reduction nor on the country's international commitments was made. This might be a reason, together with the cheap price of fossil fuels, why this Act makes it difficult to endorse

renewable energy in Russia. In 2014, another step for energy efficiency was taken with Federal Law 219: to reduce hazardous emissions, the state gives incentives to enterprises that design, construct and install best available technologies (BAT), recycle, clean gases before emitting them in the atmosphere, and use equipment for the neutralization of waste. These incentives include reimbursing part of the cost of implementing BAT, the provision for investment credits and the removal of penalties for those enterprises that fully implement BAT. This system should be fully implemented by 2022 and it is in line with the international regulatory framework for environmental saving activities. Nowadays, the Russian government works on matters of ecology are divided into different areas, namely: environmental safety, protection of nature, forest conservation, water complex, protection of lake Baikal and ecology of the Volga.

In the international arena, the Russian Federation still plays an important role: the country signed the Paris Agreement in 2015. The treaty aims at keeping the increase of temperatures below 2°C above pre-industrial levels and it plans on achieving its goal through “nationally determined contributions” (NDCs). During the negotiation process, Russia took an active role since it pledged that, by 2030, the country would reduce green-house gases emission by up to 70 per cent compared with the base year 1990. According to the Climate Action Tracker rating system, the climate action implemented by Russia are “critically insufficient”. Moreover, other international actors decisions may influence Russia’s implementation: since the US president Trump has declared his will to withdraw from the Paris Agreement, Russia can either drop its commitments too or ratify the agreement keeping carbon emissions as they are, since they are already below 1990 baseline due to deindustrialization caused by the period of recession the country went through. The Paris Agreement, even though it adopts a different system to tackle the issue of climate change, risks falling in the same dynamics of the Kyoto Protocol and missing an opportunity for concrete action. Only the upcoming ‘facilitative dialogues’ of 2018 will tell whether this process is leading to a long-term solution or it will result in a dead end.

Russian environmental movements continued their activism in the new millennium, even if they assumed different forms and the number of their participants significantly declined. In fact, they split in local and transnational movements, with different sources of funding and goals. As regards to public concern on the environment, it appears that they remained high from the late 1980s to the present, but many Russians still do not believe in global warming and do not feel morally obliged to take direct action against the phenomenon.

This dissertation tried to answer to the research question: *How is Russia involved in international environmental agreements?* As we have explored, Russia cooperated in many of these kinds of agreements from the late Soviet period to the present, namely from the 1972 UN Conference on the Human Environment in Stockholm to the 2015 UN Climate Change Conference in Paris. The reasons behind Russia's participation in such treaties and their implementation's effectiveness evolved over time.

The real reasons behind Russia's participation in international environmental agreements during the Soviet times did not entail only concerns related to nature's preservation: it is true, the USSR became a party to the Convention on Long Range Transboundary Air Pollution (LRTAP) in 1979 because it was interested in reducing the damages acid rain had on its territory, but the main reasons included diplomatic matters as well. Behind numerous environmental commitments there were goals of declarative character, while the real reasons were politicized and linked to foreign priorities. The grounds for cooperation were often tied to Cold War dynamics, from the competition between socialism and capitalism in the involvement in policies for the protection of the environment to the Soviet attempt to cut back on the arms race through environmental cooperation. In the 1990s, the reason why the Russian Federation took part in these agreements was aimed at its integration in the international community rather than at solving environmental problems. It is argued that another cause entailed Russia's willingness to achieve a "great power status" with regards to climate policy. Nowadays, diplomatic reasons are intertwined with ecological stances: in facts, in the latest years Russia does want to extend its soft power but, at the same time, it aims at tackling environmental issues.

