

New Integrative, Cross-border and Transnational Approaches for a Carpatho-Danubiano-Pontic Transdisciplinary Mega Project Based on Horizon 2020 and the European Strategy for Bio-Economy 2030. Innovative Eco-bio-geo-economic Solutions and Legislative-Financial Synergies

Alexandru Bogdan¹, Andy-Corneliu Pusca², Mariana Trandafir³, Emanuel Marinescu⁴ Amalia-Gianina Străteanu⁵, Judith Ipate⁶

Abstract: This project is absolutely necessary because the economic situation, nationally and globally, requires innovative impetus that materialize in socio-economic development through the use of transalpine Eco-zone balanced and efficient management, responsible and rational local bio-resources, improving quality of life and therefore human and animal health, combating and preventing major environmental issues, sustainable use of biological resources for industrial purposes, while ensuring environmental protection and biodiversity, rational land use and not least food security. This project aims at increasing the added value of RDI national system - forming and research; - formation of new specialists; - conducting research into new areas of European institutions; - carrying out scientific research FOOD Bio-Platform in the context of innovative eco-bio-geo-economic solutions and legislative-financial synergies. The present project is contribute to counteract biodiversity loss, relying on the protection of natural heritage and cultural landscape vulnerable. Biodiversity in general and biodiversity protection in particular, must be compatible with economic development for the benefit of local communities, biodiversity as a “common heritage of mankind” and therefore, mankind must band together to preserve them. Overexploitation of resources

¹ The Centre of Studies and Research in the Agrosylvicultural Biodiversity “Acad. David Davidescu”, Romania, Address: 13 Calea 13 Septembrie, et.7, West Wing, District 5, Bucharest, Tel.: +4 021.318.24.38, E-mail: alecutbogdan@gmail.com.

² Associate Professor, PhD, Danubius University of Galati, Romania. Address: 3 Galati Blvd, Galati, Romania, Tel.: +40372 361 102, Fax: +40372 361 290, E-mail: andypusca@univ-danubius.ro.

³ Associate Professor, PhD, Danubius University of Galati, Romania. Address: 3 Galati Blvd, Galati, Romania, Tel.: +40372 361 102, Fax: +40372 361 290, Corresponding author: marianatrandafir@univ-danubius.ro.

⁴ Senior Lecturer, PhD, Danubius University of Galati, Romania. Address: 3 Galati Blvd, Galati, Romania, Tel.: +40372 361 102, Fax: +40372 361 290, E-mail: marinescuemanuel@univ-danubius.ro.

⁵ The Centre of Studies and Research in the Agrosylvicultural Biodiversity “Acad. David Davidescu”, Romania, Address: 13 Calea 13 Septembrie, et.7, West Wing, District 5, Bucharest, Tel.: +4 021.318.24.38, E-mail: strateanuamalia@gmail.com.

⁶ The Centre of Studies and Research in the Agrosylvicultural Biodiversity “Acad. David Davidescu”, Romania, Address: 13 Calea 13 Septembrie, et.7, West Wing, District 5, Bucharest, Tel.: +4 021.318.24.38, E-mail: ipate.iudith@gmail.com.

to meet the demand for bio-products are in a continuous growth and industrial hazards can cause serious damage and endanger regional development. Changes in land use threatening cultural resources and landscapes and may lead to fragmentation of natural and ecological habitats.

Keywords: eco-bio-geo-economy; bio-platform; bio-resources

1. Introduction

The proposal project is very important because promoting the polycentric and balanced territorial bio-development. The proposed polycentric generate added value and operational centers contributing to the broader term eco-development regions to which they belong. The polycentric territorial policy of Bio-development territorial policy must support the competitiveness of the EU. Rural areas, remote and sparsely populated need to improve their accessibility, foster entrepreneurship and build, in fact, strong local capabilities.

