

INTERNATIONAL TRENDS IN THE IMPLEMENTATION OF THE AGRICULTURAL BIODIVERSITY CONCEPT

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Abstract

The paper is studying gaps in policy, strategy and legislation regarding the proper implementation of the decisions taken under international instruments targeting the agricultural biodiversity and proposes some solutions. For more than 30 years at international level different fora are alarmed by the loss of biological diversity and its negative impacts on the sustainability of agriculture and the world's food and energy security. Also they are aware that agriculture is highly dependent on biodiversity, and that cultivated systems provide food, feed, fibre and fuel, but unsustainable practices affect other ecosystem services. These fora are convinced that agricultural biodiversity is a vital asset to achieve Millennium Development Goals 1 and 7 in alleviating poverty. Therefore it is highly recognized the important contributions of local communities, farmers, livestock keepers, breeders, scientists, international agencies, other stakeholders in the conservation and sustainable use of agricultural biodiversity and further their contribution in the conservation and sustainable use of biodiversity, in particular in protected areas and centres of origin, the value of their traditional knowledge and their contribution to the achievement of the three objectives of the Convention on biological diversity. It is mentioned the cooperation between the Convention on biological diversity and the Food and Agriculture Organization of the United Nations, the International Treaty on Plant Genetic Resources for Food and Agriculture, the World Health Organization, the World Summit on Sustainable Development (WSSD). A coherent political vision should target the local communities which should be supported in their everyday activities as they are contributing effectively to the conservation and sustainable use of biological diversity through traditional knowledge. Romania needs to develop further its strategic plan for agriculture and biological diversity, also as food suppliers, by strengthening capacity building for the implementation of the Addis Ababa Principles and Guidelines on Sustainable Use (decision VII/12, annex II of the Convention on biological diversity).

Keywords: environment policy, food policy, agricultural biodiversity

1. INTRODUCTION

Agricultural biodiversity was addressed for the first time during the Conference of the Parties no 3 (COP3) (November 1996, Buenos Aires, Argentina) of the Convention on Biological Diversity (CBD), when the Conference of the Party adopted *the work programmes on agricultural and forest biodiversity*. Other relevant decisions were adopted during the COP4 and the COP5, for the later being reviewed for the first time the work programme on agricultural biodiversity.

After 8 years of international intensive negotiations, during the COP9 of the CBD official delegates of the Parties considered a draft decision on the in-depth review (the second review) of the work programme on agricultural biodiversity (UNEP/CBD/COP/9/3) [1] and a large debate was around the perverse agricultural incentives on world food prices.

Draft Decision UNEP/CBD/COP/9/L.34 adopted as Decision IX/1 [2] includes sections on: (1) implementation of activities related to assessment, (2) adaptive management and capacity-building, (3) mainstreaming; (4) the international initiatives on pollinators, (5) soil biodiversity, and (6) biodiversity for food and nutrition; (7) climate change; (8) integration of biofuels into the work programme; (9) sustainable use; (10) and research issues. It is important to mention that Romania is a Party to the Convention on Biological Diversity since 1994 (Low 58/1994) and for that should implement the decisions adopted under this Convention.

2. MATERIAL AND METHODS

This paper is a review regarding the published national and European political statements, strategy and existing legislation at the EU level towards the analysis of international

instruments such as Convention on Biological Diversity on the subject of agricultural biodiversity.

It was applied the Albert Humphrey' SWOT analysis (Strengths, Weaknesses, Opportunities, and Threats) regarding the legislation looking especially to the negotiators' language for international use.

It involves specifying the objective of the proposed project and identifying the internal and external factors that are favorable and unfavorable to achieving that objective.

3. RESULTS AND DISCUSSIONS

International context

For more than 30 years at international level different fora are alarmed by the continuous loss of biological diversity reason for which in 1992 at the UN World Summit which took place in Rio de Janeiro, Brazil, adopted the final text of the Convention on Biological Diversity (CBD) together with the Agenda 21 and the Rio Declaration. The CBD is today one of the most important instruments for biodiversity conservation because of the 193 signatory Parties including the European Union for 2009.

