



## Crunch time for Kyoto

Only Russia can rescue the global agreement on climate change. So why aren't Russian climate scientists speaking up? Quirin Schiermeier and Bryon MacWilliams report from Moscow.



Reach for the seatbelt in a Moscow taxicab, and you are likely to be reprimanded by the driver. “We’re in Russia,” he might say — his way of letting you know he feels insulted by your low regard for his driving skills.

Although the cabbie’s attitude may surprise first-time visitors, it’s old hat to David King, chief scientific adviser to the British government. King is well aware that attitudes in this former superpower are heavily influenced by its dented pride and need for respect.

Yet even he was taken aback at a recent Moscow summit with Russian climate researchers. King and a delegation of British experts had come to the 7 July workshop at the invitation of the Russian Academy of Sciences. But it soon became clear that the agenda had been hijacked by some of Russia’s most vocal critics of the Kyoto Protocol on climate change, the international agreement to reduce global warming, which Russia has yet to ratify. The UK delegates reacted with dismay as several unscheduled speakers got

up to state that man-made global warming was a myth.

King remains diplomatic. “I am very disappointed that this event wasn’t as successful as it should have been,” he told *Nature*. Michael Grubb, a climate-change expert at Imperial College London and a member of the UK delegation, is more blunt. “We walked into a trap,” he says.

That a small group of treaty-objectors could co-opt a high-level scientific meeting illustrates Russia’s unusual situation. Unlike Europe and the United States, where most scientists strongly support efforts to limit greenhouse-gas emissions, Russia is under virtually no pressure from its scientific community to take steps to avert climate change. While the majority remains silent, a small group within the Russian Academy of Sciences speaks with nationalistic fervour about the need to avoid restrictions on the Russian economy. In post-soviet Russia, where economic hardship and growing nationalism are everyday realities, it is difficult for anyone to speak out against them.

The Kyoto agreement, drafted in 1997, requires industrialized countries to cut their greenhouse-gas emissions to 5% below 1990 levels by 2012. It has been ratified or accepted by 124 countries, which collectively account for 44% of the industrialized world’s emissions. But 55% is needed for the treaty to take effect, and, after the United States withdrew its support in 2001, Russia, with its 17.5% share of emissions, became the treaty’s last remaining hope.

### Doing a deal

President Vladimir Putin’s statements on the matter have been ambiguous. In May he told European Union leaders that he might be willing to sign in exchange for their support of Russia’s application for membership of the World Trade Organization. But neither Putin nor his ministers have shown any real enthusiasm for the treaty beyond its use as a negotiating tool, and it now seems that a handful of anti-treaty Russian scientists and economists are busy in the background setting the stage for the Kremlin ultimately to reject it.

A. NATRUSKIN/REUTERS



Meltdown? Yuri Izrael (far left, with President Putin) and other powerful voices in the Russian Academy of Sciences (above) oppose Russian ratification of the Kyoto Protocol.

Two powerful advisers to Putin are spearheading this opposition. One is Yuri Izrael, the 74-year-old director of the Moscow-based Institute of Global Climate and Ecology. His age and political leanings have led some of his opponents to call him a “fossil communist fighting for fossil fuel”. The other is Andrei Illarionov, 40, Putin’s top economic adviser and a staunch opponent of any government interference in the economy.

### Economic argument

While Izrael says he opposes the Kyoto Protocol mainly on scientific grounds, Illarionov argues that it threatens Russia’s wealth and development. He says that Russia’s rapidly growing economy will soon produce more emissions than the treaty allows, forcing it to buy emission rights on the international market. And as the world’s largest greenhouse polluter, the United States, has backed out despite its much stronger economy, it is even more unreasonable to expect Russia to sign the Kyoto treaty, Illarionov argues.

Observers worry that Putin will find this argument persuasive. Illarionov’s influence is thought to be extensive, and even his critics admit that he is an eloquent and sharp-witted lobbyist with a solid understanding of science. “Not many countries have such an intelligent expert dealing with climate issues at this high level,” says Grubb.