Some rural areas tend to be vulnerable territories rich in cultural and natural values. The project ensures the protection and sustainable use of this territorial capital, the ecological functions and the services they provide. In rural areas in Romania where agriculture and forestry are still important forms of land use be upgraded primary sector by eco-invest efficient in terms of resource use in new sectors and alternative preservation of high quality arable land and functions organic. The proposed project is advancing solutions for managing and connecting ecological values, landscape and cultural regions. The proper functioning of ecological systems, as well as protect and improve the natural and cultural heritage are important conditions for long-term sustainable development. Common risk management is important, given the different geographical features of the areas that are found CDI proposed infrastructure modernization and development.

The proposed project supports the integration of ecological systems and areas protected for their natural values into green infrastructure networks at all levels. The high value of landscapes should be protected and enhanced in terms of quality. Areas rich in natural and cultural landscapes require special attention in order to make the most of their strengths. Creating green jobs and enhancing recreational functions can complement conservation. Manage local, regional and trans-regional natural and cultural heritage is crucial.

The project supports the protection, rehabilitation and utilization of heritage through a territorial approach. Under the Treaty on European Union (art. 174 and 175), all Union policies and actions must contribute to economic, social and territorial cohesion. Therefore, the factors responsible for the design and implementation of domain policies should take into account the principles and

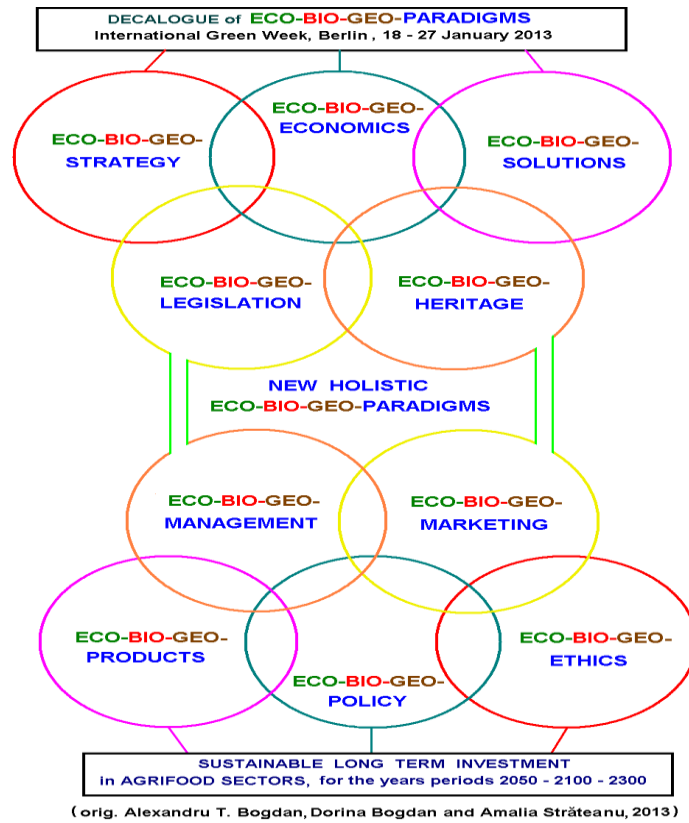
objectives of the Territorial Agenda. Coherence of EU and national policies¹ is extremely important for territorial cohesion. Most policies have a significant territorial impact, influencing the development opportunities of territories in different ways.

A balance between sustainability, competitiveness and social cohesion can be achieved through an integrated territorial development. Relying on the principles of horizontal coordination, policy development based on empirical data and the development of integrated functional areas, such an approach applies the principle of subsidiarity through multilevel governance. It aims to unleash territorial potential through development strategies based on knowledge of local and regional needs and the specific advantages and factors contributing to bio-competitiveness Eco-zone.

2. Material and Methods

New original concept of “Bio-Platform” Research and Development and Innovation through Knowledge Transfer (scientific) and Technologies - concept based on Eco-Bio-Geo-Economics Objectives of “BIO-PLATFORMS” based Eco-Bio-Geo-Economics are: - Initiation development and adaptation to dynamic contemporary contexts bases Eco-Bio-Geo-Economics; Starting, testing, experimentation and launch integrative processes and products based Eco-Bio-Geo-Economics; Establishment, monitoring, adaptation and evolution cycles Innovative Eco-Bio-Geo-Systems (direct effect on medium term and long term promotion of Eco-Bio-Geo-Economics); Delimitation conceptual and practical management and marketing of integrative processes and products Eco-Bio-Geo-Systems of complex R & D, Innovation and Production for integrative processes and products of Eco-Bio-Geo-Systems.

