

# Bioeconomy and Fundamental Rights: a Possible Relation?

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## Abstract

The Bioeconomy represents an important development factor. Brazil, which has the greatest biodiversity on Earth, occupies an outstanding position on the international stage for the biotechnology and all the opportunities that it is able to provide for the national and regional development, consequently increasing the effectiveness to the human rights. The Biotechnology is a technologic science, which is able to produce or modify living organisms or its derivatives for specific uses, improving production and marketing methods of products and processes which will interfere in human life and health and in environmental conditions. The legal issue emerges as an important factor in the face of this technologic context. The development of the biotechnology assumes a national normative pacing that makes the progress preservation of the fundamental rights possible. In this article reflexions about the possible harmonic relation among the fundamental rights to life, health, environment and biotechnology are present, showing that if there is an adequate regulation which preserves the environmental, social and economic sustainability, the Bioeconomy acts as a consolidator of the fundamental rights.

**Keywords:** *Bioeconomy, fundamental rights, right to life, right to health, biodiversity, biotechnology*

## 1. Introduction

There is a great biodiversity in Brazil, which represents a factor of national, regional and local development in a suitable normative environment. This suitability comes from a constitutional interpretation that captures the contents of the fundamental rights especially the right to the environment.

There is a necessity to bring ecological and economical precepts, in a sustainable standardisation process in a bioeconomy way, to promote sustainability. The biodiversity represents a strategic resource to Brazil which is one of the main megadiverse countries and one of the main international traders in the range of the Convention about Biological Diversity (Fiorillo and Diaferia, 2012).

The meaning of bioeconomy is given by OECD (Organization for Economic Cooperation and Development) which considerate the importance of biotechnology in contributing greatly to the economic production, urgently related to the sustainable development and environmental sustainability, regarding everything in this process to the biotechnology which is responsible to recover degraded areas, improve environmental efficiency of productive

processes, operate in human health by using biological processes and products (Dias and Carvalho, 2017).

The reflective pathway in which this task is based will be conveyed the legal concepts and arguments frequently associated with the risks of the use of the biodiversity for human rights, to show that the biodiversity exists also to help men and in its sustainable use.

The recognition of the human rights is dynamic. They are always in process of being implemented, not being born all at once and not once for all (Bobbio, 2004), being built and rebuilt constantly (Arendt, 2012).

Several authors (Sarlet, 2015; Bonavides, 2015; Silveira, 2010) classify the human rights in dimensions and generations. Human rights from the first generation would be the civil and political rights; the ones from the second generation would be related to the social State, the social, economic, cultural and collective rights. The third generation are the ones related to fraternity, such as the environment right and development. The ones from the fourth generation are the human rights which results from the globalization process coming from the narrowing process of the international relationships, mainly international commerce and the speed of the communication. The human rights incorporate in the internal arrangement as fundamental rights.

The Brazil Federal Constitution of 1988, conceived as a legal, social and political legal mark of the democratic and institutional transition, forming the more advanced Political Card in relation to the fundamental rights of the history of the country (Siqueira Junior and Oliveira, 2007). When it comes to the constitutional rules with full efficacy and immediate applicability, everybody must be concerned, such as public authorities and

the society itself, reminding that the Constitution is not a repository of principles but a tool of the government in which the freedom and the law are ensured, not harmed by the progress (Maximiliano, 2005).

The standards which foresee fundamental rights must be analysed based on a vast natural support (Silva, 2011), not limiting any fundamental guarantees the counterweighing among the principles inserted in specific cases, but being compatible so that the human beings dignity, which is the aim of the Federative Republic of Brazil can succeed.

The environmental right, fundamental guarantee, must be cushioned. What it is intended to show is that the bio-economy is perfectly compatible with the fundamental rights realization. Due to the development of new technologies, the right to live and to be healthy need the sustainable use of natural resources and it is helped by the biotechnology in this process.

This current paper aimed to develop these relationships, when we see a scientific research using environmental elements to improve human life so as to produce medicines, to increase the production of food or to reduce pollution based on better technologies, less polluting. There are some reflections shown about legal issues, which entail the use of biodiversity and biotechnology. Some elements involving new technologies are presented to be thought, based on a new possibility to human life, leaving the assumptions behind, to verify the link between the use of the biodiversity as a fact which generates wealth and the fundamental rights.

