



LATIN AMERICAN AND CARIBBEAN FORESTRY COMMISSION

THIRTY-FIRST SESSION

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8.4 FORESTS AND THE BIOECONOMY

Annex 1: Note by the Government of Uruguay

I. Bioeconomy

1. FAO defines bioeconomy as the knowledge-based production and utilization of biological resources, biological processes and principles to sustainably provide goods and services across all economic sectors. It involves three elements:

- The use of renewable biomass and efficient bioprocesses to achieve a sustainable production;
- The use of enabling and converging technologies, including biotechnology;
- Integration across applications such as agriculture, health and industry.

2. Bioeconomy is a cross-cutting approach that offers a unique opportunity to comprehensively address interconnected societal challenges such as food security, fossil-resource dependence, natural resource scarcity and climate change, while achieving sustainable economic development.

3. Achieving sustainable bioeconomy development faces many challenges that concern not only ensuring food security but also addressing climate change and managing natural resources (land, forest, water and biodiversity) in a sustainable way, managing competition between different uses of biomass feedstocks, while guaranteeing that bioeconomy development benefits everybody. It is therefore crucial to establish guidelines that enable it to be developed in a sustainable way.

4. In January 2015, on the occasion of the Global Forum for Food and Agriculture (GFFA) meeting in Berlin, participants, including 62 ministers of agriculture, discussed sustainable bio-based and diversified forms of agriculture and how to efficiently produce healthy and high quality food, promote

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the use bioenergy, protect the environment and respond to climate change. They recommended that FAO coordinate international work on bioeconomy. As a follow up, the German Ministry for Food and Agriculture (BMEL) has provided support to FAO to start working on Sustainable Bioeconomy Guidelines. The guidelines will be validated through regional and specific stakeholder meetings.

5. FAO also contributes actively to other bioeconomy international fora, including the International Advisory Committee (IAC) of the Global Bioeconomy Summit (GBS), and the International Bioeconomy Forum (IBF).

6. Investments in bioeconomy-related research, development and innovation have paved the way for new wood-based productions, that could well expand during the coming years and decades. Construction of high-rise wooden buildings is expanding in a range of countries. Innovations towards wood-based bioeconomies include textile fibres from cellulose as substitute to oil-derived synthetic products, hygiene products containing lignin derivatives, lignin-based products used for livestock feed granule production and woodbased biocomposites. These and other emerging products and markets are key entry points for wood-based bioeconomies.

7. In order to strengthen sustainable wood value chains and to improve their social, economic and environmental benefits from production to consumption, FAO recently launched the “Sustainable Wood for a Sustainable Wood Sustainable World ”(SW4SW) initiative. It is a Joint Initiative of the Collaborative Partnership on Forests (CPF) led by the FAO together with its Advisory Committee on Sustainable Forest-based Industries (ACSFI) and in collaboration with the Center for International Forestry Research (CIFOR), the International Tropical Timber Organization (ITTO), the World Bank (WB) and the World Wildlife Fund (WWF). The initiative aims at strengthening sustainable wood value chains and to increase the contributions of these value chains to the Sustainable Development Goals (SDGs), to the Global Forest Goals and to climate change commitments. This comprises advancing knowledge and promoting forest contributions to the bioeconomy, including use of FAO data for reports on status and trends in trade of wood and paper products covering whole value chains.

II. Points for consideration

8. The Regional Forestry Commission may wish to invite countries to:

- Explore ways to approach bioeconomy in the forestry sector in the Region.
- Contribute to the preparation of FAO guidelines that adequately include contributions of forests and their management and to ensure sustainability.

9. The Regional Forestry Commission may wish to invite FAO to:

- assess and harness the main contributions of sustainable forest-based value chains to the SDGs and climate change mitigation and adaptation in the region .
- seek further cooperation with regional partners to build capacities to strengthen sustainable wood value chains and their contributions to advance sustainable development objectives.

Annex 1

Document prepared by the Government of Uruguay on Forests and the bioeconomy

1. Bioeconomy is the integration of economic sectors that use renewable biological resources such as plants, trees, animals and microorganisms, among others, in order to replace fossil fuels and produce food, materials, services, energy and other products of biological origin.
2. Raising awareness of the scarcity of natural resources, food security, dependence on fossil resources and climate change, provides the countries with an opportunity to include these problems in their agendas and address the same through a bioeconomic approach while achieving a sustainable economic development.
3. The concept of a new economy with a biological and sustainable basis in environmental, social and economic terms is being currently implemented in various countries and regions such as the European Union, through the use of renewable materials from forests and applying new marketable technologies and successful forest-based bioeconomic products.
4. Activities related to forest-based bioeconomy have a significant effect on climate change mitigation, as they provide alternatives to fossil fuel-based products and increase carbon sequestration through the development of forest plantations.
5. Uruguay defines bioeconomy as one of the drivers of the productive transformation needed to leverage a sustainable development, through the incorporation of new bioprocesses into the goods and services production, resulting in higher value-added products from a proper use of natural resources.
6. The "National Development Strategy, Uruguay 2050" being developed since 2017 by the Planning Directorate of the Planning and Budget Office (OPP, acronym in Spanish), includes a prospective study on "Forest Bioeconomy by 2050" with the technical support of Finnish and local forest experts, working in a coordinated manner through effective Governance represented by Ministries, Research Institutes and the Academia.
7. The Bioeconomy Strategy is built on the basis of the forest-wood-cellulose value chain, identifying five areas such as forest management, mechanical and chemical transformation of wood, biorefining and bioenergy, with sustainable forest management being a key factor.
8. At the country level, the objective is to develop a roadmap aimed at boosting the potential of the wood-based industry through high value-added products, with special emphasis on forest plantations. It also includes a value increase of the native forest with emphasis on the adequate use of the resource, based on ecosystem services, timber and non-timber products, as opportunities for a greater productive integration, particularly with livestock, meaning tangible benefits to all the parties involved.
9. Finally, it is worth noting that Uruguay participates in the International Sustainable Bioeconomy Working Group (ISBWG) along with 24 other countries, organizations, universities and regional blocks, coordinated by FAO. In close collaboration with the German Ministry of Agriculture (BMEL), Uruguay is developing a Sustainable Bioeconomy Strategy based on existing public policies in order to develop and implement national and regional strategies, policies and programmes on sustainable bioeconomy.
10. Uruguay experience showed that:
 - Bioeconomy as one of the main ways to achieve the United Nations Sustainable Development Goals by 2030.
 - Promote innovative and environmentally sustainable trade practices, guiding people in the use of forest biomass products to contribute to the development of bioeconomy.

