

19. The state of social sciences and global environmental change in Russia

by

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Despite public support for environmental issues, in Russia policymakers, social scientists and the media in particular do not prioritise them. Indeed Russian elites view the planet as a resource to be exploited. Trust between social and natural scientists and across disciplines is needed if collaborative interdisciplinary research is to succeed.

Introduction

According to the Barcelona Manifesto adopted by the International Sociological Association in 2008, “humankind faces two comprehensive dilemmas in this troubled age” (ISA, 2008). The first is financial and economic uncertainty, and developing countries are particularly vulnerable in this respect. The second is the lack of security regarding future energy sources, notably oil and gas, and including the global prospect of climate change and the need to reduce carbon dioxide and other greenhouse gases. The world is also facing severe shortages of fresh water; soil erosion, the destruction of inshore and offshore fisheries, a growing number of megacities, the loss of healthy spaces for social and environmental interaction, and the loss of diverse landscapes and habitats. In addition, paying off the world’s enormous national debts would require huge economic growth, which will in turn rely on increasing quantities of energy and raw materials, including water.

Despite these risks and threats, Russia is still a steadfastly resource-oriented society. In turn, this exacerbates the “environmentalism of the poor” in remote parts of Russia, and heightens the risk of natural and human-made catastrophes.

The environmental research context

Politics and the media

Russian policymakers and social scientists do not consider global climate change and environmental issues a priority. The government and *Yedinaya Rossiya*,¹ the ruling political party, are primarily interested in political and economic stability, and modernisation

through resource extraction and fossil fuels to ensure industrial and infrastructure development. After the social and industrial disaster of the 1990s and the shock of economic reforms, the country could only survive globalisation as a resource-based economy. This has led to the gradual transformation of Russia into an all-embracing risk society in which there are no absolutely safe spaces, only more or less risky places (Yanitsky, 2000a, 2000b). Geopolitical issues, such as mutual security, top the national agenda. An example is the development of intergovernmental alliances such as the Shanghai Co-operation Organization.² In an ecological doctrine adopted by the Russian government in 2002, the theme of climate change was absent.

In recent years, environmental issues have received more attention. An assessment report on climate change and its consequences for the Russian Federation (Roshydromet, 2008) – modelled on the Intergovernmental Panel on Climate Change (IPCC) report – covered several social issues related to climate change. A number of policy documents and programmes have been adopted.³ Yet policymakers and business organisations remain primarily concerned with world market prices for gas and oil.

The mass media discuss climate change, natural disasters and technological catastrophes, but only inform readers of the immediate consequences of such events, rather than analysing them. They do not specifically discuss the causes or long-term consequences of climate change.

Most Russians are intent on earning a living and raising their living standards. They are not interested in global warming and its consequences. They often believe, as do some academics, that global warming is fabricated by politicians. They also believe – based on the Russian media and expert opinion – that Russia is the safest place on the planet, and that if global warming does happen they would have to defend Russia against an influx of millions of refugees.

Yet surveys show that people are becoming concerned about environmental issues: indeed in urban and industrial areas, “ecological concern” is ranked third or fourth place on the list of issues of concern, after unemployment and low living standards.

Science, policy and society

Local research has minimal influence on policymakers or the general public. Research on internationally renowned areas or issues, on the other hand, is more influential, as is the case with Lake Baikal, which is discussed in academic circles and at international conferences.

Networks of environmental nongovernmental organisations (NGOs) and other Russian civil society organisations play an important role in informing the population, functioning as alternative media, but they are not equipped to carry out their own research on global environmental change. They collaborate with experts from other NGOs or research institutes. At best, they rely on studies by the State Committee of Hydrometeorology.

Russian environmental NGOs, on the whole, do not have the right to be involved in political decision-making. The Forest Stewardship Council and its Russian branch are an exception as they work, for example, with timber merchants to ensure compliance with international standards. In the Russian top-down system of government, there is no place for consultation, feedback, or the inclusion of ideas, suggestions or projects relating to environmental issues from NGOs or the public. Russian NGOs do not carry out their own

scientific research, but collaborate with experts from other NGOs or research institutes. Stakeholders are rarely involved.

Environmental NGOs prefer to work with local people, teaching them, for example, how to map resources to protect their immediate environment or to organise nursery gardens. In some respects, the tradition of *Khozdenie v narod* – going to the people to publicise a cause – is still alive. There are five types of environmental advocacy in Russian society:

- *neutral* – advising from a distance
- *aware* – advising with a comprehensive understanding of the issues
- *involved* – partly involved in resolving a problem
- *partner* – close collaboration with a local organisation or NGO
- *fully integrated* – advocates who have left their academic position and have become members of local organisations or NGOs (Yanitsky, 2005).

