

# A b s t r a c t s

## **The Green Book** **Political Ecology in Europe's East**

Daniel Hausknost

Frenzied Standstill

The Simulated Revolution in Sustainability

Commitments to a sustainable form of civilisation are becoming more insistent. Politicians of all stripes eloquently express their opposition to climate change. Nonetheless, pleas for sustainability and radical change are followed by insufficient action. Indicators such as the "ecological footprint", which measures human consumption of the earth's bio-capacity, are pointing in the wrong direction. Political systems in the East and the West have so far proven incapable of meeting the greatest challenge of our day: the transition from the fossil fuel to the post fossil fuel era. Mankind must re-construe its entire system of reproduction and its metabolism.

Dietrich Böhler

Common Future – Shared Responsibility

The Timeliness of Hans Jonas

In his work, Hans Jonas, an engaged thinker sensitive to the times, reconstructed the self-affirmation and intrinsic value of organic life. Jonas sensed with "fear and trembling" the environmentally destructive consequences not only of high technology but of the mechanized way of life. Jonas pit The Imperative of Responsibility against both the claim to absolute truth and the underlying displacement of a practical, morally binding reason by mere technical rationality. Our everyday behaviour in the risk society can and should be oriented along these lines.

### **Definition of Nature and Environmental History**

Julia Obertreis

The "Attack on the Desert" in Central Asia

On the Environmental History of the Soviet Union

There are several approaches to writing an environmental history of the Soviet Union. The cult of technology, a specific understanding of progress and infrastructure policy would all have to be considered together. This makes it possible to reconstruct cotton cultivation and irrigation policy in Turkmenistan and Uzbekistan. The 1950s and 1960s seem to be the key phase of a radical modernity that quickly caused ecological and economic damage, but also brought about a discussion of environmental issues in the Soviet Union.

Alla Bolotova

The Geologists: Colonists around the Camp Fire

Self-Image and the Understanding of Nature in the Soviet Union

Soviet society's relationship to nature crystallised in the image of the geologist. In the early years of the Soviet Union, the geologist was considered a hero who made man master over nature. But there was little in the way of revolutionary romanticism when, under Stalin, mostly prisoners were sent on expeditions to the taiga and tundra. In the late Soviet era, classical concepts of nature involving beauty and freedom played a large role. Geologists played a key role in Soviet industrialisation policy and were at the same time the germ cell of a dissident consciousness. This ambivalent legacy lives on in post-Soviet utilitarianism as well as the new Russian ecological movement.

Andreas Guski

The Victims' Voices

On the Handling of Disasters in Russia

Many cultures know the victim as a religious category. With secularisation, the term retreated into the judicial realm. In Russia, there was hardly any room for a public debate and discourse about the victim to unfold. Especially those environmental disasters that could be traced back to natural and social causes were concealed and played down under the tsars and the Soviet regime. Under President Vladimir Putin, this practice continued. But today, the individual voices of disaster victims are making themselves heard through the digital media.

Felix Philipp Ingold

Natural Expanse and an Empire's View of the World

Reflections on Russian Meta-Geography

Even after the collapse of the Soviet Union, the Russian Federation comprises the world's largest state. The breadth of this space and the Russian character have merged into an inalienable premise of the "Russian idea" and have given rise to numerous metaphors. Since the dispute between the Slavophiles and the Westernisers at the latest, this has set in motion an enduring, meta-geographical discourse in Russia that involves many voices and serves primarily to further national self-assurance.

Vera Meyer

Idyll – Commodity – Eco-System

The Forest in Russian Literature

The forest is a central motif of Russian literature. It reflects concepts of the relationship between man and nature typical to a particular era. In the first half of the 19th century, the forest was the place for individual self-discovery. In addition, the forest itself becomes an individual, as it were. From this evolves an understanding for ecology, which in literature, however, only achieves a breakthrough when the emerging capitalist order turns the forest into a commodity and then an object of a ruthless over-exploitation. Although the Socialist novel celebrates the appropriation of the forest as a metaphor for the collective, the topic of protecting the forest does not disappear from literature. Official works supporting the Stalinist re-forestation campaign and critical novels from the Brezhnev era criticise the destruction of the forest.

## Over-Exploitation of Resources and Pollution

Aleksei Iaroshenko

### The Attack on the Green Lung

#### Forestry in the Russian Taiga

One fourth of the world's forest areas are in Russia. Of these, one third is used in forestry. The forest resources in the best areas have been exhausted, because more is cut down than replanted. Pressure is growing to release valuable primeval forest for exploitation. Illegal logging is a serious problem. At least 25 percent of official logging is felled illegally. This is abetted by the consequences of bureaucratic restructuring. Since 2005, the forests have been de facto without supervision, the powers of supervisory agencies are rife with contradictions, and the forest fire prevention is insufficient. The forest eco-system is in danger.