Based on this issue, a new paradigm is proposed in which the infra-constitutional rules can be used as an encouragement to the research presuming that it is

appropriate to social demand and the fundamental rights.

Related to the methodological procedure, it has been carried out an exploratory and descriptive research, in which legal issues are presented. They convey that the bioeconomy is a factor which add protection to the fundamental rights. The legislative scenarios must be improved to assert the fundamental rights searching for alternatives to solve problems. A documental and bibliographic research has been carried out from material collected mainly from books, scientific articles, doctoral thesis, scientific magazines and legislations.

## **2. Environmental rights and biotechnology**

The environmental rights is frequently an international issue and it leads to various global concerns due to the understanding that men do not live without the environment, which brings the compelling necessity to bear in mind for all people who live in this Planet that every development must be sustainable. According to our laws, the Brazilian Constitution system order that the environment must be preserved for present and future generations.

The environmental matter when it comes from the use of biodiversity is firstly discussed in an international scene, always focusing the human being and the conservation of the biodiversity. The fear towards the potential risks have brought about difficulties in a better understanding of the biodiversity, due to restrictions that are not always justified. This situation has been brought to the Brazilian law and persisted in Brazil until the enactment of the law number 13123, 20th May 2015, which came to soften science problems at home by simplifying the access to natural resources. However, there is a lot to improve, mainly related to the distribution of benefits.

The biodiversity has the power to become an important factor for the social and economic development. Brazil houses 12% of the global biodiversity, and it is the country with the greatest macro and microbiological diversity on Earth. It is estimates that there are 500,000 plant species terrestrial ecosystems, 16% are found in the Brazilian Amazon Region. Among these, less than 10% have been chemically studied, and only a small number have their biologic properties characterized. Half of the 25 top selling drugs around the world are originated from herbal active ingredients (Lima, 1999; Barbosa, 2001).

The potential of the biodiversity as a starting point of the biotechnological products has been able to establish new paradigms in treating diseases in using new drugs in human beings and animals in using sustainable biodiversity, in treatment and recovery of residues and more, innovating and generating new products (Decret n. 6.041/2007).

In the document "The Bioeconomy to 2030: designing a policy agenda (OECD, 2009) the role of the biotechnology in the Global economy in the next 2 decades and the public politics must be developed to maximize its benefits. The document point out the necessary measures such as the simplifications of regulations, which is brought from a modern and innovative legislation that follows technological and economic evolutions.

All these possibilities are conveyed as opportunities to leverage the national development based on the knowledge and innovations then generating employment, allowing local and regional development increasing the export of products with higher added value, reduction in imports, clean production with minor environmental impact.

The potential effects of the application of the biodiversity resources and of the biotechnology on behalf of the human being show that it is possible to reverse the traditional analysis related to health and life risks with the biotechnology can represent to the benefits that the same to the rights of life and health if the criteria of sustainability is observed.

### **3. The rights to life and health**

This protection towards the fundamental rights to life and health is of utmost importance in the Constitutional text. The right to life is inserted in the Constitution as a immutable clause. Undeniably it is a precondition to the other rights, which is the most basic and sacred among all presenting the right to exist and the right to have an adequate standard of living (Tavares, 2011).

The concept of the right to live improved to be considered a right to have a decent standard of living, involving all the human needs and rights, including the rights to health and all the Technologies involved, the right to have a environment and healthy food in which good standard of living is guaranteed.

The right to health has become a fundamental right by the Federal Constitution 1988, article 196, as being a right for everyone guaranteed by the Government. Moreover, in order to reduce the risks to any disease measures must be adapted. On the other hand, if the disease is consolidated one must have universal and equal action and services to recover properly.

The insertion of the right to health as fundamental is an important Constitutional framework as the fundamental rights are basic elements to traduce the democratic principle (Canotilho, 2005). The fundamental rights are born and are

developed by the Constitutions in which they are recognised and ensured.

