

The Hindu July 10th 2008

Challenging the basis of Kyoto Protocol

Vladimir Radyuhin

Russian scientists deny that the Kyoto Protocol reflects a consensus view of the world scientific community.

As western nations step up pressure on India and China to curb the emission of greenhouse gases, Russian scientists reject the very idea that carbon dioxide may be responsible for global warming.

Russian critics of the Kyoto Protocol, which calls for cuts in CO₂ emissions, say that the theory underlying the pact lacks scientific basis. Under the Theory of Anthropogenic Global Warming, it is human-generated greenhouse gases, and mainly CO₂, that cause climate change. "The Kyoto theorists have put the cart before the horse," says renowned Russian geographer Andrei Kapitsa. "It is global warming that triggers higher levels of carbon dioxide in the atmosphere, not the other way round."

Russian researchers made this discovery while studying ice cores recovered from the depth of 3.5 kilometres in Antarctica. Analysis of ancient ice and air bubbles trapped inside revealed the composition of the atmosphere and air temperature going back as far as 400,000 years.

"We found that the level of CO₂ had fluctuated greatly over the period but at any given time increases in air temperature preceded higher concentrations of CO₂," says academician Kapitsa, who worked in Antarctica for many years. Russian studies showed that throughout history, CO₂ levels in the air rose 500 to 600 years *after* the climate warmed up. Therefore, higher concentrations of greenhouse gases registered today are the result, not the cause, of global warming.

Critics of the CO₂ role in climate change point out that water vapours are a far more potent factor in creating the greenhouse effect as their concentration in the atmosphere is five to 10 times higher than that of CO₂. "Even if all CO₂ were removed from the earth atmosphere, global climate would not become any cooler," says solar physicist Vladimir Bashkirtsev.

The hypothesis of anthropogenic greenhouse gases was born out of computer modelling of climate changes. Russian scientists say climate models are inaccurate since scientific understanding of many natural climate factors is still poor and cannot be properly modelled. Oleg Sorokhtin of the Russian Academy of Sciences Institute of Ocean Studies, and many other Russian scientists maintain that global climate depends predominantly on natural factors, such as solar activity, precession (wobbling) of the Earth's axis, changes in ocean currents, fluctuations in saltiness of ocean surface water, and some other factors, whereas industrial emissions do not play any significant role. Moreover, greater

concentrations of CO₂ are good for life on Earth, Dr. Sorokhtin argues, as they make for higher crop yields and faster regeneration of forests.

"There were periods in the history of the Earth when CO₂ levels were a million times higher than today, and life continued to evolve quite successfully," agrees Vladimir Arutyunov of the Russian Academy of Sciences Institute of Chemical Physics.

When four years ago, then President Vladimir Putin was weighing his options on the Kyoto Protocol the Russian Academy of Sciences strongly advised him to reject it as having "no scientific foundation." He ignored the advice and sent the Kyoto pact to Parliament for purely political reasons: Moscow traded its approval of the Kyoto Protocol for the European Union's support for Russia's bid to join the World Trade Organisation. Russian endorsement was critical, as without it the Kyoto Protocol would have fallen through due to a shortage of signatories. It did not cost much for Russia to join the Kyoto Protocol since its emission target was set at the level of 1990, that is, before the Russian economy crashed following the break-up of the Soviet Union. According to some projections, Russia will not exceed its target before 2017. Notwithstanding this, the Russian scientific community is vocal in its opposition to the Kyoto process.

"The Kyoto Protocol is a huge waste of money," says Dr. Sorokhtin. "The Earth's atmosphere has built-in regulatory mechanisms that moderate climate changes. When temperatures rise, ocean water evaporation increases, denser clouds stop solar rays and surface temperatures decline."

Academician Kapitsa denounced the Kyoto Protocol as "the biggest ever scientific fraud." The pact was lobbied by European politicians and industrialists, critics say, in order to improve the competitiveness of European products and slow down economic growth in emerging economies. "The European Union pushed through the Kyoto Protocol in order to reduce the competitive edge of the U.S. and other countries where ecological standards are less stringent than in Europe," says ecologist Sergei Golubchikov.