Regine Richter, Karsten Smid

### The Over-Exploitation of Nature

#### Oil Production in Western Siberia and off Sakhalin

Oil production in Russia has had devastating consequences for the environment. Antiquated production facilities and leaky pipelines mean that hundreds of thousands of tons of crude oil seep into the Russian soil and contaminate rivers, lakes and groundwater. Construction work on the drilling rig near Sakhalin poses a threat to the last of the Pacific grey whales. Although oil companies profit enormously from oil production, neither they, nor the governments in Russia and the West are doing anything to stop the destruction of nature.

Michael Bradshaw

### No Smoke without Fire

#### Conflicts Over Oil and Gas Production at Sakhalin II

An international consortium under the leadership of Shell was trying to exploit the world's largest integrated gas and oil reserve near Sakhalin Island. Non-governmental organisations around the world mobilised to stop international financial institutions from providing credit for Sakhalin II. They said the project violated basic environmental requirements. The environmentalists suddenly found support in Russia's government. It revoked the Sakhalin Energy consortium's environmental licence. But this could be a Pyrrhic victory. There is no indication that the consortium – now controlled by Gazprom – will give greater attention to protecting the environment than international investors.

Jörg Stadelbauer

### Mining Gold in Kyrgyzstan

#### Environmental Threat and Economic Necessity

International companies mine gold in Kyrgyzstan. Gold mining is an important factor for Kyrgyzstan's national economy and state budget. But mining gold can also become an environmental burden – as a cyanide accident ten years ago showed. The operating companies, the state and the population must come to an arrangement that takes into account all conflicting interests.

Artem Ermilov

### Nuclear Testing, Uranium Extraction and the Oil Industry

#### Radiation Contamination and Radiation Protection in Kazakhstan

In Kazakhstan, large parts of the country are contaminated by radiation. In a territory of ca. 350,000 square km, where more than 1 million people live, radiation contamination is clearly high. The radio-ecological situation is therefore an important factor in the social and economic development of Central Asian countries. In providing adequate protection from radiation, it is crucial that the field of vision is not limited to the nuclear testing site in Semipalatinsk and the decommissioned fast breeder reactor near Aktau. Radioactive contaminated waste from uranium mining and radiation contamination from oil extraction pose the greatest danger.

Vladimir Chuprov

### The Enrichment Problem

#### Russia's Imports of Uranium Hexafluoride

Each year, thousands of tonnes of radioactive and highly toxic uranium hexafluoride accumulate during the enrichment of uranium. This nuclear waste is one of the nuclear industry's unsolved problems. But Russia has stepped forward as saviour: It considers uranium hexafluoride a resource to be used in fast breeder reactors. These reactors, however, would first have to be built in large numbers. That is unrealistic, because breeder technology has yet to mature; most states have thus dismissed it. Nonetheless, Russia is importing uranium hexafluoride and will have to pay for the expensive process of disposing of it. Aside from the dangers entailed in transporting and storing this dangerous material, a financial fiasco is looming, because no sufficient surplus funds for disposing of the remaining nuclear waste can be built up from the income for processing the material.

## **Energy and Climate Policy**

Martin Konečný, Ketí Medarova-Bergström

### Heading Wrong

#### EU Cohesion Policy to the Detriment of the Climate and Environment

The financial framework to 2013 behind the European Union's cohesion policy was a unique opportunity to lead new member states in Eastern Central Europe towards an environmentally friendly path of development. But analysis of the EU fund and the member state's plans shows that only a small fraction of the subsidies are going to energy efficiency, renewable energy and ecologically sustainable mobility. The traffic sector ranks among the fastest growing causes of greenhouse gases. In spite of this, the EU is investing in road and highway construction and thus undermining its own efforts to bring about a turnaround in climate and traffic policies.

Jörg Stadelbauer

### Russia and Global Climate Change

#### Repercussions, Models and Scenarios

Climate change presents Russia with enormous challenges. According to a moderate scenario, the country's landscape zones will shift. The advantages and disadvantages for agriculture will maintain a balance. The retreat of the permafrost zone is more threatening. This will release additional carbon dioxide and methane into the atmos-

phere. Infrastructure will also be at risk. Additional costs for construction and maintenance are to be expected. Russia's political and business leaders have so far failed to give the explosive nature of this problem the attention it needs.