At this point, the Federal Constitution 1988 seeked for the alliance between the State of the Right and the Social State, in a way that the State of the Right should guaranteed the rights of the citizens, preventing the state from joining its field of rights and furthermore, the State post an action itself, a positive and efficient one, in order to fulfil the social dimension of the concept of the State in which it is established (Coelho, 2002).

The State must adapt public polices to satisfy the relative prescriptions to the right to health that researches are included with the use of biodiversity resulting in benefits to maintain health. The coverage of this politics related to the rights to health must be wide when it comes to promote health prevent disease and diagnosis, treatment and researches on behalf of health.

All the available efforts must be considered to reach the state of health which was proposed by World Health Organization, anticipating the right to health is everyone's right and that the perception of a better state of health is one of the fundamental right for every human.

### **4. The impact of the bioeconomy in the fundamental rights to life, health, environment and biotechnology**

From what was mentioned before, it is possible to verify the strong relationship among the rights to life, health, environment and biotechnology on behalf of the sustainability, environmental, social and economically speaking.

The biotechnology can play an important role coherent with the purposes of the state in relation to the fundamental rights especially because the population and its needs are rising and the resources are limited. When science develops better

Technologies directly linked to health, higher accuracy in diagnosis, more efficient drugs with less side effects, the rights to life and health are implemented.

The topic is complex and provokes several discussions. Varied issues are originated from the fact that the national laws need adequate accuracy because they are not able to solve all the issues related to this content. The internal legal system allows the balance of the interests between the mega-diverse countries and the rich countries biotechnological speaking making them able to produce drugs from the biodiversity (Mont'alverne and Andrade, 2011).

According to the Brazilian Development of Biotechnology Politics and the National Biotechnology Committee, set by the Decret n. 6.041/2007, biotechnology is one of the most technologic tools at present, and its use contributes with the boost of the standard of living, leading to new ways to the economic development, with the establishment of an adequate environment to develop products and new biotechnological processes, with the encouragement to a better efficiency of the national productive structure with the increase in innovating Brazilian enterprises, with the absorption of Technologies, with the business generation and with the expansion of exports.

Despite its various benefits the biotechnology has brought about heated discussion (fundamental rights, biodiversities, bio-rights, trademarks and ethic). The future of the biotechnology depends on economic and social factors which condition the industrial development and the way the national politics will be implemented, so as to create a favorable environment to the improvement of technology, then the full efficiency of the fundamental rights are guaranteed due to their natures of principles optimization (Alexy, 2014).

When a question is raised, a range of legal and ethic implications arises. Some specific regulations based on a sustainable focus are the ideal solution. Furthermore, the research is essential and the laws that follow the progress of science are very important. The law should follow the development of the society and then provides secure means to guarantee improvement, in view of its complexity and is various interests.

The national legislative environment is improving to act in favour of these objectives, within the limits of the duality between the precautions against the risks and indispensability of the scientific knowledge about biodiversity and its biotechnological appliances. The rules to access the research are being refined with a higher number of participants, in a democratic and pluralist context (Häberle, 2002), but it is not the end, mainly when the distribution of benefits is concerned.

In the following years the topics that entail biotechnological actions must sign maturity and their complicated relations with the fundamental rights. An exploitation of these themes free from prejudice is proposed, conciliating the security of the fundamental rights towards the biotechnological researches. The innovation itself is perfectly compatible with the fundamental rights, the principles and causes of Federative Republic of Brazil and must be encouraged.

## 5. Conclusions

The concerns related to the human rights guarantee are known and extremely important, but the issues raised in this article, about the relationship between the Bioeconomy and the fundamental rights, can be a counterpoint to a reflection about the restrictive interpretation of the use of these rights, making them more concrete with the use of new biotechnological

practice. The biotechnology provides improvements to the use of natural resources and in the end, it enables the achievement of the rights to life, health and to the environment.

The Bioeconomy, which entails the biotechnology as a basics in the process of production and transformation, is an important tool for sustainable development for megadiverse countries, ensuring the development since the macro environmental (national) with the distribution of the product obtained from the use of biodiversity resources, until the micro (local) with the distribution of the benefits of the use of traditional knowledge associated to biodiversity.

There are many challenges faced by the law when it comes to the possibilities brought by biotechnology. A proper normative environment can promote the, social and economic sustainability preserving the fundamental rights.

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