

SOVIET ERA ANTHROPOGENIC CRISIS AND ITS ECOLOGICAL AND SOCIO-ECONOMIC CONSEQUENCES IN THE POST-SOVIET SPACE

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ABSTRACT

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Environmental Security in Russia is a major concern at the present times. Russia has taken the environmental security as a grave concern in the context of the country's social and economic development (Dalby, 2002). Important security issues like preservation of biodiversity, water contamination, air pollution, nuclear waste, radioactive contamination etc. has been one of the important environmental issues in Russia since past few decades. Many anthropogenic activities due to developmental projects have destroyed the environment which have triggered an environmental crises.

KEYWORDS *Anthropogenic activity, environmental security, insecurities, biodiversity, World War, Socio-economy, Soviet Union.*

INTRODUCTION

Russia being the largest landmass in the world is the home to vast natural resources but had faced massive environmental crises since the Russian Empire era. There was a huge extraction of natural resources due to which it has undergone massive climate change decades later. The most important argument here that there was substantial mismanagement of policies during the Russian empire era has affected the forest and with bad technology in the industries made it even harder to preserve the environment. The Soviet Union in spite of all the hurdles and inhibitions, later on, acknowledges the issue of environmental insecurity, especially concerning pollution and energy. However, the issue of the slow Soviet system made it difficult for environmental groups to carry on with their agendas and did conform to the government (Josephson et al., 2013).

For centuries the Russian economy was highly dependent on the natural resources and the Soviet industry in that period drastically destroyed metals, fisheries, timber, minerals, etc and exported these supplies to the rest of the country (Bradshaw 1997; Bradshaw and Lynn 1998). Even today the economy of Russia continues to be dependent on hydrocarbons like oil and gas, precious metals and fish and timber, etc. (Bradshaw and Connolly, 2016). Lack of technology or infrastructure being one of the major reasons for the over-extraction of resources and polluting the environment and destroying the ecosystem along with the Soviet Union's

inefficiency in running the economy (Barr and Braden 1988; Bradshaw and Lynn 1998).

The communist government has substantially derailed the growth of the economy along with crushing the environment. However, since the fall of the Soviet Union and the decentralization of the government have made the environmentalists face a new challenge of rigid government where the state focused more on the economy and very little regard or nothing for the ecology creating obstacles for talks to preserve the environment (Henry, 2010). The movements on environmental protection were challenged with the increased dependence on the extraction of petroleum resources and the limits and influence on the movements by the state authorities. Therefore as of now, there is the only rhetoric change in the status quo of the movement on the environment, it might change when there is an interplay of ecology and economic growth. (Henry, 2010).

ADDRESSING THE ENVIRONMENTAL ISSUES DURING THE SOVIET PERIOD

The Soviet-era suffered massive economic slowdown due to its flawed economic system and the two most important explanations were the two World Wars and a long prolonged Cold War. With the constant urge to compete with the West, the Soviet system failed miserably in its policies and governance. The participation in the War itself was a costly affair and after the end of World War II, there was a bipolar world that made the superpowers race for weapons. Slowly

and gradually the Soviet Union wanted to expand its military strength in eastern Europe and this was pursued in most of the 20th century. However, with the visible economic slowdown, the Soviet state's focus shifted from military to industries and investments (Birch and Mykhnenko, 2010).

Through big developmental projects, the Soviet Union wanted to recover the economic crisis and together with the nuclear race and arms race, there was the insecurity of military attack in the borders. The military attack is not the only insecurity they were concerned but water sharing issues and food security also eventually came up. During the period of *perestroika* and *glasnost*, ecological concerns were a primary focus as it was not only the problem of the Soviet Union but a global environmental concern too. The concerns for the environment were getting popular around this time and many civic groups and environmental groups asked for accountability from the system (Bowers, 1993).

Many factors were responsible for the slowdown of the economy and environmental crisis but reasons like political instability and legal factors were very important in bringing down the environment quality. And some of these problems are unpredictable and cannot be blamed a hundred per cent for the economic and environment meltdown (Acemoglu et al., 2003). The Soviet Union followed the western model to handle the ecology crisis and this model did not suit the Russian model as it had a different ideological background and different economic system. In the 1990s, sticking to Western model to resolve the environmental crisis was one of the mistakes by the Soviet government moreover the Soviet system had additional issues of high corruption, interest groups, lobbying and lack of awareness and lack of involvement by the public in decision making (Denisov, 2010).

Development and growth have always been associated in economic terms however, with time as we see that sustaining the ecology is equally necessary for survival and development. The Soviet Union practices a socialist approach to achieve growth and in due course of time, the consequences are in front of us. One of the biggest environmental disasters was the Chernobyl accident in the year 1986. Failure of old Soviet technology, amateur engineer, bad decisions and lack of communications made the nuclear plant explode.