Now the Russian Academy of Sciences has

been drawn into the fray. Izrael, a prominent academy member, was accused of stage-managing last year’s World Climate Change Conference in Moscow to promote his agenda (see *Nature* 423, 792; 2003). Shortly after the conference, Putin asked the academy to reassess the risk of man-made climate change and the effectiveness of the Kyoto Protocol.

Observers considered the move to be politically motivated, as all the key scientific issues had already been addressed in great detail by the Intergovernmental Panel on Climate Change (IPCC), of which Izrael is a vice-president. The last IPCC report in 2001, *Climate Change 2001: The Scientific Basis*, quoted extensive evidence that anthropogenic greenhouse warming is real and could dangerously alter the climate.

But Izrael has challenged this finding. In May, he put out a two-page memorandum based on a series of meetings with selected academy members that claimed “a high level of uncertainty as to whether the rise in temperature [over the past 100 years] was in fact due to human activity”. The Kyoto Protocol has “no scientific basis”, the report concludes.

But Illarionov’s participation in the seminars, and concerns that Izrael’s selection of experts was biased, have led observers to doubt the independence of these conclusions. “I agree there are many uncertainties,” says Igor Mokhov, a climate modeller at the Obukhov Institute of Atmospheric Physics in Moscow. “But no serious analysis can deny the existence of a profound anthropogenic influence on global warming.”

Izrael insists that the academy’s mission is purely scientific and that the treaty itself is politically motivated. “The Kyoto Protocol came about because there is big money being spent on it,” he told *Nature*. “But everyone has forgotten about the climate, and is focusing on how best to trade emission rights and earn money. They’re just deluding themselves.”

The July workshop was to have been an informal exchange of ideas about climate-change research. But unknown to the attendees, Izrael, one of the meeting’s organizers, had invited a group of known climate-change sceptics, including Richard Lindzen, a meteorologist at the Massachusetts Institute of Technology in Cambridge, who is widely regarded as the ‘guru’ of global-warming doubters. Izrael added them to the list of speakers only at the last minute.

This led to complaints by King and other British delegates. “The workshop was an excellent opportunity to discuss the important issue of climate change,” King says. “But there were some very unfortunate last-minute changes made by the organizers.”

In response, Illarionov accused Britain of attempting to force governments against their will to ratify the Kyoto Protocol. “Unfor-

tunately, it is a war. War against the whole world and, in this case, against Russia,” he said at a press conference after the meeting.

The British Office of Science and Technology is playing down the incident, calling it a “storm in a teacup”. But on the quiet, scientists inside and outside Russia worry that it is a sign that the Russian Academy of Sciences is lending its considerable weight to Kyoto-hostile forces in the country.

### Gold comfort

This is in marked contrast to the academy’s behaviour in communist times, when concerned members successfully opposed several government proposals they considered misguided, including a plan to re-route large northward-flowing Siberian rivers with a series of controlled nuclear explosions. But in the current climate debate, few within the academy are willing to voice their objections to Izrael’s stance on the treaty.

There is also no public pressure on the government. Climate change is of little concern in a country in the middle of a painful social and economic transition. “Most every Russian family simply has much more immediate problems with adjusting to the new life,” says Mokhov.

And warming doesn’t sound such a bad thing to residents of the coldest country in the world. Indeed, there is a widespread notion, held even by some scientists, that a slightly warmer climate would actually help the country to save energy and produce better harvests.

An upside to climate change is not out of the question, although the reality is likely to be more complicated, says Vladimir Kotlyakov, director of the Russian Academy of Science’s Institute of Geography in Moscow.

Melting permafrost could damage roads and pipelines, for instance. Several institutes of the academy plan to join forces to examine the likely social, economic and physical consequences of a northward shift of climate zones. The results could

help Russian scientists find their voice on the climate issue, says Kotlyakov.

Even this summer’s workshop may have helped by raising awareness among Russian experts about the urgency of the situation, suggests Georgy Golitsyn, director of the Obukhov Institute. “Many of us were quite impressed at the level of preparation Britain is already taking with regards to a changing climate,” he says.

As Russia contemplates what it will do, patience should be the name of the game, says Grubb. “Disputes within the Russian Academy of Sciences are not something that foreign comment will help resolve,” he says. “Every attempt to play hardball with the Russians will backfire.”

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