In the text of the CBD, the agricultural biodiversity is not addressed directly but during the Conference of the Parties - COP3 (November 1996, Buenos Aires, Argentina), when it was adopted *the work programmes on agricultural and forest biodiversity* based on the Recommendation II/7 of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) [3] and also was adopted the Addis Ababa principles and guidelines - Decision III/11 [4]. Under the chapter entitled "Food security and poverty alleviation" the recommendation states that *the conservation and sustainable utilization of agricultural biological diversity makes a key contribution to food security and poverty alleviation, through its application to improving agricultural productivity.*

It is for the first time when SBSTTA create a link between the importance of agricultural

biodiversity conservation – food security and – poverty alleviation or creating an indirect link between the biodiversity conservation and poverty alleviation.

The same recommendation stated among others that:

[i] the new challenge for agriculture in the expanding global economy is to achieve greater stability and productivity on a sustainable basis, by introducing technologies and management practices that would ensure a healthy environment, stability in production, economic efficiency, and equitable sharing of social benefits. Biological diversity conservation and sustainable use is a non-detachable part of the concept of sustainability
[ii] an understanding of the dynamic evolutionary and environmental processes which shape and influence agricultural biodiversity is fundamental to improving sustainable management and conservation of agricultural ecosystems. Improved understanding of the impacts, either positive or negative, of agricultural practices, will depend upon the contributions of science and scientists, including traditional knowledge and
[iii] conservation and sustainable utilization of agricultural biological diversity makes a key contribution to food security and poverty alleviation, through its application to improving agricultural productivity.

The message of this recommendation is that the Parties should develop tools and mechanisms for the sustainable use of biodiversity including agricultural biodiversity and also to apply environmental impact assessment (the objective of the Espoo Convention adopted in Espoo, Finland (1991) and ratified by Romania through the law 86/2000) [5].

According to the decision no III/11 of the CBD, the biological diversity has enabled *farming systems to evolve since 12,000* years ago using crops and animals. Moreover it states that *the biological diversity enabled the humans in understanding the evolutionary dynamic and environmental processes* creating here a feedback process of learning on own experience for shaping and influence agricultural biodiversity which proved to be

fundamental to improving the sustainable management and conservation of agricultural ecosystems today. It is underlined that in recent years (i.e. for 1996), as the world's population continues to grow and agricultural production must meet the rising demand for food, agricultural expansion into forests and marginal lands, combined with overgrazing and urban and industrial growth, has substantially reduced levels of biological diversity over significant areas. Also the decision touches the subject of land ownership and because of the immediate profit this is a cause of limited numbers of species and varieties which are today used generating the diminishing of the biological diversity within agricultural ecosystems. All these mentioned negative effects undermining the long-term sustainability of agricultural production itself according to the Parties.

When it is the case of agricultural intensification this *has the potential to balance the world's need for increasing food supplies while reducing pressures to expand agricultural areas still further*, but it may create a negative impact if it is accompanied by increasing the use of pesticides and energy. For this reason new approaches in agriculture are supported by the Parties in order to respond to these pressures through *integrated pest management and the efficient use of resources*. Later at the UN level during the World Summit from Johannesburg 2002 were adopted the Millennium Development Goals. The officials representing the governments and states were convinced that agricultural biodiversity is a vital asset to achieve Millennium Development Goals 1 (eradicate extreme poverty and hunger) and 7 (ensure environmental sustainability) [6]. Moreover, at the international level, it is highly recognized the important contributions of *local communities, farmers, livestock keepers, breeders, scientists, international agencies, other stakeholders in the conservation and sustainable use of agricultural biodiversity and further their contribution in the conservation and sustainable use of biodiversity*, in particular in protected areas and centres of origin, the value of their traditional knowledge

and their important contribution to the achievement of the three objectives of the Convention on Biological Diversity.

Because of these recommendations the programme work of the CBD changed and reshaped for the COP5. Later, during the COP9 (May 2008, Bonn, Germany) delegates considered a draft decision for the in-depth review (the second review) of the work programme on agricultural biodiversity (UNEP/CBD/COP/9/3) and a large debate targeted the perverse agricultural incentives on world food prices. In reality applying perverse incentives makes revenues for the short time and is creating a huge pressure on the loss of biological diversity with a huge negative impact over generations (e.g. Madagascar over exploitation of the tropical forests, pastures and bogs).

