Are the precautionary principle and the international trade of genetically modified organisms reconcilable ?

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Introduction

If we accept the need of solving the world's food dilemma as an ethical need, and if in the near future modern biotechnology has proven to be able to contribute in solving this dilemma, we see ourselves confronted to two major issues in the field of biotechnology. First of all, we need to promote a free circulation of genetically modified organisms to establish a fair participation in the benefits deriving from modern biotechnology for the whole world's population. But secondly, we need to control the transboundary movement of genetically modified organisms in order to protect environment and human health by ensuring a safe utilisation.

These two issues often seem to be in contrast with one another in the sense that the implementation of the precautionary principle on a national level can provoke international trade barriers. So where exactly lies the origin of the conflict, and how can we reconcile the precautionary principle with the international trade in order to work towards a sustainable development?

The precautionary principle

The precautionary principle allows and even obliges governments to adopt measures, in absence of scientific certainty, if there exists a reasonable fear for irreversible or serious damage. We can divide the precautionary principle in three components: (1) the presence of scientific uncertainty, (2) a risk of irreversible or serious damage, and (3) an obligation for the governments to take precautionary measures. The first and the second component contain a certain freedom of interpretation, which might mean that the application of the same scientific information will result in different precautionary measures according to the country's culture and environment. When does scientific uncertainty become a certainty, what should be the estimated dimension of a serious or irreversible damage, and at what level should a possibility of serious or irreversible damage be defined as a risk; all questions to which we need to respond in order to conclude that the government has an obligation to take measures. To get a better idea about the necessity of the precautionary principle, we will compare it with the preventive principle.

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The principle of prevention aims to prevent damages rather than having to cope with its consequences. It is based on the scientific proof that a violation of the preventive measures will result in the occurrence or increase of environmental damages. Scientific identification of the risks involved is therefore a condition. So why not wait with regulating until scientific proof has been established?

Within the precautionary principle lies a presumption that the establishment of scientific proof might come too late to prevent damages, either because damages have already occurred, or because the delay is too short to implement effective preventive measures. So the precautionary principle can be seen as an enlargement of the preventive principle in the sense that it broadens its scope in time and goes beyond the human capacities of a given moment.

But we should be aware that the applicability of the precautionary principle concerns a period of scientific uncertainty, to be considered as uncomfortable and temporarily. The precautionary principle identifies problems endangering sustainable development, which are still surrounded by doubt, and calls for scientific proof seeking a solution. It aims to replace uncertainty to ensure safety until other measures or solutions can be implemented.

However, different interpretations of the precautionary principle and its applicability to genetically modified organisms have led to a different opinion on: (1) whether genetically modified products should be distinguished from classical products[2] and whether genetic manipulation should be considered as a new technology containing new risks and therefore demanding an implementation of precautionary measures, and (2) the form and contents of the precautionary measures necessary.

These different interpretations can easily create restrictions on the free circulation of genetically modified products. How do the WTO rules respond to this problem?

The WTO rules

The WTO rules aim to establish liberalisation of international trade and avoid arbitrary trade discrimination. The protection of human health and environment may be used as justification for trade restrictions, but shall not lead to the establishment of arbitrary trade discrimination. In other words, they should be applied to both foreign and domestic "like products" in a similar way and may not contain disguised restrictions to protect domestic production.

Two crucial points apply to the genetically modified organisms. The first point is the Panel's interpretation of the concept "like product"; will genetically modified products and classical products be considered as "like products", or is there within the character of the product a reason to treat them differently? Secondly, if they are considered as like products, is there a justification for regulating the genetically modified product based on the precautionary principle?

When trying to respond to the question whether the Panel will consider genetically modified products and classical products as like products, we should divide the question into two sub-questions: (1) how does the genetically modified product in its final version differ from a classical product, (2) is modern biotechnology considered as a new technology or a continuation of the classical biotechnology?

While examining the presence of the notion "like products" in previous cases[3], the Panel has primarily looked at the final product. If the Panel decides to continue this approach while analysing the genetically

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2 Classical products: products which have not been subject to genetic manipulation.

3 For example the Report on Spain - Tariff Treatment of Unroasted Coffee.

modified organisms, the substantial equivalence[4] will certainly been taken into account. Consequently, when genetically modified organisms cannot be detected in the final product, similarity between the genetically modified products and the classical products will be concluded.