Generally, when Russia decides to take part to the negotiation or to the ratification of treaties dealing with environmental matters, the country adopts the *cost-benefit analysis* approach over the *security*, *ecological* and *human rights* approaches. For instance, in the Kyoto Protocol, the reasons behind ratification do not find their roots in the application of the *ecological* approach to the treaty, but they derive rather from the benefits of the *cost-benefit analysis* approach: economic and status advantages exceeded the disadvantages of ratifying, and ratification was based on a more instrumental view of the protocol as a means of realizing other diplomatic goals in the international arena. The Kyoto protocol exemplifies that participation in international environmental agreements is usually tied to economic profits over environmental concerns. Russia's decisions on international environmental treaties are framed in the game theory dynamics, because such theory gives the country some insights on how to deal with a public good with transboundary externalities, when no supranational authority has the power to enforce environmental protection policies.

As for implementation of international treaties in the domestic policies, the tendencies varied over time. In the Soviet period, during Brezhnev and Gorbachev's years, many promising steps were taken for nature preservation but, unfortunately, they were not always as efficient as they aimed to be. The main problem was that the system lacked a central environmental protection agency, therefore different ministries had to cooperate in order to solve environmental problems, which made the implementation process slower. Moreover, the national programs aimed at implementing international environmental agreements were often vague and contributed to the partial compliance to the treaties' obligations. In the 1990s, the participation in the Rio Conference stimulated domestic response, as the adoption of many decrees testify, but implementation was doomed by a gap between policy and practice: financial shortfalls and administrative inefficiencies hindered the effective implementation of the Earth Summit. The implementation of the Kyoto protocol encountered some difficulties too and resulted in an 'compliance without implementation' since the Russian Federation was emitting less CO₂ due to the recession and consequent deindustrialization and not because it effectively adopted policies to tackle emissions. In the last two decades, Russia has adopted several decrees on energy-saving activities but it did not relate them to the concept of environmental preservation until the latest years.

In dealing with environmental issues, the Russian Federation generally follows these three trends: first, it adopts a great deal of laws that are rarely translated into practice; second, if it finds itself choosing between economic development and environmental protection, it will always choose the former and, if socio-economic issues trigger the country, it will give priority to their solution over dealing with environmental problems; and third, the Russian Federation plans at facing with environmental matters only when it has economic benefits.

In conclusion, we can state that Russia does join international environmental agreements but the country sign and implements them only if the benefits of participating exceed the costs. What about the Paris Agreement? Russia took an active role in the negotiation table and pledged that, by 2030, it would reduce green-house gases emission by up to 70 per cent compared with the base year 1990. As for now, the country has put little effort in the implementation of the treaty, but counts on ratifying it by 2021. Due to the extreme weather events Russia experienced in the last few years and its will to play a decisive role in the international arena, Russia seems concerned with acting against climate change. But are there other reasons behind this choice?

The facilitative dialogues will take place at the end of 2018 and, in this occasion, all the parties to the agreement will assess their NDCs and test if their commitment were met. Since the US has expressed its will to abandon the treaty, the remaining parties will have to decide on the future of the Paris Agreement. Will it end as Kyoto? Or will it find a way to make the emissions

commitments enforceable and effective? As for the Kyoto Protocol, Russia has a great role in the successful implementation of this agreement. When president Putin, at the 2017 Saint Petersburg International Economic Forum, responded to the US president Trump decision to leave the Paris Agreement, he claimed that other solutions to tackle climate could be found and added: “don’t worry, be happy”. It is too soon to determine whether Russia will take the role of environmental leader and put efforts in a new path of true commitment to address environmental issues or if the country is joining for a matter of international reputation. In the next few years this will be more clear and perhaps, it could become object of further studies on the role of Russia in international environmental agreements.

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2016 Foreign Policy Concept of the Russian Federation (approved by President of the Russian Federation Vladimir Putin on November 30, 2016)