With the policies like *glasnost* and *perestroika*, Gorbachev extensively tried to restore the consciousness in the Soviet Union, though this was partly achieved, the environmentalism movement in the Soviet Union resurfaced after the Chernobyl misfortune in 1986. The expense of restoring the growth of the Soviet economy was disclosed after these drastic policies by Gorbachev, and therefore, slowly environmental concerns were taken as an important part of sustainable growth in the Soviet Union.

The Chernobyl accident was the only commercial nuclear accident in Soviet history as disclosed by the Soviet Union however, the impact and the repercussions are still very relevant today. The health impact of this nuclear disaster is still haunting and the effect on the economy was enormous. The exposure to radiation by the first responders was huge which included the staff and emergency workers and these people died immediately after the exposure to the emission (Feldman and Blokov, 2009).

The Chernobyl accident not only killed people, but it also killed the economy of the Soviet Union. It had a huge impact on the socio-economy of the Soviet Union. The first impact was massive population displacement after the

accident then the loss of a significant number of employments, there was a huge reduction in the labour force in the market and the cost of cleaning up the tragedy was extremely expensive and labour intensive.

The migration to different European countries and the neighbours of the affected areas were hugely impacted by this disaster especially Belarus who received the highest share of air contamination due to its proximity. Some say it was a turning point in environmentalism in the Soviet Union also it gained massive criticism from the West and considered more important than *perestroika*.

EROSION AND DEGRADATION OF LAND AND WATER

Russia being a country rich in water supplies with more than 2 millions of lakes and numerous rivers, covering almost 25% of the total fresh water on earth continues to struggle with clean hygienic drinking water (Smith, 2015). There were multiple reasons for this crisis, lack of wastewater management, lack of technology and excessive extraction from water bodies, growing urbanization etc. As half of the Russians didn't have access to clean drinking water it was a huge concern as Greenpeace report says that the level of mercury found in the water is highly poisonous for humans. Locals in the areas where water and land are contaminated suffered in their traditional goods supply such as timber or local food. To cultivate agriculture land and water should in healthy condition as there might be chemicals and harmful particles from industrial waste. To address this problem more scientific and public awareness is required and just not government policies and regulations (Ritter, 2020).

Many examples can be shown here where the contamination of land and water had threatened the population. Many parts of Siberia such as the Urals mountains or the Volga river where developmental projects are happening are damaged beyond repair (Kimura, 2007). Many of its arable lands available in these regions are contaminated by fertilizers and chemicals which made the soil infertile for cultivation. Due to many unsustainable industrial activities and mismanagements and poor execution of policies the quality of the soil and water had reduced to worst and unfit for consumptions by humans. Pollutants from industries are directly released from the sewage pipe and dumped into the seas and rivers which in the course of time have concentrated in one spot due to lack of exchange of water.

When we talk about Soviet environmental legacies the one most important aspect is the old Soviet technologies which are neither sustainable nor efficient. Russians mainly suffered from lack of equipment to tackle the sewage system problem and due to this, a toxic layer of hydrogen sulphide covers Russia due to its agricultural by-products and poor sewage system. And as we discussed of corruptions in the old Soviet system, mismanagements of funds and poor law enforcement made it harder for the citizens to get clean drinking water. The construction of many hydroelectric dams in the Soviet era was done without a clearance from the environmental department or consulting experts such as geologist and this neglected the vulnerable ecology making the developmental initiatives unsustainable.

CLIMATE CHANGE

Global warming and climate change have an infinite impact on the survival of humans. Climate change has a serious effect on population, health and life. The most severe case of climate

change can be seen in the arctic regions of Russia where the permafrost is melting. The main cause of climate change as we know is from the greenhouse gases. The surface pressure in some parts of Russia has significantly decreased in the 20th century creating hotter temperature. In the late 20th-century climate change has become a serious environmental crisis which cannot be solved instantly. In the Far East which is an extremely cold region we could see positive temperature growth due to climate change, however, those places are not suitable for agriculture and inhabitable. Some of the serious effects of climate change are, rise in the sea level, more droughts and heat waves, changes in precipitation, arctic will become ice free, and lastly rise in the temperature.

To adopt policies on climate changes are serious commitments and it has huge impacts especially on the economy, climate policies will also impact the lives of the indigenous people who are dependent on natural resources for their livelihood. It will be a challenge to Russia in the social, economic and environmental matters because Russia is dependent on hydrocarbons for many developmental projects. To respond to climate change the Russian government will have to engage in international treaties such as the Kyoto protocol, Earth summit etc and this requires signing and commitment to carbon emission. Russia should also be ready to combat abrupt changes in the ecosystem like natural disasters which are generally unpredicted (Renat, Serguey, Mikhail, 2008).