Environmental research in Russia

High interest in climate change in natural sciences, but not in social sciences

V.I. Vernadskii's (1865-1945) concept of the biosphere⁴ and his supposition that humanity had become a mighty geological force (Vernadskii, 1980) became the theoretical basis for studies of climate change in Russia. Later, in the early 1970s, Budyko (1977) introduced the energy-balanced climatic model of the Earth, which in turn became the basis for further investigations of global warming and greenhouse effects. Klimenko (2008: 93) calculated the world fuel balance and predicted that by the 2000s, average global temperatures would have increased by no more than 1 °C, lower than the increase predicted by the IPCC.

Today, research on climate change in Russia is still driven by natural scientists working on global challenges.⁵ There are funding channels from overseas and Russian foundations, local and regional governments, private sponsors and other sources, but only the government or international organisations have sufficient funds for climate change research on a global scale. This could be instigated by one of the international scientific organisations.

Climate change studies are conducted at the institutes of the Federal Service for Hydrometeorology and Monitoring of Environment (Roshydromet) of the Russian Academy of Sciences and at the Ministry of Civil Defence, Emergencies and Disaster Relief (EMERCOM). These institutions employ physical geographers as well as some human geographers and economists (see Box 19.1 and Box 19.2).

Social scientists in Russia, in contrast to natural scientists, have not paid attention to the problem of climate change. Indeed, it is the natural scientists, rather than social scientists, who initially revealed local social-ecological crises.

Universities have no faculties or departments to produce professional social ecologists, or specialists in the theory and practice of environmental sociology, and in particular global environmental change policy. Social ecology is still not well established or institutionalised as a separate discipline, nor does environmental sociology exist in the Ministry of Higher Education certifying commission's official list of humanities professions.

Social science research on environmental change today

WWF-Russia, one of the largest international NGOs in the country, began to comment on climate change issues in the early 2000s, but could not carry out independent research given the constraints of the Russian situation (see below). On the basis of research by Russian and foreign climatologists, some NGOs tried to estimate the economic consequences of global environmental change locally. However, businesses and most Russian people, especially in remote rural areas, are not concerned with these issues.

The political motto “First – stability, then – all the rest” has never been publicly articulated in Russia, but lies at the root of its *realpolitik*. Russia is gradually reverting to a state-controlled economy that aims to regulate the market in natural resources.

Some social science research has examined the impact of natural disasters on vulnerable groups in Russia, and shows that people tend to rely entirely on state support (Yanitsky, 2012). In the past decade, volunteers and others (NGOs, charities, concerned professionals, lay people and groups that have organised themselves via social media) have begun to help those affected by disasters and their immediate environment with the process of rehabilitation (Yanitsky, 2010). Research (Kostyushev, 2012: 9) shows that trust is a key indicator of the efficacy of rehabilitation, and that people will trust volunteers and neighbours most (4.3-4.2), then physicians and state rescuers (3.4-3.5), then the police, journalists and business people (2.9-2.8). They trust regional and local administrations least of all (2.4-2.1).

A community’s ability to adapt to increased risks depends on the availability of resources. A resourceful population might migrate to safer places, whereas poor people will have to stay put and rely on state aid. As the few studies of the consequences of forest and peat fires in Russia show, people adapt well in a material sense, as a result of state aid (providing, for instance, new houses and financial support). Psychologically, however, they suffer from the breakdown in human relations and the loss of their home environment, or “small Motherland” as participants in the studies called it (Yanitsky, 2012).

The case of sociology and climate change

Russian sociology examines many different kinds of social conflict, but ignores the growing struggle between nature and society. The apparent logic, for the Russian government, is that social development is based on resource extraction, primarily fossil fuel production, which means that environmental sociology languishes at the bottom of the research agenda. Russian environmental sociology focuses on socio-ecological conflicts and environmental movements, public participation to resolve local and regional environmental issues, risk research and studies on human ecology (Lemeshev, 1990; Khalyi, 2004; Yanitsky, 2010). Around ten environmental sociology research teams are based at different institutions such as the Russian Academy of Sciences, Moscow State University, the Higher School of Economics (State University) and some regional universities.

The large umbrella NGOs, such as WWF-Russia and Greenpeace Russia, also research these issues, but occasionally and in an ad hoc way. They also prefer to work independently as it is cheaper and quicker, and the results might be checked by the independent professionals with whom they collaborate or by citizens-turned-experts. This type of research is mainly small-scale, related to a specific conflict, or undertaken at the request of a local community.

