



Organization for Security and Co-operation in Europe

The Security Implications of Climate Change in the OSCE Region

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The effects in Central Asia, including Kyrgyzstan where I work, of global warming or climate change – the two terms get increasingly used interchangeably – are graphic. The symptoms, familiar to most of you, are replicated in many other mountainous countries like Kyrgyzstan, which have a continental climate of hot summers and cold winters: greater extremes of weather, glacier loss, water scarcity, the destruction of entire ecosystems and of arable land.

Indeed, research-based predictions for climate change in Kyrgyzstan are dire. Average annual warming is forecast before 2100 at between 1.8 and 4.9 °C and annual precipitation between -6 % and 54%, according to assessments given in Kyrgyzstan's first and second "National Communications" to the UN Framework Convention on Climate Change. Such significant changes will inevitably have a profound impact on habitat and thus human economic and social life.

However it is on the potential security consequences of such unwelcome developments that I have been asked to speak.

It has to be said at the outset that Kyrgyzstan is not a significant contributor to global warming. It is not a major industrial producer nor big emitter of green house gases. It is the victim rather than the perpetrator of global warming. And yet it is not entirely faultless. As in many countries, illegal logging, deforestation, overgrazing, poor land rotation, water wastage, and under-investment in environmental protection compound the problems caused by global warming.

The combined impact of the illustrative symptoms and aggravating practices I have given is manifold. I would simplify that impact under 6 headings: conflict, migration, food security, human welfare, economic and (the surprise in the box) terrorism.

The potential for dispute, tension and even armed conflict, arising from pressure on scarce water and land resources, is real. Such friction can take the form of internal, inter-communal, localized conflict and, where trans-boundary water-flow is at stake as is the case in Central Asia, international dispute between upstream and downstream nations. Both these levels of friction are already apparent regarding Kyrgyzstan's water resources.

Water is a pivotal factor in Kyrgyzstan and wider Central Asia. Most of Kyrgyzstan's rivers are snow and glacier-fed. From 1973-2000 total river flow actually increased by 6.3% compared to the previous comparable period. At present, Kyrgyzstan uses not more than 10 km³ of water for its own needs. And calculations for 2100 show that water consumption will not exceed 20 km³, regardless of the level of development. However the outlook is not as bright as these figures suggest. As a consequence of forecast climate change, the total annual water flow is expected to fall with the increased loss of small glaciers in Kyrgyzstan ; the seasonal distribution of surface water-flow to change and reduce during the hottest period i.e. the periods of maximum demand ; and annual fluctuations in water-flows to increase.

The competition for these scarce or even lost water resources present difficult choices for affected inhabitants. To eek out a living or to move elsewhere? Sometimes the choice will be more stark. To move or starve ? Thus the momentum of involuntary migration builds. The knock-on effect of depopulated rural areas does not necessarily ease the problems for those who choose to remain (or have no other option) since the smaller residual communities can render Government and other facilities, such as schools and clinics, operationally and financially "uneconomic". Equally, the rural influx into the larger conurbations imposes unforeseen economic, infrastructural, social and health burdens on urban municipalities.

At present, Kyrgyzstan's population density of 26 persons per sq km is not high by global standards. 65% of the country's 5.2 million population live in rural areas. However, internal migration and overseas migration is already high. Over 25 % of the adult population, and maybe even twice this figure, work abroad. Climate change and increased risks from emergency natural disasters is expected to swell the numbers of "climatic" migrants. One of the decisions of the 17th OSCE EEF, held in Athens in May 2009, was to focus on the problems of environmental migration in Central Asia (the OCEEA-led project is expected to be implemented in 2010). Attention will be given to the development of preventive measures and raising the economic sustainability of the most vulnerable communities, living in areas prone to natural disasters.

Indeed, the incidence of natural disasters has accelerated during the past 10 years in all regions of Kyrgyzstan, but especially in the South. The increased intensity and duration of precipitation has caused a greater number and severity of landslides, mudflows and snow avalanches. The estimated damage for the period 1986 to 2005 is put at US\$10 million annually. State resources are stretched in coping with disasters alongside precautionary and preventive measures. For an essentially agricultural economy such as Kyrgyzstan, the economic impact of ecological damage on national GDP and foreign inward investment is dramatic.