DESERTIFICATION

Desertification is a human-made disaster; it is due to the scarcity of water and soil making it lose its vegetative cover which includes the organic nutrient-rich layer. Desertification not only can trigger famines but also makes the soil and land infertile. It has socio-economic implications like huge migration or population displacement creating major political chaos in the region. Therefore, one of the most urgent ecological distress is desertification which is making places desert and infertile (Hays, 2008).

RADIOACTIVE CONTAMINATION

Since the creation of nuclear weapons, there has been the tension of a catastrophe and the many secret army projects in the remote areas of Russia have been exposed by using the policy of *glasnost* in the course of the Gorbachev era (Curtis, 1996). The dangerous use of nuclear energy in the name of development and military activity are risky for ecology and human survival. These disclosures have covered the bad consequences on land and naval bases abroad. It is also recognized that there have been some secret cities particularly selected for nuclear weapon manufacturing. The primary concern right here is the dumping of nuclear waste at sea and slowly being injected into the underground.

The deadliest nuclear disaster in Russia was the Chernobyl in 1986. Sadly, the Chernobyl accident had a direct impact on the economy of the country which further caused the people to resent with the government. Due to the radiation huge land areas were lost which were used for agricultural purpose, lost their homes, had to give up their small businesses, abandon their houses and some even bulldozed. People who were affected by the radiation were isolated or ostracized by their friends and families, lost their jobs and many eventually died. This was the deep health and socio-economic damage done by a single nuclear disaster which changed the discourse on environmental insecurity.

It was not only Chernobyl that has produced radiation in Russia, many other military and scientific exercise such as underground nuclear bombs were detonated in Siberia to put pressure on oil and gas fields to create subterranean caverns to store toxic wastes and to help geophysicists conduct seismic tests. Therefore not just military purpose but developmental projects were also contributing to the nuclear enhancements.

The miserable fact that the blue-collar workers did not care for the environment not only because of the lack of awareness but also because they couldn't have the luxury to think about the future and rather think about the present employment. They would want to keep their jobs irrespective of health hazards which can be also saw during the Chernobyl clean-up. Also post-Soviet decline there were reforms in the market and it did threaten the jobs of millions. Many worked in the mining sector and the work environment was hazardous. They were exposed to sulphur dioxide, carbon monoxide, nitrogen oxide, etc. this severely affected their longevity. Migration and immigration played a reserve role in the job market, when dissatisfied with the low quality of life people did migrate to a different place, however, when economic reforms such as liberalizations and privations happened and outmigration stopped people came back after the living cost was high looking for their old jobs.

Agriculture was the first sector to be affected by the increase in the population in Russia; there was pressure to harvest more and supply food to sustain the population, therefore, the use of fertilizers start after the fall of the Soviet Union. The failing economic system and the poverty made Russia undertake a faster approach to transform and improve the economy and this made Yeltsin adopt a neoliberal method to increase the supplies by exploiting the natural resources (Rutland, 2013).

The various socio-economic changes that have started in some parts of Russia due to the growth of agriculture was another important aspect of the Soviet Union's environmental legacy. A massive number of people travelled to the urban cities in the hope that there would be an expansion of business due to the demand for food supplies. This situation caused another environmental crisis of the use of heavy fertilizers for the mass production of food supplies. Because of fertilizers, there was soil erosion and infertility rate has increased significantly in recent years. It is not only fertilizers but pesticides in huge quantity and the chemical waste from industry and nuclear waste have all added to the issue of health and economy during the Soviet era and the post-Soviet era. The land was not suitable for agriculture and cultivation in the western Ukraine post-Chernobyl accident and made people migrate from there. It had hugely affected the people in the region economically losing jobs, lands, and health had put a strain on the labour force. Apart from the radiation that caused a huge population disabled for life or die, water has been severely contaminated in those regions and degraded the environment and economy severely (WHO, 2005).

CONCLUSION

The public health is one of the primary challenges due to the impact environmental insecurity. However, it is not only the health that is of concern here; the economy of the country has also been severely affected by the lack of environmental security. There is a massive reduction in labour productivity due to illness; it is also deterring many foreign investors to invest in Russia due to fear of liability and costly clean-up of the damaged environment. Another major concern of

environmental security is the effect in the regional and foreign politics. Russia being vast in land mass, shares many rivers and natural landscapes with other nations. Russia's environmental issues pose a substantial threat to the neighbours, for example, Russia is the major polluter of the adjacent water bodies, also dumps industrial, chemical and radioactive wastes into the sea. Russia also is the major contributor of carbon dioxide.

Although Russian government cries that it is because of economic and social reasons that they are not able to handle the environmental security concerns. However, in reality, it is their lack of commitment and organizational capacity to address the issue. The foremost concern of the policy makers is to stabilize the economy and the financial markets and not on the environmental impacts of their actions. Spending on the environment was rather negligible; in fact, Soviet Union used to spend more than what Russia is expenditure on the environment.

