Climate change

What will happen in the cold light of day?

Michael Hanlon

"Please, in the name of all the world, not just Russia, you must sign this. It is our only hope." Nadezhda Ledenaya, Politburo member, environment minister and the USSR's chief negotiator was close to tears as she realized the 2006 Reykjavik Protocol was dead in the water. Outside, the birds sang in the warm April sunshine, drowned out by the chants of the eco-warriors and the cackle of reporters on their cellphones.

The third meeting of the Intergovernmental Panel on Climate Change had always promised to be a brutal affair. There were the usual suspects on the fringes, the non-governmental organizations and green advocates arguing that the Protocol did not go far enough. At the centre of things were the major governments, which seemed to be on the verge of agreement until that fatal, last-minute deal, cooked up over a secret power-breakfast at the Borg. The deal united the Japanese, Chinese and Europeans, and Reykjavik became meaningless, even though it had the full backing of the US-Canadian-Soviet alliance. Of course, the Protocol went through — but without Europe and East Asia on board, how much difference would it really make?

The world first began to take notice of the threat posed by global cooling in the late 1980s. Fusion power, which had swept all before it after that rather unexpected breakthrough in 1969, had seemed at the time to be the answer to all of humanity's problems. For a start, it meant the end of the old fission stations, which were becoming an embarrassment after the terrible accidents of '63. And the switch away from fossil fuels meant that half a century of squabbling and war over oil was ended.

But the fusion reactors created their own problems. The huge seawater processing plants were responsible for the production of millions of tonnes of microscopic salt particles, all thrown into the atmosphere. This, of course, was what was being blamed for the biggest scare-story since the end of the Wars — catastrophic climate change.

At the moment the doom brigade had the upper hand. The globe had already cooled by some 1.3 °C in the 38 years since fusion had been cracked. There was debate over this — measurements in the late 1990s by Soviet and US satellites seemed initially to contradict the ground data, but now even the sceptics agreed that something was happening. The only real

debate was over how much of this cooling was caused by the extra cloud cover generated by the salt aerosols, and how much could put be down to natural causes.

Debate was fiercer about the future. At the extreme end, the hyper-coolers predicted a 10 °C chilling by 2100. This, everyone agreed, would be a true cataclysm. Even the 'official' estimate of a four-degree drop would lead to a massive alteration in the global climate.

There was talk of losing the Siberian and Canadian grain and cattle belts, hence the near-panic among the Soviet delegates at Reykjavik. What was now fertile farmland would be turned into unproductive tundra in decades. The English, Danish and Irish wine industries would be decimated. The Neocom Soviet Union, whose vast wealth was predicated upon its status as the bread-basket of the world, would be thrown into penury and, potentially, millions could starve.

And although some wags speculated that the lush, heathered hills of Scotland could one day be alive to the braying of skiers and snowboarders, others worried that glaciers could reform in the Alps, for the first time in 180,000 years, threatening dozens of towns and villages.

There were even lurid stories, written by scores of environmental reporters, that if global cooling was not checked, the great Arctic seaways could be blocked by ice.

Of course not everyone agreed with these alarming predictions. Sceptics pointed to the fact that the recent 'cliff' seen in the climate graph — a sickening drop of nearly half a degree since 1990 — could be a statistical anomaly. The fact that many of these sceptics seemed to be associated with some

of the more dubious fusion enterprises did not help their case, but they made some compelling arguments.

Probably the most powerful were made by the Swedish gadfly Anna Carlsson, who pointed out that phasing out the fusion stations and switching to coal, oil and gas or even wind, solar and wave power would probably cripple the world's economy. But her (more subtle) argument was that there was no real evidence that a cooler world would be a disaster. For long periods of our planet's history, after all, both poles had been covered by more-or-less permanent ice, and sea levels today are at almost unprecedented high levels.

As the dust settled on the Reykjavik documents, world leaders scurried back to the airport in their whispering electric limos. Fusion power had cemented and underpinned the great alliance, the Soviet-American economic and military pacts of the '70s and '80s, which meant it now seemed unthinkable that these great powers could ever go to war.

But it now looked possible — likely, even — that we could see a return to the bad old days. If the cooling really made itself felt, then from under the sleepy forests of Araby would flow the solution. With no deal, the world would be forced into action — and as far as energy goes it would be a seller's market.

We would all be looking down the barrel of a gun and there would be absolutely nothing we could do.

Michael Hanlon is the science editor of the *Daily Mail*. His new book, *The Science of the Hitchhiker's Guide to the Galaxy*, is published by Macmillan (for review see *Nature* 435, 148; 2005).