Some of the consequences of biodiversity loss are less obvious. The Mountains of Central Asia form one of the world's biodiversity hotspots. The region represents one of the richest and most threatened reservoirs of plant and animal life on Earth. However, the region's unique biodiversity is under considerable pressure. As I recently wrote in a letter to potential philanthropic donors in support of Kyrgyzstan's seed conservation programme: "the destruction of habitats through the intensification of agriculture, deforestation, mining and construction, currently threatens over 400 vulnerable plant species, many of which are found nowhere else in the world. In addition, climate change threatens the rapid acceleration of species extinction, risking entire ecosystems and the economic and human development of the country. Over half of Kyrgyzstan's native plant species are used for agricultural, medicinal and economic purposes, forming a central component of the country's natural resources. As a result, the protection of the flora of the country is critical not only for global conservation efforts, but also for national economic and social development."

Evidence shows that vacated, inhospitable lands, or “badlands” to use the apt phrase, can become potential safe-havens for terrorists as well as smuggling routes of, for example, drugs from Afghanistan, illegal migration and the trafficking of human beings. In my own work experience, I have seen such developments evolve in the Saharan belt, the border regions of Pakistan and Afghanistan and in the Horn of Africa. It is not a flight of fantasy to suggest areas within Central Asia could present the same challenges. I reflected on this a great deal on a visit a fortnight ago to the southwestern province of Batken in Kyrgyzstan. Batken lacks water resources and neighbours Uzbekistan’s Fergana Valley and the Kokand region of Tajikistan, both of which have been historically epicenters of islamic extremism. Batken is increasingly a source of security concern to Kyrgyzstan, Uzbekistan and Tajikistan.

So where does this all leave us and what can we do?

The Government of Kyrgyzstan is fully aware of the impact of climate change. Kyrgyzstan joined the UN Framework Convention on Climate Change in January 2000. It signaled its intent to meet its obligations in its first report (or National Communication) to the UN in 2003. Climate modeling and the methodology of greenhouse gases (GHG) were embraced. For the first time, the results of the GHG inventory for the period 1990-2000 and a national ecological risk evaluation were presented. Measures to adapt and reduce greenhouse gases were developed. A matrix of costed, strategic actions was formulated.

The Kyrgyz Government’s subsequent measures and ratification of the Kyoto Protocol in 2003 reinforced national economic management based on the concept of “clean development”. Kyrgyzstan’s Second National Communication to the UN in 2008 underlined the principles of sustainability within economic development and the current relevance of climate change, which is captured in the Government’s Concept of Environmental Security until 2020.

Nevertheless, as the UN noted in its 2008 report on Kyrgyzstan progress towards the UN millennium development goals (MDGs), “State financing for environmental protection is insufficient”. The report also noted that “the current system of environmental monitoring does not meet modern requirements” and “the number of environmental components subject to monitoring has dramatically decreased.....the State registration of emissions is based only on data collected by businesses.”

Clearly much work in mitigating climate change lies ahead for all countries, including the Central Asian Republics. The repertoire of preventive measures, on which time does not allow me to expand here, includes strengthening:

Environmental awareness

Environmental Protection measures

Disaster preparedness and mitigation

Economic growth in vulnerable areas

Energy efficiency

The development of energy renewable sources

Alternatives to thermal power plants

Infrastructural modernization

Greater State priority and investment in environmental protection

Regional cooperation, notably on ecosystem management and finding durable solutions in balancing the needs of irrigation, energy and economic productivity with sustainable environmental practices

The enhancement and creation of trans-boundary mechanisms such as intergovernmental water commissions, of which the Chui-Talas water commission, operated jointly by Kazakhstan and Kyrgyzstan and supported by the OSCE, is a shining example.

We at the OSCE Centre in Bishkek, and in conjunction with the OSCE's Office for the Coordination of Economic and Environmental Affairs, work on a number of these measures with local partners, Governmental and non-Governmental. We vigorously promote environmental awareness through training, workshops and educational aspects, in particular utilising the national Aarhus Centre, based in Osh. We work closely and support the Ministry of Emergency Situations with preventive measures, training and equipment and civic disaster preparedness. We focus our attention on supporting business and economic growth in vulnerable areas. We lobby for and showcase renewable energy. We have successfully concluded a waste management programme in 3 Provincial capitals, which contributes in part to the reduction of CO2 emissions. We are currently working with OCEEA on a possible extra-budgetary funded project that would monitor glacier melt in Kyrgyzstan and Tajikistan as well as the environmental migration project I mentioned earlier. And last but by no means least we support a number of projects at local level within Kyrgyzstan, which address potential conflict over water management.