There is no proper execution of the regulations and the laws that have been established. Russia has a comprehensive legal framework to deal with environmental problems but lacks the authority and the capability to enforce such legislations. Most of the environmental challenges of Russia are the legacy of the Soviet past. The campaigns such as 'Solve the Food Problem' led to the overuse of the fertilizers and pesticides making the arable land infertile and damaged (OECD, 2006). There was no waste management system, a lot of abundant resources were considered as free and led to waste. The Russian public at present would prioritize the socio-economic needs over the environmental improvement; even though the environmental condition is deteriorating at a high level.

The short-sighted plans of the government had made country dependent on natural resources and therefore, efficient measures such as increased public participation, agreements with the international community for cooperation and integrate the environmental concerns into public policy has become a necessity (Davis, 2003).

REFERENCES

- Alcamo et al., (2007), "A new assessment of climate change impacts on food production shortfalls and water availability in Russia", *Global Environmental Change*, 17(3):429-444.
- Barr, B., & Braden, K. E. (1989), "The Disappearing Russian Forest: A Dilemma in Soviet Resource Management". XF2006277094, 79. <https://doi.org/10.2307/215585>
- Birch, K., & Mykhnenko, V. (2010). Introduction: A world turned right way up. The rise and fall of neoliberalism: The collapse of an economic order, 1-20.
- Bowers, Stephen. R (1993), "Soviet and Post-Soviet Environmental Problems", *The Journal of Social, Political and Economic Studies*, 18(2): 131-158.
- Bradshaw, M.J, and N.J. Lynn (1998) ' Resources Based Development in the Russian Far East: Problems and Prospects, *Geoforum* 29:375-392.
- Bradshaw, M.J.(1997), Sakhalin: The Right Place at the Right Time. *Russia Euro-Asia Bulletin* 6:1-7.
- Bradshaw, Michael J. and Connolly, Richard, (2016) "Russia's Natural Resources in the World Economy: History, Review and Reassessment". *Eurasian Geography and Economics*.
- Curtis, Glenn E. (eds) (1996), "Russia: A Country Study", Washington: GPO for the Library of Congress, [Online Web] Accessed on 23 July 2017, URL: <http://countrystudies.us/russia/>.
- Dalby, Simon (2002), "Security and Ecology in the Age of Globalization", *ISUMA: Canadian Journal of Policy Research*, 8:95-108.
- Davis, Sue (2003), *The Russian Far East: The Last Frontier?*, London and New York: Routledge.
- Denisov, Dmitry (2010), "Business lobbying and government relations in Russia: The need for new principles", *Reuters Institute for the Study of Journalism*, University Of Oxford.
- Feldman, David L. and Blokov, Ivan Pavlovich (2009), "Promoting an Environmental Civil Society: Politics, Policy, and Russia's Post- 1991 experience", *The Policy Studies Organization*, 26(6).
- Hays, Jeffrey (2008), "Air Pollution and the Contamination of Russia's the Land and Forest in Russia", *Facts and Details*, ̄May ̄03, ̄2017 URL: http://factsanddetails.com/russia/Nature_Science_Animals/sub9_8c/entry-5065.html
- Henry, L. and Douhovnikoff, V. (2008), "Environmental Issues in Russia", *Annual Review of Environment and Resources*, 33(1)1: 437-60.
- Josephson, Paul R. et al. (2013), *An Environmental History of Russia*, Cambridge University Press: Cambridge
- Kimura, H. (2007). *Putin's Policy Toward the Korean Peninsula: Why Is Russia Losing Its Influence? Russia's Shift Toward Asia*, 154–180. Retrieved from <http://www.spf.org/e/publication/dbfiles/17857fc7f02.pdf>
- OECD (2006), "Environmental Policy and Regulation in Russia: The Implementation Challenge", OECD, Paris.
- Perelet, Renat, Serguey Pegov and Mikhail Yulkin, (2007) *Climate Change: Russia Country Paper*. UNDP Occasional Paper 2007/12 http://hdr.undp.org/en/reports/global/hdr2007-2008/papers/Perelet_Renat_Pegov_Yulkin.pdf.accessed : 20 October 2009.
- Peter Rutland (2013) *Neoliberalism and the Russian transition*, *Review of International Political Economy*, 20:2,332-362.
- Ritter, Kayla. (2020). *Water News Pollutants and Heavy Metals Taint Moscow's Water Supply*.
- Smith, B. B. (2015). *Russia/ : Environmental Issues , Policies and Clean Environmental Issues of Russia Environmental Policies of Russia*.
- WHO (2005), "Chernobyl: the true scale of the accident", *World Health Organization*, [Online Web] Accessed 17 July 2017, URL: <http://www.who.int/mediacentre/news/releases/2005/pr38/en/>