Barriers to interdisciplinary research

Links across and between the social sciences are weak, in the same way that disciplinary and institutional links between the sciences, university faculties, state research and educational organisations and NGO research units are weak. Geographers are the exception, as some are leading politicians and public figures.

As soon as academics from different institutes and disciplines begin to form an interdisciplinary team to work on a joint research project, serious bureaucratic barriers are raised. Some academics therefore prefer to work for NGOs where they feel less constrained. It is far easier to organise multidisciplinary research on local environmental issues than on global problems such as climate change. Although the international flows of money, goods, people and information, and their socio-ecological metabolism in the biosphere, are among the most challenging problems of interdisciplinary research (Fisher-Kowalski, 1997), Russian social scientists (notably sociologists) do not consider them a priority.

Further barriers to interdisciplinary research

Trust is a key issue: natural scientists are wary of the work of social scientists, with the possible exception of historians, who have a much longer-term perspective (see e.g. Korotaev, Myalkov and Khalturina, 2005; Ionov, 2009) and use a holistic, crossdisciplinary approach in their work and database organisation – as do those working in archaeology and palaeontology, for example.

There are also clear institutional and interdisciplinary barriers between climatologists and social scientists: some disciplines see themselves as self-sufficient and therefore feel no need to collaborate with others. Their worldviews and research methods also differ.

Social scientists are equally wary of cooperating with each other. Divisions between disciplines have become institutionalised over time, and the grant system for funding research organisations contributes to this problem.

The pressures of the market economy mean that quick public opinion surveys are preferred to long-term analysis of the biosphere–humankind system.

Interdisciplinary research is promoted by environmental sociologists because the very object of their research, the biosphere, has a “hybrid nature” (Latour, 1998). The institutional systems that regulate society are, however, monodisciplinary. Russian research can be characterised as a collection of monodisciplinary articles or reports gathered, for example, in readers and textbooks. The monodisciplinary approach is seen as more efficient and economical; it can be more profitable when commissioned and funded by the private sector; it is politically safe because the results are academic rather than political.

Given the hybrid nature of climate change research, academics experience enormous difficulties from the start in the shape of the grant application process.⁶

As a result, there is interdisciplinary desk-based research and even field-based research on various ecological issues, but very little on global environmental issues. The main drivers of multidisciplinary research are those academics who support this type of research, such as eco-sociologists or sociologically inclined environmentalists. They only succeed up to a point – as academics, but not as politicians or public figures – because corporatism is the distinguishing feature of the state machinery and science.

Conclusion

The prevailing view of Russia's ruling elite that the environment – local, regional and global – is a resource to use and exploit rather than a shared living space is the main reason why Russian social scientists and other scholars lag behind in the study of global environmental change. It is not because of a lack of good data or database systems.

Looking to the future, policies aimed at the prevention of climate change must be based on isomorphism. If processes that impact on the climate are global in scale, policy needs to match this and be global in terms of its structure and function, including its aims, goals and practical efforts. Policy and politics must also be responsive to the challenges of nature and human beings. If the processes of global socio-ecological metabolism are durable over time and space, policy has to be prognostic; above all, win-win policies are essential.

The challenge will be to construct such a supporting network and to examine real possibilities for collaboration between the state, businesses, and a range of public and private actors interested in promoting such policies. It will also be important to increase the educational and research capacity of actors worldwide to contribute to sustainability, particularly in the form of global research projects and open training programmes. The Russian branch of the Forest Stewardship Council with its three chambers (social, economic and ecological) is a good example for future intersectoral and interdisciplinary research.

Global “socio-futurology” is still in its infancy, however. What we really need is to develop a global systemic world view – a full restructuring of a “body of science”. Are we prepared for such a transformation in our turbulent world?

Oleg Yanistky

Box 19.1. Economic studies of climate change in Russia

In Russia, economic issues related to climate change are primarily studied in the economic research institutions of the Russian Academy of Sciences, in the economic departments of the national universities, in special departments of Roshydromet, and in the Ministry of Civil Defence, Emergencies and Disaster Relief.

Most economic studies have focused for a long time on industrial greenhouse gas emissions, in view of the major role the energy sector plays in the Russian economy. Two more research areas have recently emerged: evaluating the impact of climate change on the economically active population (mostly human health), and the analysis of infrastructure and the cost of adaptation to climate change.