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Summary

Nowadays, climate change and environmental degradation are highly debated topics. Solutions to these issues need to be found, but, to do so, it is important to know what has already been done: therefore, examining how a key international actor such as Russia has been dealing with environmental protection implementing domestic policies and cooperating internationally is so relevant. Even if the environment hasn't always been among its top policy priorities, Russia has often addressed the matter. *What is Russia's role in international environmental agreements? What are the reasons behind Russia's participation in such agreements and how have they evolved over time? Which deeds is the country taking to tackle national environmental issues and how are they linked to global environmental action?* This dissertation aims at exploring the environmental challenges Russia had to go through, analyzing the reasons behind and the effects of its participation in international environmental regimes through theoretical frameworks, i.e. game theory, cost-benefit analysis, etcetera. Previous literature tends to study either specific treaties through a theory lenses, or large periods in the absence of a relevant theory: this research will try to fill this gap by analyzing development trends within an extended time-frame while applying theories on the international environmental agreements and national domestic policies under scrutiny. The dissertation is divided in three chapters: the first focuses on the Soviet period, the rising environmental degradation and the beginning of international cooperation on nature preservation issues in 1970s–1980s; the second section is devoted to the 1990s, considering national tendencies such as de-ecologization and examining Russia's role in international environmental agreements, from Rio Conference to Kyoto Protocol; in the third and last chapter, the stances of Russia over Paris Agreement are explored and its current domestic environmental policies will be taken into account. In conclusion, the findings of this thesis show why Russia joined and successfully implemented certain treaties while others were not as effectively complied with, and it demonstrates how its national environmental policies are sometimes unrelated to international environmental agreements.

The overview on the environmental degradation in the Soviet period clearly shows that the territory has undergone a vast number of issues, from droughts to irrigation problems, from resources exploitation to pollution, and that concrete action to prevent such phenomena was seriously taken only when the environment became a matter of global awareness. In fact, the combination of policies and different projects in the spheres of industry, agriculture, urbanization and power generation aimed at mastering nature under economic plans, together with the difficulties posed by the climate and the geography of the territory, caused grave environmental degradation. According to Feshbach and Friendly, the USSR went through the phenomenon of *ecocide*, namely

the widespread, severe and long-lasting environmental harm caused by anthropogenic or natural agents.

After the Bolsheviks took power, political turmoil put at risk the environment since *zapovedniks*, i.e. nature preserves, and fisheries were assaulted by the hungry population. Stalin's era witnessed severe environmental degradation as the leader's policies of industrialization through Five-Years Plans, agricultural collectivization and hydroelectricity and irrigation projects compromised the territory irreversibly. In the same years, the Second World War not only caused the destruction of a great part of the West of USSR, but it also accelerated the process of conquest of Siberia and Far North for the exploitation of their natural resources. The Khrushchev era was characterized by the development of "hero projects" such as the Virgin Lands and the Corn Campaigns, which had a devastating impact on land, causing crop failure and soil erosion. In Brezhnev's years, the Food Program caused land and water pollution, due to the overuse of chemicals and fertilizers aimed at improving farmland production. During Gorbachev's leadership, the Soviet Union experienced the greatest nuclear power accident of the century: the Chernobyl disaster, its radioactive contamination and its irreversible environmental and human consequences.

The tendencies Soviet leaders and public had towards issues concerning nature and its resources were the following: nature was viewed as something science was supposed to master and its resources were considered infinitely abundant, therefore they ought to be exploited for economic growth. This explains why grave environmental conditions were often overlooked. National environmental policies at that time involved emergency measures aimed at repairing the damages more than preventative action until the 1970s and the 1980s, when nature protection became a policy objective and Soviet leaders introduced environmental laws standards and fines.

As said before, Soviet policies addressing environmental challenges changed over time, assuming first a remedial character and later becoming more and more preventative in their nature. Lenin's times were characterized by some attention towards environmental matters, as the 1918 *On Forests* and the 1919 *On Hunting* decrees testify, but the implementation of these policies was not always an easy task and, in Stalin's era, a great number of these natural protection measures went through significant changes or were repealed altogether. In fact, Stalin's policies tended to favor natural resources exploitation over their conservation: the Five-Year Plans clearly show how economic expansion held greater policy priority than environmental matters. In 1948, the *Stalinist Plan for the Transformation of Nature* was adopted in order to avoid future droughts and famine: this was the only time over Stalin's years that a preventive measure to deal with environmental problems was approved, even if its scope was not nature preservation itself but the modeling of nature serving industrial and agricultural purposes and, in the end, it did not achieve the expected results.