Tobias Münchmeyer

#### "Less Money for Fur Coats"

##### Ignorance and Arrogance in Russian Climate Policy

There was one good thing about the collapse of the Soviet economy: Afterwards, Russia was able to produce an excellent climate record, because greenhouse gas emissions fell dramatically. But it cannot be said that Russia is a paragon of virtue in climate policy. After the United States and China, Russia is the world's third-largest producer of greenhouse gases; the national economy is extremely energy intensive and produces more CO<sub>2</sub> than hardly anybody else. In politics and society, knowledge about climate change is astonishingly poor. The myth that Russia profits from climate change is widespread. The negative consequences and material costs are already to be felt today. One of the central international challenges is to win over Russia as an active partner for global climate protection.

Iryna Stavchuk

#### Ukraine: A Double Change in Climate

##### Reducing Greenhouse Gasses, Increasing Knowledge

Ukraine is among the top 20 largest producers of greenhouse gasses. The national economy is inefficient, the amount of energy wasted enormous. Scientific expertise for addressing the consequences is hardly available; awareness among political class and the general public is poorly developed. This offers non-government organisations solid starting points for their work. At the state and grass-roots level, the climate is changing: There is growing sensitivity to the fact that Ukraine must also make a contribution to reducing greenhouse gasses in order to fight climate change.

Jens Boysen

#### Renewables on the eve of a Breakthrough?

##### The Energy Situation in East-Central and Southeastern Europe

Climate protection and energy supply security are the key requirements for a sustainable energy policy. The solution is the expansion of renewable forms of energy and an increase in energy efficiency. EU countries recognize this and have agreed to reduce greenhouse exhausts and to increase the share of renewables. The East European member states are to work on this as well. The Baltic and Southeast European states already have a high share of renewable forms of energy. In Poland, however, coal is still high in demand as is nuclear energy in the Czech Republic and Slovakia. Potentials could be better realised only if countries change their priorities for subsidies.

Grzegorz Wiśniewski

#### Green Evolution

##### Perspectives for Renewable Energy in Poland

Poland's highest energy policy goal is limited dependency on energy imports. But domestic coal is irreconcilable with climate protection. The solution is renewable energy. Poland has committed itself to increasing its use of renewable energy to 15 per-

cent of energy consumption by 2020. Renewable energies have been receiving support since 2001. But up to now, too little has happened. Above all, investment was supposed to flow into the production of "green" electricity from bio-mass, wind and sunlight. Given the long-term advantages, the high investment costs of around €15 billion are justifiable.

Aleksei Grigor'ev, Vladimir Chuprov

#### Energy Dwarf Russia

##### Renewable Energies in the Land of Unrealised Potential

The potential is gigantic, but it is far from exhausted: Renewable energies play almost no role in the production of electricity and heating in Russia. This is because, for one, there is an abundance wealth in fossil fuels, and because the available infrastructure does not make it seem necessary to reconsider energy policy. Furthermore, the principle of decentralised supply, on which renewable forms of energy are based, is alien to Russia's centralised political thinking. Russia's energy supply has nothing to do with economic and ecological sustainability.

Manana Kochladze

#### Tradition before Innovation

##### Electricity Production and Energy Policy in Georgia

Georgia has survived the energy crisis that followed the collapse of the Soviet Union. But due to high energy prices and an outdated distribution network, not everybody has access to enough electricity and gas. Although the country has enormous potential for using renewable forms of energy and could provide the entire population with clean, cheap electricity, the government is building gigantic dams instead of small decentralised hydro-electric facilities, wind parks and solar power stations. The international community, on whose money and expertise the development of renewable energy in Georgia depends, is sending mixed signals.

Michael Krug

#### Impetus for Sustainability

##### Energy Supply in Kaliningrad

Kaliningrad Oblast is one of Russia's most dynamic regions. Energy consumption is steadily growing. Scenarios predict further growth in consumption. But the supply of the exclave with electricity and heating is characterized by dependency and shortages. Instead of improving efficiency in power generation and energy use, and thus pursuing an ecologically sustainable supply of energy, the oblast administration is counting on the expansion of production capacity through nuclear power or ecologically dubious sources of energy such as coal and peat. A project subsidised by the European Union is trying to give impetus to the development of a sustainable supply of energy on the regional and communal level. Front and centre are the efficient generation and distribution of power and the rational use of energy.

