

## A precautionary tale

The EU plans new regulations for scientific risk-taking, based on the principle of sustainable development. US big business is furious

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Chances are that most people have never heard of "the precautionary principle". This relatively new term is the most radical idea for rethinking humanity's relationship to the natural world since the 18th-century European Enlightenment. Its potential impact is already being felt within the business community and the halls of government, with profound implications for all of us.

Recently, a congressional committee released emails between the United States and Europe about the future of scientific research, technology innovation and entrepreneurial risk-taking. At issue is a proposed EU directive that would force companies to prove chemical products introduced into the marketplace are safe before being granted permission to market them. Existing laws allow most chemical-based products to be introduced without prior assurances by the company of their safety. The result is that 99% of the total chemicals sold in Europe have not passed through any environmental and health testing review process.

Under the proposed EU standards, companies would be required to register and test for the safety of more than 30,000 chemicals at an estimated cost of nearly €6bn (£4bn) to the industry. The new proposed standard is called Reach - registration, evaluation and authorisation of chemicals.

The American chemical industry is furious. The US says the EU chemical regulations threaten the export of over \$20bn in chemicals the US sells to Europe each year. According to the released White House and state department emails, the US government, in collaboration with the American chemical industry, has been putting unprecedented pressure on key European governments to waylay the proposed regulations. Even secretary of state Colin Powell has intervened. US strong-arm tactics appear to have paid off. Tony Blair, Gerhard Schröder and Jacques Chirac have all urged the European commission to water the proposed Reach regulations and have partially succeeded. When the final proposal was introduced last October, it was a much weaker version of the original legislation.

What's at stake here goes far beyond the chemical industry. The EU is attempting to establish a radical new approach to science and technology based on the principle of sustainable development and global stewardship of the Earth's environment.

In November 2002, the EU commission adopted a communication on the use of what it calls the "precautionary principle" in the regulation of science and technology innovation and the introduction of new products into the marketplace. The precautionary principle is

designed to allow government authorities to respond pre-emptively, as well as after damage is inflicted, with a lower threshold of scientific certainty than has been the rule of thumb in the past. "Scientific certainty" has been tempered by the notion of "reasonable grounds for concern". The precautionary principle gives government the flexibility to respond to events in real time, so that potential adverse impacts can be forestalled or reduced while the suspected causes of the harm are being evaluated.

At the heart of the precautionary principle is a radical divergence in the way Europe has come to perceive risks compared to the US. In Europe, intellectuals are increasingly debating the question of the great shift from a risk-taking age to a risk-prevention era. That debate is virtually non-existent among American intellectuals. Risks of all kinds are now global in scale, open-ended in duration, incalculable in their consequences, and not compensational. Acid rain, the tear in the Earth's ozone layer, and the spread of virtual and biological viruses, are among the new genre of man-made threats. No one can escape their potential effects. When everyone is vulnerable, and all can be lost, then traditional notions of calculating and pooling risks become virtually meaningless. This is what European academics call a risk society.

The EU hopes that by integrating the precautionary principle into international treaties and multilateral agreements, it will become the unchallenged standard by which governments oversee and regulate science and technology. While the US has integrated aspects of the precautionary principle into some of its environmental regulations, for the most part its standards are far more lax than the EU's, though better than many countries. But the US views Europe's tightening regulatory regime as a noose around US exports and is determined to thwart its efforts. America's National Foreign Trade Council warned that the EU's invocation of the precautionary principle "has effectively banned US and other non-EU exports of products deemed hazardous" and stifled scientific and industrial innovation.

The precautionary principle is deeply at odds with the traditional Enlightenment idea about science. Risk taking is at the heart of modern science. To attempt to put limits on scientific pursuits, in lieu of greater certainty about their potential impacts on the environment, is, some scientists say, tantamount to squelching our very notion of progress.

The precautionary principle says, in effect, that because the stakes are so high, we have to weigh even the most dramatic benefits against the prospects of even more destructive consequences. The old Enlightenment science is too primitive to address a world where the bar for risk has been raised to the threshold of possible extinction itself. When the whole world is at risk because of the scale of human intervention, then a new scientific approach is required that takes the whole world into consideration.

- Jeremy Rifkin is the author of *The Biotech Century*