The first strand focuses on measuring losses caused by hazards and disasters such as storms, floods, wildfires and melting of the permafrost. Most of this damage is due to “creeping” impacts; “burning-type” disasters, such as storms, flash floods and hurricanes, make up less than 10% of the total. In terms of impact on its national economy, Russia is not likely to be among the nations worst affected by climate change. A comprehensive study produced in 2011 by a joint team of Russian Academy of Sciences economists and Roshydromet human geographers confirmed earlier findings, including those of international experts, that global warming may actually benefit a number of industries, such as agriculture, tourism and heating, and will generally provide a window of opportunity for future economic development (Kattsov and Porfiriev, 2011). Using this opportunity in practice is, however, a different story.

Box 19.1. Economic studies of climate change in Russia (cont.)

The second research area to emerge in recent years concerns adaptation to climate change. This tackles policies, economic actors – for example, the state, businesses and households – and the funds that are necessary to reduce hazards, disaster risks and other climate change impacts on communities and industries. The findings reveal that the Arctic region is the most vulnerable, and will be the most affected by climate change. Yet it is also likely to benefit from the windows of opportunity provided by global warming. It is expected to consume a significant part of future climate investment in order to develop infrastructure in the region by 2030.

Boris Porfiriev

Box 19.2. Geography and the study of climate change in Russia

Geographers are heavily involved in climate change studies conducted at numerous institutes of Roshydromet, of the Russian Academy of Sciences and at EMERCOM. The Roshydromet organisations have monitored global climate change by means of large databases compiled from observations for over 100 years at meteorological stations across Russia. They can therefore develop up-to-date mathematical models, and have done so annually since 1983. The results are published online⁷ and in Roshydromet's annual report on the state of the climate in Russia.⁸

Institutes of the Russian Academy of Sciences and leading state universities also explore climate change in various ways. Studies of the ice kernels from deep drilling at the Russian “Vostok” station in Antarctica, and direct observations at the North Pole stations in the Arctic Ocean, have led to conclusions of world importance (Petit et al., 1997). These institutes also assess the influence of climate change on populations, settlement systems and the economy.

Studies on climate change show that today Russia's climatic conditions are changing considerably, and that these trends will not alter in the next ten years. The changes are characterised by increasing temperatures in the cold seasons, increased evaporation despite similar or even decreasing rainfall during the warm season, more frequent droughts, changing river flows and altered glacial conditions in the Arctic Ocean basin. These tendencies have a considerable impact on living conditions and the social and economic processes of the country. For instance, rapid climate change has led to more frequent natural disasters – spring floods, mud flows, hurricanes and avalanches – which cause economic damage in the energy, agriculture, transportation and municipal economy sectors. In some regions, climate change has contributed to a decrease in heating demand, but in others it has increased it.

Studies of the impact of climate change on the population and economy, and on possible ways to adapt to this, integrate work by geographers as well as applied studies. New data received at the Institute of Geography of the Russian Academy of Sciences and at other geographical institutes in Moscow, Saint Petersburg and Syktyvkar show the impact of climate change on the Russian economy through the so-called “cascade effect”. The northern regions and mountains with decreasing populations are the most vulnerable. Global warming accelerates the destruction of their traditional economies and destroys their life support systems because thawing permafrost levels damage the foundations of the buildings and road infrastructure, and affect the water supply.

Arkady Tishkov

Notes

1. Yedinaya Rossiya (United Russia), a centrist political party, currently holds 238 of the 450 seats in the Duma (parliament).
2. An intergovernmental, mutual-security organisation founded in 2001 by the leaders of China, Kazakhstan, Kyrgyzstan, Russia, Tajikistan and Uzbekistan.
3. For example, the Implementation Plan of the Climate Doctrine of the Russian Federation (RF) (adopted by the RF Government on 25 April 2011), and the Basic Principles of the State Policy in the Field of Environmental Development of the Russian Federation until 2030 (adopted by the RF President on 30 April 2012).
4. The biosphere, or planet Earth, is a global ecological system integrating all living beings and their relationships with one another.
5. Including geographers, who are considered natural scientists in Russia.
6. A number of international and national funding agencies do, however, fund multidisciplinary research. The government's Rossiiskii Fond Fundamental'nykh Issledovaniy (the Russian Foundation for Basic Research) is the main national agency that does so.
7. www.climatechange.ru.
8. www.meteorf.ru.

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From:
World Social Science Report 2013
Changing Global Environments

Access the complete publication at:
<https://doi.org/10.1787/9789264203419-en>

Please cite this chapter as:

Yanitsky, Oleg, Boris Porfiriev and Arkady Tishkov (2013), "The state of social sciences and global environmental change in Russia", in International Social Science Council/United Nations Educational, Scientific and Cultural Organization, *World Social Science Report 2013: Changing Global Environments*, OECD Publishing, Paris/Unesco Publishing, Paris.

DOI: <https://doi.org/10.1787/9789264203419-23-en>

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