¹ *The Economics of Ecosystems and Biodiversity (TEEB) reports:*
http://ec.europa.eu/environment/nature/biodiversity/economics/index_en.htm.



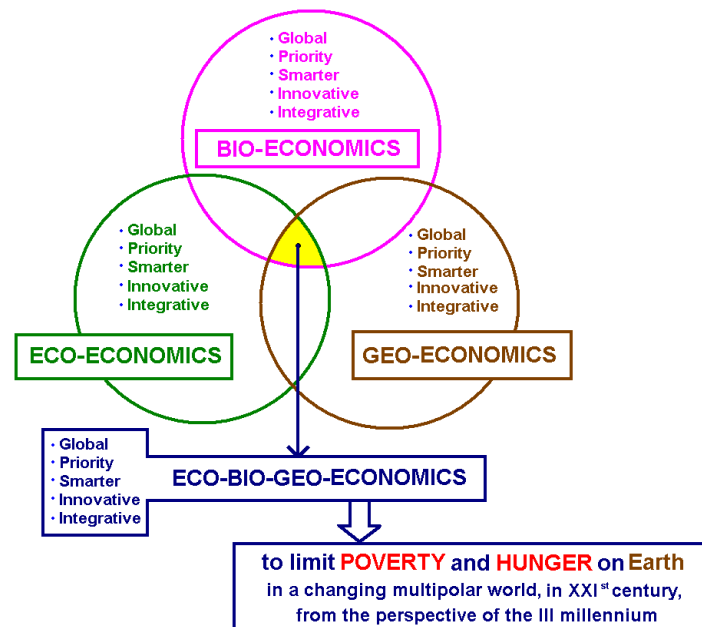
The context of our project addresses: regional natural heritage - biodiversity; eco-economy and bio-economy (socio-economic priorities and humanities), health (consequence of ecosanogenesis) and default environment (through environmental impact on human health issues and animals). The interdisciplinary character and complexity of the project is given the high degree of integration of specific activities interdisciplinary research and experimental development aimed mainly: development of complex analysis and diagnostic studies of the development of sustainable bio priority areas compared with EU practices, formulating and verifying hypotheses networks of firms, exchange best practices for implementing document, and developing the methodology for establishing and operating a network of companies, simulation and optimization of collaborative systems and mechanisms created, identification and assignment of intellectual property rights and experimentation, demonstration of functionality and utility collaborative systems and mechanisms created and their transfer to the main actors in the Eco-zone studied.

3. Results and Discussions

World Charter for Nature formula three fundamental principles that define the current view area: life depends on the functioning of natural systems, humanity is part of nature and all life is unique and deserves to be respected, regardless of its usefulness to humans. Natural capital represented and semi-natural ecosystems, forming “life support”, providing resources and services that underpin socio-economic development. Natural heritage values of biodiversity form to be used by current generations without future generations the chance to enjoy the same living conditions. From this point of view we can speak of a common heritage of mankind. As formulated in the United Nations Conference on Sustainable Development (“Rio + 20 Earth Summit”) in Rio de Janeiro from 20 to 22 June 2012 proposal to reflect on a “green economy in the context of sustainable development and eradication poverty “in accordance with the principle of shared responsibilities is a topic of great interest, the green economy is one that enhances and gives priority to increasing human welfare, while significantly reducing environmental risks and ecological deficit. This proposal supports the redesign of specific public policies that promote sustainable development viable models that are reflected in the reduction of negative environmental impacts, to promote efficient use of energy and natural resources and to avoid loss of biodiversity and ecosystem services.