But if the Panel decides to consider the whole production process, it will be essential whether modern biotechnology is to be considered as a new technology. How will the products resulting from genetic manipulation be classified? Will they be classified in one category consisting of products containing or having contained genetically modified organisms, or into different categories according to the product type (potato, corn, etc.)? Will a genetically modified potato be considered as a genetically modified product or as a potato?

The second point will only be applicable if genetically modified products and classical products will be considered as "like products"; is there a disposition adopted in the WTO rules which allows the application of precautionary measures? In most cases, the justification for the implementation of environmental restrictions must be founded on scientific proof, so prevention of damages is possible but not by the implementation of precautionary measures. However, the Sanitary and Phytosanitary Agreement indicates that if scientific proof is insufficient, the Party may provisionary adopt measures, which need to be analysed after a reasonable delay in order to conform them with scientific information later established[5].
And although the Sanitary and Phytosanitary Agreement recommends the Parties to harmonise their sanitary measures by basing them on international norms established, they have the liberty to determine their own level of protection.

The harmonisation of national measures [6]

We have observed that differences in the adoption of precautionary measures could result in the first place from a certain freedom of interpretation of the precautionary principle, due to its complexity and imprecision, and secondly from the definition of the precautionary measure necessary, determined by the risk assessment and risk management procedure. In order to reconcile the precautionary principle with the international trade of genetically modified organisms, we need to establish an international framework harmonising national measures and redefine certain notions and definitions influencing the determination of these measures. But which elements shall be coordinated on an international level and which should fall under the scope of the national sovereignty of the state?

When harmonising national measures, we should start with promoting the exchange of scientific information and stimulate scientific cooperation. Knowing that the necessity of the precautionary principle will depend on the scientific knowledge of a certain moment, international cooperation might help to develop scientific evidence.

The interpretation of the precautionary principle will partially depend on the interpretation of the scientific information available and the perception of related concepts, such as "risk" and "irreversible or serious damage". Establishing guidelines on how to use the scientific information and defining related concepts

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4 The concept of "substantial equivalence" has been developed by the FAO/OMS and the OECD and divides the genetically modified products in to three groups: (1) products, which in their final version don't differ substantially from classical products, (2) products, which substantial equivalence can be concluded, except for the introduced genes, (3) substantial equivalence cannot be concluded.

5 Article 5.7. of the Sanitary and Phytosanitary Agreement.

6 Experience has shown that there is a need for a harmonisation of national measures preventing biotechnological damages and projects have been undertaken to create an international legal framework (the "Biosafety" Protocol) and strengthen the European regulation (the revision of the European directive 90/220).

might help harmonisation, while states keep their liberty to adapt these guidelines according to their national circumstances.

This freedom of interpretation allocated to the states should be respected in order to guaranty an effective risk assessment and management procedure. Culture and environment differ according to the country and could have a diverse influence on the risks involved. But how far should we go? Should we take into consideration only scientific elements, or should we also bear in mind the social-economical interests of the genetically modified organism in question balancing these interests with the risks involved. And what about the public opinion? At first instance, the precautionary principle is a policy, which should provide the society with measures aiming to protect human health and the environment and thus the scope of the precautionary principle seems to exclude social-economical considerations and the opinion of the public. Although social-considerations and the public opinion can be adopted into the precautionary measures, once their necessity has been justified, they should not be the fundamental justification for the adoption of precautionary measures or their abolishment. But if taken into account, the national social-economical considerations shouldn't be analysed isolated, but should be added to the international stakes in question and regional and international commitments made by the country should not be forgotten.

A last point asking for consensus concerns the burden of proof. The precautionary principle implies a shift of the burden of proof, and asks the promotor of a certain activity to prove that the activity is not dangerous. The WTO rules however demand the state imposing the trade restriction to justify its necessity. So the question is whether it is the state imposing a precautionary measure needing to justify its necessity or the promotor of a certain activity, proving its safety.

Conclusion

The harmonisation of national measures is obstructed by the fact that countries have a different background and therefore a different need for precautionary measures. While harmonising, we should not aim to abolish all diversity of precautionary measures, but have as objective to avoid abuse, which might lead to restrict the promotion of international trade liberalisation. The necessity of precautionary measures and their contents needs therefore to be analysed, bearing in mind the culture and environment of the country. But the applicability of the precautionary principle should be seen as temporarily. A scientific society based on a strong scientific development demands a flexibility in the form, contents and length of period of a precautionary measure, susceptible to be changed according to the scientific evidence established. If we want to reconcile the protection of the environment with the trade liberalisation, we need to take this characteristic into account.

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