In Khrushchev's years, great emphasis was put on the construction of plants, especially heavy industry ones, but only when they reached sky-high levels of pollution was a policy devoted to the installation of pollution treatment facilities, but the environment was already compromised. This trend changed from the second half of the 1960s to the 1980s, when many laws on nature's protection, industrial and agricultural regulations and pollution limitations were adopted and, in the same period, international regimes were joined. Not only did Brezhnev mention environmental rights in his Constitution, but he also adopted various laws on the issues, establishing environmental offices in different ministries, setting air quality standard and establishing the grounds for fauna protection. Gorbachev's years were characterized by an intense activity in the sphere of nature preservation, including the promulgation of environmental laws and the creation of ad hoc government bureaucracy.

As in many other countries, environmental concerns gained space at the policy-making table of the Soviet Union too, not only in the domestic sphere, but in foreign affairs as well. In the 1970s, the country began to be involved in different international environmental organizations and programs and started signing some multilateral agreements in different spheres of environmental protection. During Brezhnev's era, the 1972 UN Conference on the Human Environment was held in Stockholm. The USSR did not participate due to Cold War dynamics, but it became a member later. In the same years, the Soviet Union and the USA engaged in a series of bilateral environmental agreements: not only did the collaboration help the two countries in dealing with their respective environmental issues but it perpetrated their ideological competition. In 1979, the Soviet Union became a party to the Convention on Long Range Transboundary Air Pollution (LRTAP): as the heaviest polluters were located in the Eastern Bloc and the currents transported polluted air from the West to the East, the Soviet Union was the first victim of transboundary air pollution and, for this reason, it became particularly interested in reducing emissions. Many other agreements were signed but the overall tendencies were that the USSR participated without fully implementing the agreements and that often the decision to cooperate was not linked to environmental interests only, but it involved matters of diplomatic significance too.

In Soviet times, different environmentalist movements gained ground, advocated for nature preservation, faced difficulties and struggled for their survival assuming an evolving role in environmental protection policies. The first movement established in this period was the VOOP, the All-Russian Society for the Protection of Nature. Since its activity was under threat – especially in Stalin's era –, its members had to adopt the tactic of *protective coloration*: they acted like chameleons, promoting the independence of scientists while swearing loyalty to the government and its policies. Between the 1960s, the students' Nature Protection Corps (*druzhina* movements)

were established and promoted civic initiatives to protect nature. In the 1980s these movements were gathered under the umbrella organization Socio-Ecological Union (SoEU).

Even if many observers expected that, with the breakup of the Soviet Union, the environmental conditions of the Russian Federation and of the NIS (Newly Independent States) would have improved, the reality was quite different: 15 per cent of the Russian Federation's territory was classified as 'environmental disaster zones'. Despite the reduction of pressure, problems linked to air pollution, land degradation, low water quality, illegal logging etc., did not disappear with the breakup of the USSR. The deep recession causing decline in production negatively affected the environment since, as more and more factories closed, emissions were not reducing in proportional patterns, on the contrary, they were decreasing only slightly. The reasons behind this trend tied with deindustrialization are twofold: first, the industrial sector which was the least affected by recession was the heavy industry, a major contributor to pollution; and second, industries were forced to use obsolete and unsafe technology, rising the number of accidental discharges.

In the 1990s, greater priority was given to economic and social issues over environmental ones. The main trends involved decentralization, de-ecologization and environmental de-institutionalization. Decentralization entailed the transfer of administration and management activities from central government to regional authorities, which negatively affected the environment because often legal authorities exploited natural resources without restrictions. De-ecologization implied the erosion of institution building for environmental reforms, while environmental de-institutionalization referred to the process of gradual transfer of responsibilities over environment matters from ad hoc ministries to a comprehensive environmental authority.