Final decision IX/1 of the CBD includes sections on: [a] implementation of activities related to assessment, [b] adaptive management and capacity-building, [c] mainstreaming; [d] the international initiatives on pollinators, [e] soil biodiversity, and [f] biodiversity for food and nutrition; [g] climate change; [h] integration of biofuels into the work programme; [i] sustainable use; [h] and research issues – all in relation with the agriculture biodiversity.

The COP 9 invited parties to further develop and apply methods for assessing and monitoring status and trends of agricultural biodiversity and requests the Executive Secretary of the CBD to collaborate with the FAO to identify methods and means to evaluate contributions made by the adopted work programme. This action is very important if it is taken in consideration the constant preoccupation in food security of FAO from its beginning.

In the same time CBD invites the FAO, with other relevant organizations, to compile and disseminate information on the positive and negative impacts of agricultural practices and policies on biodiversity; best practices for sustainable use and enhancement of ecosystem goods and services in agriculture; and impact of trade-related incentives.

Any policy or agricultural practice impacts the agricultural biodiversity to a certain extent because of the specificity of the site, of the agricultural ecosystems and because of the connectivity in between the ecosystem and the lag effect of the antropic factor affecting the agricultural biodiversity.

Also, to use good and services provides by the agricultural ecosystem depends a lot on the ecosystem components and the exploitation system in place not only for the targeted ecosystem but for the surroundings ecosystems too.

The agricultural biodiversity may become threatened also because of the applied perverse incentives systems for trade which are rapid money converting systems and if these financial mechanisms are not developed according to the supportability capacity of each agricultural ecosystem, integrated into a landscape, in time the genetic erosion may be installed together with agro-ecosystem deterioration and destruction.

For the above mentioned reasons the CBD and the FAO are decided to raise attention and take action on the importance of the sustainability mode of exploitation of the agricultural ecosystems.

It is important to mention that at international level already exists a proper cooperation between the Convention and the Food and Agriculture Organization of the United Nations, the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA), World Health Organization, the World Summit on Sustainable Development (WSSD).

All these international instruments try to address agricultural biodiversity subject which is extremely important in the achievement of all three objectives of the Convention but also for the purpose of he other mentioned international instruments.

The International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) is an instrument targeting the agricultural genetic resources and now it is concerned by the loss of biodiversity and it is committed to develop further collaboration

with the CBD for a sustainable use of agricultural biodiversity too.

From official point of view the need for agricultural biodiversity preservation is addressed by the Council Decision adopted in 24 February 2004 concerning the conclusion, on behalf of the European Community, of the International Treaty on Plant Genetic Resources for Food and Agriculture (2004/869/EC) for the adoption of this Treaty mentioning also the provisions of the Convention on Biological Diversity [7].

Romanian situation

Even Romania is a Party to the CBD and also to FAO, WHO, WSSD – up to nowadays – never organized a National Technical Committee for developing negotiations under these international instruments for this topic for national, European and international levels.

Agricultural biodiversity is not addressed by the Romanian legislation according to the recommendations of all mentioned international instruments and one cause might be due to the lack of communication and transparency between authorities as different authorities are nominated as focal points for the CBD (Ministry of Environment) the FAO (Ministry of Agriculture) the WTO (Ministry of Trade) and they are not coordinating the negotiation process for the international level regarding the horizontal subjects and for the national implementation of the decisions taken. Moreover our policy for agriculture or environment is not addressing this issue in the same terms such it is already addressed by the European Members States.

Thus, its is extremely important that the Addis Ababa Principles and Guidelines on Sustainable Use (decision VII/12, annex II) which is addressing the agricultural biodiversity subject should be implemented at the national level based on the decision taken also by Romania for the CBD [8].

Even these principles are adopted under the CBD, were addressed and discussed during the European Council they were never addressed by the Romanian policy or legislation (e.g. environment, agriculture).