Russian scientists deny that the Kyoto Protocol reflects a consensus view of the world scientific community. Academician Kapitsa complains that opponents of the man-caused global warming are routinely denied the floor at international climate forums.

"A large number of critical documents submitted at the 1995 U.N. conference in Madrid vanished without a trace," the scientist says. "As a result, the discussion was one-sided and heavily biased, and the U.N. declared global warming to be a scientific fact."

Critics concede that the thrust of the Kyoto Protocol is towards promoting energy-saving technologies, but then, they argue, it should have been just that — a protocol on energy efficiency and energy conservation. The problem with the Kyoto process, critics say, is that it shifts the emphasis away from genuine ecological problems, such as industrial, air and water pollution, to the wasteful fight against harmless gases.

"Ecological treaties should seek to curb emissions of sulphur dioxide, nitrogen oxides, heavy metals and other highly-toxic pollutants instead of targeting carbon dioxide, which is a non-toxic gas whose impact on global warming has not been proved," says Dr. Golubchikov.

Russian researchers compare the Kyoto Protocol to the 1987 Montreal Protocol on Substances that Deplete the Ozone Layer, which called for phasing out Freon-12 as a preferred refrigerant. It has since been proved, says Dr. Golubchikov, that chlorine-containing Freon-12 destroys ozone only in laboratory conditions whereas in the atmosphere, it interacts with hydrogen and falls back to Earth as acid rain before it can harm ozone. The Montreal Protocol brought billions of dollars in profits for U.S. DePont, which held global patent rights for Freon-134, an alternative refrigerant that does not interact with ozone. "Within 10 years of the Montreal Protocol the output of refrigeration compressors in the U.S. increased by 60 per cent, whereas in Europe it declined by a similar proportion. In Russia, which accounted for a quarter of the global market of refrigerants, the industry ground to a complete stop," says Yevgeny Utkin, Secretary of Russia's Inter-Agency Commission for Climate Change.

The ultimate irony of the Montreal Protocol is that the new refrigerant is the most potent among greenhouse gases blacklisted under the Kyoto Protocol, and moreover is explosion-prone. The Freon bubble burst when, in 1989, the ozone layer suddenly jumped to the pre-Montreal Protocol level and has since continued to rise. Russian critics of the Kyoto Protocol are convinced that the greenhouse gases bubble will likewise prove short-lived.

Global cooling

Who remembers today, they query, that in the 1970s, when global temperatures began to dip, many warned that we faced a new ice age? An editorial in *The Time* magazine on June 24, 1974, quoted concerned scientists as voicing alarm over the atmosphere "growing gradually cooler for the past three decades", "the unexpected persistence and thickness of pack ice in the waters around Iceland," and other harbingers of an ice age that could prove "catastrophic." Man was blamed for global cooling as he is blamed today for global warming. "Climatologists suggest that dust and other particles released into the atmosphere as a result of farming and fuel burning may be blocking more and more sunlight from reaching and heating the surface of the earth," *The Time* lamented.

Russian scientists say that today's alarmism over greenhouse gases is as baseless as concerns about man-raised dust were 30 years ago. Solar physicists claim that the Earth has entered a 30-year period of global cooling predicated upon a cyclic decline in solar activity. They cite U.S. global weather reports as indicating that global temperatures have stopped rising since the turn of the century. "The global warming in 1970-1998 was merely a phase in the 60-year cycles of natural warming and cooling," Dr. Bashkirtsev says.

Russian climate researchers working in Antarctica confirm that temperatures on the sixth continent have been declining in recent years.

According to geographer Nikolai Osokin, the ice cover in Antarctica, which accounts for 90 per cent of the global ice stock, has overall been growing. This year global temperatures have been showing a distinct downward trend, and according to the Earth System Science Center at the University of Alabama in Huntsville, in May "the globe was cooler than at any time since January 2000."

This is good news for Dr. Bashkirtsev, who together with another Russian solar physicist three years ago, bet climate scientist James Annan \$10,000 that the Earth would cool down over the next decade. It is more than a wage; it is a contest between two concepts of climate change. The Russian scientists believe in sun-driven climate changes, while the British researcher creates man-caused climate-warming models on the Earth Simulator supercomputer in Japan's Yokohama.