Lutz Mez, Mycle Schneider

#### The Myth of Rebirth

##### Nuclear Energy in the 21<sup>st</sup> Century

Talk of a nuclear power renaissance is making the rounds. There are 439 nuclear power plants in operation in 31 countries. They account for 16 percent of global electricity production. That is less than the contribution made by renewable forms of en-

ergy. The United States, France, Japan and Germany account for two thirds of nuclear power plant performance, threshold and developing countries make up 4 percent. Over 300 reactors will have to be replaced by 2030, in order to maintain today's nuclear power plant performance. Due to aged personnel, a lack of training capacity and production shortages, the industry faces problems that can hardly be overcome. Due to the liberalisation of the electricity industry, new nuclear power plants can hardly be financed. The alleged advantage in climate protection is also questionable. In Europe at least, the renaissance of nuclear power is a myth.

Vladimir Sliviak

Time to Shut Down

Russia's Unrealistic Nuclear Plans

After two decades of stagnation, Russia's nuclear energy industry has announced its rebirth. This even seems possible in financial terms, because revenues from the oil industry are flooding the state budget. But there are numerous hurdles standing in the way of the atom's renaissance. A lack of capacity for building new facilities is the least of them. A much greater problem is the nuclear industry's tremendous amount of waste, for which there is no convincing concept of disposal. This is also the reason why the construction of new nuclear power plants will meet with considerable resistance from society. Even in authoritarian ruled Russia, it will be impossible to ignore this opposition.

### **Traffic Policy**

Weert Canzler, Andreas Knie

On the Road

Trends in Passenger and Freight Traffic in Eastern Europe

As a transport carrier, the road will in future also dominate in Eastern Europe. The amount of traffic and the choice of means of transportation used will follow the North American and West European pattern. This catch up effort in modernisation and growth in prosperity will lead to an increase in automobile traffic and with that to new infrastructure and environmental burdens as well. Only Russian freight transport will provide an exception. It will double by 2020, but that will take place primarily on the railroad.

Viktoriiia Bitiukova, Ekaterina Sokolova

On the Brink of Collapse

Moscow's Tangled Traffic

Moscow is choking on its own traffic. The rapid increase in the number of cars in the city has led to the complete overuse of roads. The consequence is extremely high air pollution. On top of that, there is the noise and contamination of the soil with heavy metals. The situation is being exacerbated by hyper-centralisation and an unfavourable road network. The arterial roads that radiate from the centre in the form of a star are connected by a few rings. This creates long distances, especially where rails or industrial areas stand in the way. But instead of strengthening the local public transport, the city is building more and more roads, which are just as quickly packed with even more autos. Traffic planners have not even turned their back on the ring system.

Helen Byron, Małgorzata Górška

#### Collision in the Rospuda Valley

Poland: Nature and Traffic in Conflict

The construction of the Via Baltica, which links Warsaw and Helsinki, is controversial in Poland. Environmentalists are protesting the government's plans to run the Via Baltica through several nature reserves. Noise and pollution from the ensuing traffic would inflict enormous damage on animals, plants and natural habitats. The dispute over the course of the Via Baltica is a precedence case. It will show whether traffic and environmental policy interests can be reconciled, and whether the EU is strong enough to assert environmental law in the face of Polish government resistance.

Erich Forster, Armin Engler, Alexandra Krones

#### Making Tracks for the Railroad

Austrian Federal Railways and Cross-Border Passenger Traffic

Since the fall of the Iron Curtain, cross-border railroad traffic between Austria and its eastern and south-eastern neighbours has grown in leaps and bounds. Austrian Federal Railways (Österreichische Bundesbahnen) has expanded old local and long-distance rail lines, opened new ones, invested in infrastructure and technology and – by means of an intelligent price policy — won new customers in the East and the West. All of this brings more passengers and environmental advantages, and along the way, it helps Europe grow together.

### **Environmental Approaches**

Jochen Lamp

#### The Baltic Sea Gas Pipeline

A Transnational Infrastructure Project as Touchstone for International Environmental Standards

The Baltic Sea gas pipeline as planned by the company Nord Stream is not only politically controversial. It is also an environmental challenge. Environmental damage can result from crossing protected area or producing major changes in the seabed. The risk of sites contaminated by munitions and chemicals on the floor of the Baltic Sea has also yet to be clarified. Before the construction of the pipeline, a cross-border environmental impact assessment is to be carried out according to the Espoo Convention. This process will provide a high degree of transparency. Whether the results of the study will be comprehensible and eventual environmental objections will lead to consequences remains open. There is reason for scepticism, since supply lines and production works for the pipeline are already being built even though the environmental report has yet to be submitted.