The final document “The Future We Want” - Outcome Document - Biodiversity signed at Rio + 20 in June 19, biodiversity as a whole, is dealt with professionally, reiterating the point 197, the intrinsic value of biological diversity and severity of total loss biodiversity, ecosystem degradation, which undermines global development, affecting food security and nutrition, and access to water supply and health of the rural population and people worldwide, including present and future generations. Therefore, conservation and sustainable use of biodiversity is of major importance to poverty eradication and environmental sustainability¹. The document promotes international cooperation and partnerships in order to encourage the innovative (Bogdan, Ipate & Covaci, 2013), active involvement of all stakeholders in the conservation and sustainable use of biodiversity and access to fair and equitable sharing of benefits arising from the utilization of genetic resources with a view to live in harmony with nature. The main enemy is poverty and the protection of biodiversity is a distant second in the welfare of humanity and the fight against underdevelopment.

¹ <http://www.unep-wcmc.org/climate-change-and-biodiversity>.

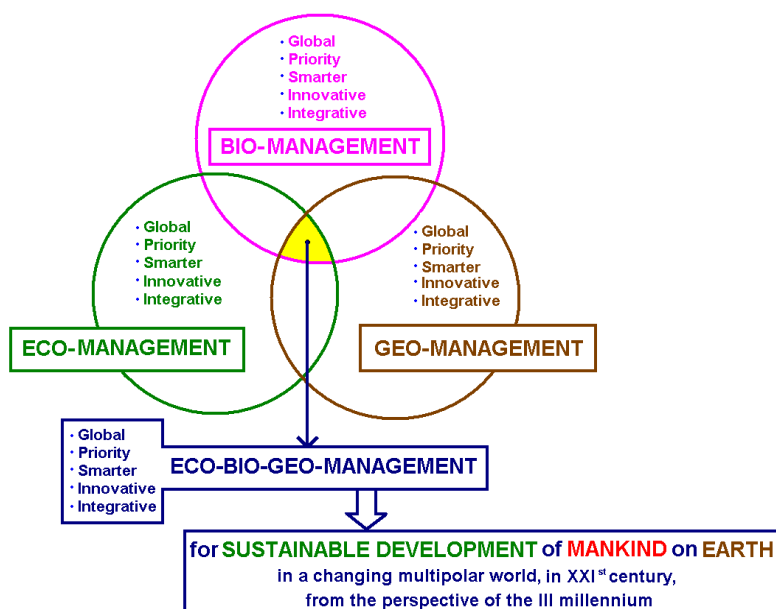


(orig. Alexandru T. Bogdan, Dorina Bogdan and Amalia Străteanu, 2013)

According to estimates of the United Nations Food and Agriculture Organisation (FAO) states that by 2050 global demand for food will increase by 60%¹. Especially agro-biodiversity is a significant example of anthropic ecosystem where man is the builder, regulatory and consumer of agricultural products from different types of agro-ecosystems (extensive, semi-intensive, intensive and super intensive, the degree of artificiality of the environment and the noxious pollutant progressively increase). Correctly EU Programmes scientific research, technological development and innovation carried out within FP6 and FP7 and FP8 the topics already proposed, approached with the utmost seriousness and scientific approach various aspects of national and international bio new strategies, to 2030 and some guidelines for bio horizon of 2050. These issues are part of the intrinsic and essential contribution to programs of economic growth of the EU countries according to the Lisbon objectives 2020. Unfortunately in our country up to the time of submission of this project there another Bio-Platform ECO-BIO-GEO-economic complex interdisciplinary research to ensure increased bio-economy of Romania. By creating the European Commission through the European Research Area COM (2000) finally introduced a new dimension in R & D career requesting the increase of its human resources and mobility. By communicating \\\ “More research for Europe - towards 3% of GDP \\\” and \\\ communicating “Investing in research: an action plan for Europe \\\” ‘Community policies recognize that owning a sufficient number of suitably qualified researchers is an important determinant of

¹ .<http://www.biodiversityinternational.org>.

development. The EU has a detailed strategy on food safety. It covers not only food safety but also animal health and welfare and plant. Strategy provides the ability to track food from farm to table, even if this requires preceding boundaries within the Union. EU food strategy is based three main elements: food safety legislation and feed, advice scientifically necessary decision-making in the field and policy implementation¹ and control Community legal framework on food safety is common to all Member States, but adapted diversity. The EU is making significant efforts to traditional foods should not be removed from the market due to safety standards for food and not be discouraged innovation and product quality will not suffer. The globalization of the food chain is constant cause new challenges and risks to health and consumer interests.