At the national level, two main environmental policy tools were adopted: the first consisted of a system of experts' assessment involving regular collection and dissemination of information on the state of the natural realm, the second entailed a system of charges aimed at collecting payments to produce pollution and to use natural resources. In 1991, the law *On the Protection of the Natural Environment* was designed specifically to address these policies. The 1993 Constitution dedicated Articles 42 and 58 to rights and duties of the citizens on environmental matters. In 2002, the law *On the Protection of the Natural Environment* was substituted with the Federal Law *On Environmental Protection*, which made explicit reference to the concept of sustainable development. In theory, the Russian Federation has the proper legislative framework to carry out policies addressing environmental matters, but in the 1990s the country lacked the practical means to do so: the systems of charges and of expert assessment gave some positive answers to environmental problems but they were not fully implemented due to the economic and political circumstances in which the country found itself.

In the 1990s, at the international level, not only did the Russian Federation continue to comply with the commitment subscribed by the Soviet Union, but it also started to take part in other international environmental agreements. In 1992, Russia took part in the United Nations Conference on Environment and Development (UNCED) held in Rio. Even if during the negotiations, the country had a low level of participation, it signed a number of treaties agreed upon during the Conference. This stimulated domestic response: the concept of sustainable development became the foundation of Russia's environmental policy and numerous decrees were adopted. However, the implementation of this agreement was characterized by a gap between policy and practice: since a great deal of legislation has been devoted to the issue but action in this sphere has been undermined by domestic problems. In 1997, the Russian Federation participated in the negotiations of the Kyoto Protocol, which required developed countries to stabilize or reduce their green-house gas emissions. When the country entered the negotiations, the circumstances granted profitable conditions for signing: Russia could comply to the agreement without making significant emissions cuts due to the deindustrialization process it was going through after the USSR breakup and it could sell emissions quotas to the other parties of the agreement. But, when the US left the treaty, the conditions became less favorable, therefore a debate over the ratification delayed the ratification to 2004. The implementation of the Kyoto Protocol encountered several difficulties: even if Russia was supposed to be one of the main sellers under the emission trade mechanism, significant delays in the development of monitoring strategies, in the adoption of national registries and in the implementation of other legislative and institutional frameworks diminished the opportunity for profits. The Kyoto protocol was not effectively implemented by Russia but, as some could argue, the treaty was flawed in its structure.

During this decade, a wide part of the population believed that global warming did not have many negative consequences for a country as cold as Russia and preferred that the government prioritized policies aimed at the solution of economic issues such as poverty and unemployment over environmental action. Consequently, environmental movements and organizations faced difficulties for three main reasons: the first entailed the decline in public perception on environmental issues, the second referred to the difficulties of organizing voluntarily in a time of economic trouble, and the third was linked to the increasingly hostile atmosphere faced by activists in the governmental sphere. Many organizations were disbanded or significantly shrank, as it was the case for the *druzhina* movements.

Nowadays, the natural environment of the Russian Federation is facing with a variety of problems. Since the turn of the millennium, the country has been dealing with old and new environmental challenges derived, on the one hand, from the Soviet environmental legacy, and, on the other, from

recent trends and phenomena. Deforestation is one of the most important environmental issues: illegal logging, mineral and energy exploitation, the construction of infrastructures and settlements and the transformation of woodlands in agricultural land compromise the status of forests through soil erosion, landslides, floods and green-house effect. Another environmental problem concerns pollution in its different forms. Air and water pollution is caused mainly by power plants and industrial enterprises: they contribute to the phenomenon of acid rain, which negatively affects soils, flora and fauna and are detrimental for the human health. Furthermore, nuclear waste and nuclear power plant accidents have heavily contributed to the overall degradation of the environment.

In the last two decades, priority has still been given to economic investments over environmental considerations, but, at the same time, measures are taken to face the issue and prevent further degradation. The environment is therefore under threat because, in the last thirty years, decision makers have prioritized the solution of economic and social problems, which have driven them to endorse practices of exploitation of natural resources, i.e. fossil fuels. It was only in recent years that the environment started to gain more weight at the policy table, since Russia's perception on climate change acquired a different angle. Decision makers acknowledged that extreme weather events have been hitting Russia more harshly in the past twenty years and action must be taken in order to tackle their effects.