Dorota Metera

#### Growth Market

Organic Farming in Poland

Poland is one of Europe's large agrarian states. Because Polish small-scale agriculture is comparatively under-industrialised, the land there has largely been spared the grave consequences of conventional agriculture such as ground acidification, drinking water pollution and reduction of biodiversity. It is also why less attention has been

given to organic farming than, for example, in Germany. Nonetheless, the number of enterprises running organically controlled farms is increasing, and more and more organic food products are making their way to market.

Inna Rudenko, Ulrike Grote, John P.A. Lamers, Christopher Martius

#### Add Value, Save Water

##### Increasing Efficiency in the Uzbekistan Cotton Sector

Cotton cultivation in Central Asia is one of the most important causes for one of the most devastating manmade environmental catastrophes ever: the drying up of the Aral Sea. The ecological situation can only be improved if this takes place without economic losses. The Uzbek cotton region Khorezm shows that this is possible. Water and land use can be reduced by more than two thirds without a decline in income. For this to happen, the creation of value by processing cotton on site and the export of high-quality manufactures must be increased.

Martin Müller

#### Protected Areas in Russia

##### Catalysts for Sustainable Development?

Protected zones are supposed to conserve nature and to promote economically and socially sustainable development. Since the 1990s, administrators in Russia's protected areas have been engaged in environmental education and tourism. The integration of the local population in managing the protected area is growing in importance. However, administrative reforms under Vladimir Putin have devalued the status of protected areas. They must prove themselves as economic undertakings and are increasingly coming under pressure to be developed economically.

Antonina Kuliasova

#### Russia's Global Forest

##### Forest Certification as Protection from Over-Felling

Globalisation has reached the taiga. Wood from the boreal forests of Russia is a highly sought after good on the global market. Where the state is weak and corruption flourishes, one-of-a-kind primeval forests are threatened by over-felling. However, the opening of borders also has positive aspects. Multinational lumbering corporations are under observation by international NGOs. Many of their customers purchase wood only if it can be shown by a certificate that ecological and social sustainability was guaranteed in the felling of trees. Forest certification not only serves to protect nature, it strengthens civil society in Russia.

Geir Hønneland

#### Cooperation in the Barents Sea

##### Environmental Protection between Russia and Norway

In the Barents region, Norway and Russia are in conflict over ecological issues. This involves fishing quotas and fishing equipment, the over-fishing of Atlantic cod, the clean up of radioactive waste left on the Kola Peninsula by the Soviet Northern Fleet, CO<sub>2</sub> emissions and nuclear safety. In order to regulate these conflicts, both countries are

working at the bilateral level and in transnational forums such as the Euro-Arctic Barents Region. The results of such cross-border environmental protection efforts have been quite modest. The erratic actions of the Russian environmental authority and its break up under Vladimir Putin both limit environmentalists' ability to act and weaken cooperation.

Anna Małgorzata Ehrke

The Market, the Environment and the Image

Chemical Industry in Poland and Ukraine

The chemical industry in Poland and Ukraine is associated with environmental transgressions. But the environmental burdens created by this industry have decreased since 1989. In Ukraine, this was the consequence of economic crisis. In Poland, it was due to EU accession. Since then, stricter environmental standards have been in force in several fields. In order to meet these standards, companies have to invest in environmental technology. The market also offers incentives for environmentally sound behaviour. Environmental engagement is good for the image. But at the same time, the chemical industry bristles at too much transparency and stricter limits. To this day, sustainability is still a non-issue.

Aleksandr Gnedov

Tonnes for the Bin

Waste Industry in Belarus

The accumulation of waste in Eastern Europe is growing. Although the per capita municipal waste is still clearly less than in Western Europe, the difference is getting smaller. In Belarus, municipal waste is exclusively stored at disposal sites; there are no garbage incineration facilities. Many disposal sites do not meet modern environmental requirements. They lack, for example, waterproofing that keeps seepage containing heavy metals from reaching the groundwater. Waste separation hardly takes place either. Recyclable containers and yellow sacks are rare; the system of raw material collection works more poorly than properly. If the new waste law, which came into force in 2008, is well implemented, improvement is in sight.

Christina Gehrlein

Waste Connection

Environmental Partnership between Sumgait and Ludwigshafen

The city of Sumgait in Azerbaijan is one of the most polluted places in the world. Until five years ago, the face of the city was marked by puddles of oil and mercury and improvised waste disposal sites. Large areas had been contaminated by the Soviet chemical industry. With the help of partner city Ludwigshafen, Sumgait began systematically registering these areas in 2003, cleaning them up, disposing of waste in better fashion and making the population more sensitive to protecting the environment – with success. Although many problems remain unsolved, Sumgait is now considered an example from which other cities in the region can learn.