(orig. Alexandru T. Bogdan, Dorina Bogdan and Amalia Străteanu, 2013)

The primary objective of EU food safety policy is to achieve the highest possible degree of protection of human health and consumer interests in relation to food. The context of our project approach: eco-economy and bio-economy (as socio-economic priorities and humanities), biodiversity as a resource for sustainable development; biotechnology; food safety including food chemistry; health (consequence of ecosanogenesis) and average default.

¹ The Millennium Development Goals Report 2012 (We can end the poverty 2015), United Nations, New York, 2012.

4. Conclusions

Ecological diagnosis is a method that allows transparent and accurate assessment for each parcel of biotic and non biotic resources available to an agricultural farm or a natural mountain area. It provides an opportunity to examine and evaluate all existing forms of occupation of land (natural ecosystems or near natural state. Using the evaluation system involves a first decisive stage which consists of an intensive prospecting work in the area of investigation (labor land) with the complete mapping of vegetation and fauna and considering the aspects of important structures in terms of ecology animal can describe the actual situation. In these prospects, there must be localized species and endangered habitat of rare and interesting bio-geographical point of view. For verification method must be performed examinations in soil and water, farm and around the farm in order to obtain the elements necessary to assess a biotic resources.

The overall objective of the project is the structural and functional organization of the innovative by upgrading existing facilities and developing new Bio-Platform ECO-BIO-GEO-agricultural economy meant research and development of innovative and eco-bio emergent geo-economy for the years 2014-2050. The specific objectives of the project ist: construction and equipping of laboratories on new subfields: laboratory for agro-ecology and bio-economy; laboratory for bioinformatics, modeling and simulation processes; laboratory wildlife studies and research; laboratory environmental monitoring and climate change; laboratory biotech biotechnology breeding with genetic and genomic Bank, laboratory of Biotechnology embryo transfer; laboratory for aquaculture and Biotechnical Research. Structural and functional organization of a department, new interdisciplinary research (in the field of eco-bio-geo-economy expanded concept of EU bio-economy strategy, construction and equipping of a service documentation and dissemination of information: multimodal digital platform, conference library and information work and information dissemination.

Correctly scientific research EU Programs, technological development and innovation carried out within FP6 and FP7 and FP8 the topics already proposed, approached with the utmost seriousness and scientific approach various aspects of national and international bio new strategies, to 2030 and some guidelines for bio horizon of 2050. These issues are part of the intrinsic and essential contribution to programs of economic growth of the EU countries according to the Lisbon objectives 2020. Unfortunately in our country up to the time of submission of this

project there another Bio-Platform ECO-BIO-GEO-economic complex interdisciplinary research to ensure increased bio-economy of Romania.

5. References

Bogdan, A.T., Ipate, I., Covaci, B. (2013). *Innovation activities in biodiversity and eco-bio-economics doctoral research for safety and food security*. Bucharest: Economica.

Bogdan, A.T., Ipate, I., Covaci, B. (2013). *Innovation activities in juridical science for sustaining environment, safety and food security, biotechnology and eco-economy trough doctoral research*. Bucharest: Economica.

Brown, L. (2002). The eco-economic revolution – Getting the market in sync with nature. *Futurist* 36 (2): 23-32.

***(2012). The Millennium Development Goals Report 2012 (We can end the poverty 2015), United Nations, New York.

Online Sources

http://www.unep-wcmc.org/our-work_18.html.

<http://www.unep-wcmc.org/climate-change-and-biodiversity>.

http://europa.eu/legislation_summaries/environment/sustainable_development/index_en.h

www.who.int World Health Organization, 2005 – *World Summit Outcome Document*.

<http://www.cbd.int/doc/meetings/cop/cop-09/official/cop-09-20-add1-en.pdf>.

The Economics of Ecosystems and Biodiversity (TEEB) reports:
http://ec.europa.eu/environment/nature/biodiversity/economics/index_en.htm.

<http://www.biodiversityinternational.org>.