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Comment on Van den Belt: Biotechnology, the US-EU dispute and the Precautionary Principle

William A. Kerr[#]

The 'Precautionary Principle' has become the focal point of the debate over how genetically modified organisms (GMOs) should be licensed for commercial use and the rules under which they should be traded internationally. The reason for the debate is that while exercising precaution in the face of scientific uncertainty is a generally accepted principle, turning that principle into an operational decision-making mechanism has proved to be extremely difficult and controversial. The result is that what was meant to be an innocuous part of science-based decision making within the Risk Analysis Framework has become politicized. The politicization of the Precautionary Principle has meant, among other things, that a great deal of what has been written about the Precautionary Principle is either advocacy or purposely opaque. The paper by Henk van den Belt is a refreshing departure from advocacy and obfuscation as it lays out in clear, finely crafted arguments the central questions pertaining to the Precautionary Principle as a mechanism for deciding policy. I highly recommend it to anyone interested in biotechnology, the environment, technology management and/or science policy.

The debate over the Precautionary Principle is often couched in terms of a conflict between the European Union's approach to science policy – and biotechnology in particular – and that of the United States. Van den Belt is careful to point out this fallacy. He chooses to examine the acrimonious debate between anti-GMO activists and the French scientific establishment over conducting field trials of genetically modified crops by way of illustration. France is often portrayed as the major advocate of the Precautionary Principle in the EU, yet even within France the scientific establishment's interpretation of the Precautionary Principle is greatly at odds with that of anti-GMO advocates. The contention arises because the Precautionary Principle was enshrined in a number of multilateral environmental agreements and the World Trade Organization (WTO) as well as EU legislation on food safety and the environment before its operational procedures had been decided. While the views on how the Precautionary Principle should be operationalized are extremely diverse, two have become the focal point of the debate – decisions by 'scientific experts' versus 'zero risk' (Van den Belt's strong version of the Precautionary Principle). Anti-GMO activists have grasped the latter and made it their mantra because they believe that it can be used to prevent any further use and development of agricultural biotechnology – zero risk cannot ever be scientifically proved.

One major contribution of Van den Belt's paper is to show why the 'zero risk' interpretation of the precautionary principle is logically untenable. This is done by showing that the idea of zero risk always cuts both ways, meaning that there is always a 'zero risk' argument that would support the further development of biotechnology –

[#] Van Vliet Professor, University of Saskatchewan, Saskatoon, SK, Canada

including a wonderful analogy to Pascal's untenable wager argument regarding the worship of God. Equally important as a contribution is his pointing out that 'reversing the burden of proof' arguments often put forward by those wishing to introduce bias into the use of the Precautionary Principle is a 'red herring' or non-argument because it is the setting of standards that is the central element in decision-making, not who bears the burden of proof.

One area that Van den Belt does not delve into is what is at the heart of the trade dispute between the EU and the US over the EU's invocation of the Precautionary Principle. If the EU were to allow deference to scientific expertise to form the basis of its decision making under the Precautionary Principle, the US would likely accept it. The EU, however, has chosen to allow other, non-scientific, considerations to inform its choices explicitly – what Isaac (2002) calls a 'social rationality' basis for operationalizing the Risk Analysis Framework. In particular, the EU Commission's communication on the Precautionary Principle (European Commision 2000) specifically states that when the Precautionary Principle is invoked, subsequent decisions will have a political element and that socio-economic considerations can be part of the decision process. For a trade economist, allowing these two criteria raises 'red flags'.

The reason why the scientific-principle approach was included in the WTO's Agreement on Sanitary and Phytosanitary Measures (SPS) was to prevent these regulations from being used as unfair barriers to trade. While the intent of having the decision being a political one may be the belief that making difficult trade-offs under scientific uncertainty is a politicians' role, explicitly allowing for it also allows politicians to use it to extend protection when asked for it by political constituents – negating the intent of the SPS. The same can be said of socio-economic considerations – which could be interpreted in a protectionist way as, for example, "some EU farmers losing from import of genetically modified foods". Suspicion in the US runs high due to the willingness of the EU to ignore its scientific experts in the case of banning the import of beef produced using growth hormones (Kerr and Hobbs 2002). In the case of beef produced using growth hormones and GMOs, however, there is also an institutional failure at the WTO. Unlike the case of traditional producer protectionism, there is no way in the WTO to accommodate the politicians' need, at times, to extend protection when it is demanded by consumers or other groups in civil society such as environmentalists (Perdikis, Kerr and Hobbs 2001). Until this question is addressed directly at the WTO, politicians and trade policy makers will be tempted to try and find ways to extend protection within the SPS, including how the Precautionary Principle is operationalized.

References

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