At the national level, various pieces of legislation address environmental issues in the spheres of production and energy. In 2009, Medvedev's government adopted the new *Energy Efficiency Act*, which addressed the modernization tasks the Russian economy had to fulfil. Its aims were to end wasteful consumption and embrace the practices of energy efficiency and saving. Even if this is considered a milestone in Russian energy policy, it lacks some important features for its fully successful implementation. Moreover, this policy separates energy efficiency measures from environmental implications: even if it was adopted after Russia ratified the Kyoto Protocol, no mention on CO₂ reduction nor on the country's international commitments was made. This might be a reason, together with the cheap price of fossil fuels, why this Act makes it difficult to endorse renewable energy in Russia. In 2014, another step for energy efficiency was taken with Federal Law 219: to reduce hazardous emissions, the state gives incentives to enterprises that design, construct and install best available technologies (BAT), recycle, clean gases before emitting them in the atmosphere, and use equipment for the neutralization of waste. These incentives include reimbursing part of the cost of implementing BAT, the provision for investment credits and the removal of penalties for those enterprises that fully implement BAT. This system should be fully implemented by 2022 and it is in line with the international regulatory framework for

environmental saving activities. Nowadays, the Russian government works on matters of ecology are divided into different areas, namely: environmental safety, protection of nature, forest conservation, water complex, protection of lake Baikal and ecology of the Volga.

In the international arena, the Russian Federation still plays an important role: the country signed the Paris Agreement in 2015. The treaty aims at keeping the increase of temperatures below 2°C above pre-industrial levels and it plans on achieving its goal through “nationally determined contributions” (NDCs). During the negotiation process, Russia took an active role since it pledged that, by 2030, the country would reduce green-house gases emission by up to 70 per cent compared with the base year 1990. According to the Climate Action Tracker rating system, the climate action implemented by Russia are “critically insufficient”. Moreover, other international actors decisions may influence Russia’s implementation: since the US president Trump has declared his will to withdraw from the Paris Agreement, Russia can either drop its commitments too or ratify the agreement keeping carbon emissions as they are, since they are already below 1990 baseline due to deindustrialization caused by the period of recession the country went through. The Paris Agreement, even though it adopts a different system to tackle the issue of climate change, risks falling in the same dynamics of the Kyoto Protocol and missing an opportunity for concrete action. Only the upcoming ‘facilitative dialogues’ of 2018 will tell whether this process is leading to a long-term solution or it will result in a dead end.

Russian environmental movements continued their activism in the new millennium, even if they assumed different forms and the number of their participants significantly declined. In fact, they split in local and transnational movements, with different sources of funding and goals. As regards to public concern on the environment, it appears that they remained high from the late 1980s to the present, but many Russians still do not believe in global warming and do not feel morally obliged to take direct action against the phenomenon.

This dissertation tried to answer to the research question: *How is Russia involved in international environmental agreements?* As we have explored, Russia cooperated in many of these kinds of agreements from the late Soviet period to the present, namely from the 1972 UN Conference on the Human Environment in Stockholm to the 2015 UN Climate Change Conference in Paris. The reasons behind Russia’s participation in such treaties and their implementation’s effectiveness evolved over time.

The real reasons behind Russia’s participation in international environmental agreements during the Soviet times did not entail only concerns related to nature’s preservation: it is true, the USSR became a party to the Convention on Long Range Transboundary Air Pollution (LRTAP) in 1979

because it was interested in reducing the damages acid rain had on its territory, but the main reasons included diplomatic matters as well. Behind numerous environmental commitments there were goals of declarative character, while the real reasons were politicized and linked to foreign priorities. The grounds for cooperation were often tied to Cold War dynamics, from the competition between socialism and capitalism in the involvement in policies for the protection of the environment to the Soviet attempt to cut back on the arms race through environmental cooperation. In the 1990s, the reason why the Russian Federation took part in these agreements was aimed at its integration in the international community rather than at solving environmental problems. It is argued that another cause entailed Russia's willingness to achieve a "great power status" with regards to climate policy. Nowadays, diplomatic reasons are intertwined with ecological stances: in fact, in the latest years Russia does want to extend its soft power but, at the same time, it aims at tackling environmental issues.