We mention that according to the Annex II, art. 8 g of the Decision “*Underlying conditions for sustainable use it should structuring a sustainable use programme and the attendant policies, laws and regulations to implement such a programme, there are a few underlying conditions that should be taken into account in Government and natural resource management planning the basic necessities of life, such as food, shelter, freshwater and clean air are produced either directly or indirectly from using biological diversity. In addition, biodiversity provides many direct benefits and ecosystem services necessary for life. In many countries, there is complete or substantial dependence on harvested plants and animals by millions of people, often among the poorest, for their livelihoods. Increasingly other uses such as pharmaceuticals for disease prevention and cure are becoming evident and are also met from using biological diversity. Finally, indigenous and local communities and their cultures often depend directly on the uses of biological diversity for their livelihoods. In all of these instances, Governments should have adequate policies and capacities in place to ensure that such uses are sustainable*”.

Romania having on one side one of the best biodiversity representation in Europe with over 37000 species and on the other hand a huge agricultural potential may take advantages in properly implementing these Addis Ababa principles and guidelines and supporting local communities in producing safe food of good quality based on the sustainable use of agricultural biodiversity.

We should first develop a policy vision for recognizing local communities (ecosystem inhabitants and agricultural ecosystem inhabitants) and science communities as the main supporters of the conservation and sustainable use of biological diversity including the conservation of agricultural biodiversity based on traditional knowledge for the sustainable use of food resources.

Based on this vision Romania should first develop a strategy and an action plan for a proper implementation of the subject into the already existing legislation by covering on

short: capacity building, financial mechanisms including reviewing the incentive measures, setting indicators, monitoring system implementation, enforcement, archiving, reporting, evaluation of the performance of the system and development accordingly.

4. CONCLUSIONS

In order to implement a coherent policy for agricultural biodiversity conservation and sustainable use by increasing food production and quality and also applying the best practices for nature conservation it is a great need for:

-strengthening capacity building among the main stakeholders for the implementation of the work programme regarding agricultural biodiversity adopted through the decision IX/1, *In-depth review of the programme of work on agricultural biodiversity*. Capacity building should be understood as a close cooperation between authorities (Ministry of Agriculture and Forestry, Ministry of Defense, Ministry of Education, Ministry of the Environment, Ministry of Finance, Ministry for Foreign Affairs, Ministry of the Interior, Ministry of Justice, Ministry of Labour, Ministry of Social Affairs and Health, Ministry of Transport and Communications, Ministry of Trade and Industry), local communities, science and other stakeholders. Each authority should be seen here as an important contributor not for the necessarily first degree of involvement in agricultural biodiversity but rather for secondary or tertiary degree of involvement according to the ecosystem approach adopted by the COPVII.

-Implementing Addis Ababa Principles and Guidelines on Sustainable Use (decision VII/12, annex II)

- Further development of legislation provisions and guidelines for implementation and enforcement of legal instruments.

- Developing financial mechanisms for implementing the following activities:

- Assess the positive versus negative impacts of agricultural practices and policies for nowadays on all components of biodiversity related to agriculture,

- landscapes, ecosystems and ecosystem goods and services; with a special focus on the protected areas.
- Develop guides regarding best practices for the sustainable use and active enhancement of ecosystem goods and services in agriculture taking into account the conservation and sustainable use of biodiversity and the ecosystem approach.
 - Assess the impact of trade-related incentives on agricultural biodiversity and revealing the perverse incentives and find solution for removing them from the financial mechanism
 - Undertaking multidisciplinary studies to evaluate the capability of different farming systems to conserve agricultural biodiversity and use it sustainably and to provide economic viability;
 - Further investigating the use of agricultural biodiversity to develop sustainable agricultural systems that contribute to improved livelihoods, enhance biodiversity and make use of its benefits, as well as conserving the most vulnerable and potentially useful species;
 - Evaluating and characterize germplasm potentially suitable for adaptation to climate change and desertification in the case of our country;
 - Research to enhance resilience of agricultural systems;

- Develop and implement programmes for pollinators and biofuels, and creating appropriate mechanisms for policy development, research and monitoring.

5. REFERENCES

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- [2] Decision IX/1 In-depth review of the programme of work on agricultural biodiversity <http://www.cbd.int/doc/?meeting=cop-09>
- [3] Recommendation II/7 Agenda item 3.9: Agricultural biological diversity, advisory statement <http://www.cbd.int/recommendations/sbstta/?m=sbstta-02>
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- [8] Decision VII/12 Sustainable Use (Article 10), <http://www.cbd.int/doc/?meeting=cop-07>