Generally, when Russia decides to take part to the negotiation or to the ratification of treaties dealing with environmental matters, the country adopts the *cost-benefit analysis* approach over the *security*, *ecological* and *human rights* approaches. For instance, in the Kyoto Protocol, the reasons behind ratification do not find their roots in the application of the *ecological* approach to the treaty, but they derive rather from the benefits of the *cost-benefit analysis* approach: economic and status advantages exceeded the disadvantages of ratifying, and ratification was based on a more instrumental view of the protocol as a means of realizing other diplomatic goals in the international arena. The Kyoto protocol exemplifies that participation in international environmental agreements is usually tied to economic profits over environmental concerns. Russia's decisions on international environmental treaties are framed in the game theory dynamics, because such theory gives the country some insights on how to deal with a public good with transboundary externalities, when no supranational authority has the power to enforce environmental protection policies.

As for implementation of international treaties in the domestic policies, the tendencies varied over time. In the Soviet period, during Brezhnev and Gorbachev's years, many promising steps were taken for nature preservation but, unfortunately, they were not always as efficient as they aimed to be. The main problem was that the system lacked a central environmental protection agency, therefore different ministries had to cooperate in order to solve environmental problems, which made the implementation process slower. Moreover, the national programs aimed at implementing international environmental agreements were often vague and contributed to the partial compliance to the treaties' obligations. In the 1990s, the participation in the Rio Conference stimulated domestic response, as the adoption of many decrees testify, but implementation was doomed by a gap between policy and practice: financial shortfalls and administrative inefficiencies

hindered the effective implementation of the Earth Summit. The implementation of the Kyoto protocol encountered some difficulties too and resulted in an ‘compliance without implementation’ since the Russian Federation was emitting less CO₂ due to the recession and consequent deindustrialization and not because it effectively adopted policies to tackle emissions. In the last two decades, Russia has adopted several decrees on energy-saving activities but it did not relate them to the concept of environmental preservation until the latest years.

In dealing with environmental issues, the Russian Federation generally follows these three trends: first, it adopts a great deal of laws that are rarely translated into practice; second, if it finds itself choosing between economic development and environmental protection, it will always choose the former and, if socio-economic issues trigger the country, it will give priority to their solution over dealing with environmental problems; and third, the Russian Federation plans at facing with environmental matters only when it has economic benefits.

In conclusion, we can state that Russia does join international environmental agreements but the country sign and implements them only if the benefits of participating exceed the costs. What about the Paris Agreement? Russia took an active role in the negotiation table and pledged that, by 2030, it would reduce green-house gases emission by up to 70 per cent compared with the base year 1990. As for now, the country has put little effort in the implementation of the treaty, but counts on ratifying it by 2021. Due to the extreme weather events Russia experienced in the last few years and its will to play a decisive role in the international arena, Russia seems concerned with acting against climate change. But are there other reasons behind this choice? The facilitative dialogues will take place at the end of 2018 and, in this occasion, all the parties to the agreement will assess their NDCs and test if their commitment were met. Since the US has expressed its will to abandon the treaty, the remaining parties will have to decide on the future of the Paris Agreement. Will it end as Kyoto? Or will it find a way to make the emissions commitments enforceable and effective? As for the Kyoto Protocol, Russia has a great role in the successful implementation of this agreement. When president Putin, at the 2017 Saint Petersburg International Economic Forum, responded to the US president Trump decision to leave the Paris Agreement, he claimed that other solutions to tackle climate could be found and added: “don’t worry, be happy”. It is too soon to determine whether Russia will take the role of environmental leader and put efforts in a new path of true commitment to address environmental issues or if the country is joining for a matter of international reputation. In the next few years this will be more clear and perhaps, it could become object of further studies on the role of Russia in international environmental agreements.