- Get acquainted with the experience of other countries regarding national and regional sustainable bioeconomy programmes, in order to identify measures, policies and previous actions that can be integrated into the Forest Bioeconomy Strategy of Uruguay.
- Identify regional production and innovation drivers in existing and potential forest value chains through the sustainable use of native forest resources.

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Annex 2

I. Principles and Criteria (P&Cs) for Sustainable Bioeconomy, which were formulated in collaboration with the International Sustainable Bioeconomy Working Group (ISBWG) in 2016 and have been incorporated in the FAO sustainability framework for bioeconomy.

TABLE 1.
ASPIRATIONAL PRINCIPLES AND CRITERIA (P&Cs) FOR SUSTAINABLE BIOECONOMY AGREED BY THE INTERNATIONAL SUSTAINABLE BIOECONOMY WORKING GROUP
PRINCIPLE 1. SUSTAINABLE BIOECONOMY DEVELOPMENT SHOULD SUPPORT FOOD SECURITY AND NUTRITION AT ALL LEVELS
Criterion 1.1. Food security and nutrition are supported Criterion 1.2. Sustainable intensification of biomass production is promoted Criterion 1.3. Adequate land rights and rights to other natural resources are guaranteed Criterion 1.4. Food safety, disease prevention and human health are ensured
PRINCIPLE 2. SUSTAINABLE BIOECONOMY SHOULD ENSURE THAT NATURAL RESOURCES ARE CONSERVED, PROTECTED AND ENHANCED
Criterion 2.1. Biodiversity conservation is ensured Criterion 2.2. Climate change mitigation and adaptation are pursued Criterion 2.3. Water quality and quantity are maintained, and, in as much as possible, enhanced Criterion 2.4. The degradation of land, soil, forests and marine environments is prevented, stopped or reversed
PRINCIPLE 3. SUSTAINABLE BIOECONOMY SHOULD SUPPORT COMPETITIVE AND INCLUSIVE ECONOMIC GROWTH
Criterion 3.1. Economic development is fostered Criterion 3.2. Inclusive economic growth is strengthened Criterion 3.3. Resilience of the rural and urban economy is enhanced
PRINCIPLE 4. SUSTAINABLE BIOECONOMY SHOULD MAKE COMMUNITIES HEALTHIER, MORE SUSTAINABLE, AND HARNESS SOCIAL AND ECOSYSTEM RESILIENCE
Criterion 4.1. The sustainability of urban centres is enhanced Criterion 4.2. Resilience of biomass producers, rural communities and ecosystems is developed and/or strengthened
PRINCIPLE 5. SUSTAINABLE BIOECONOMY SHOULD RELY ON IMPROVED EFFICIENCY IN THE USE OF RESOURCES AND BIOMASS
Criterion 5.1. Resource efficiency, waste prevention and waste re-use along the whole bioeconomy value chain is improved Criterion 5.2. Food loss and waste is minimized and, when unavoidable, its biomass is reused or recycled
PRINCIPLE 6. RESPONSIBLE AND EFFECTIVE GOVERNANCE MECHANISMS SHOULD UNDERPIN SUSTAINABLE BIOECONOMY
Criterion 6.1. Policies, regulations and institutional set up relevant to bioeconomy sectors are adequately harmonized Criterion 6.2. Inclusive consultation processes and engagement of all relevant sectors of society are adequate and based on transparent sharing of information Criterion 6.3. Appropriate risk assessment and management, monitoring and accountability systems are put in place and implemented
PRINCIPLE 7. SUSTAINABLE BIOECONOMY SHOULD MAKE GOOD USE OF EXISTING RELEVANT KNOWLEDGE AND PROVEN SOUND TECHNOLOGIES AND GOOD PRACTICES, AND, WHERE APPROPRIATE, PROMOTE RESEARCH AND INNOVATION
Criterion 7.1. Existing knowledge is adequately valued and proven sound technologies are fostered Criterion 7.2. Knowledge generation and innovation are promoted
PRINCIPLE 8. SUSTAINABLE BIOECONOMY SHOULD USE AND PROMOTE SUSTAINABLE TRADE AND MARKET PRACTICES
Criterion 8.1. Local economies are not hampered but rather harnessed by the trade of raw and processed biomass, and related technologies
PRINCIPLE 9. SUSTAINABLE BIOECONOMY SHOULD ADDRESS SOCIETAL NEEDS AND ENCOURAGE SUSTAINABLE CONSUMPTION
Criterion 9.1. Consumption patterns of bioeconomy goods match sustainable supply levels of biomass Criterion 9.2. Demand and supply-side market mechanisms and policy coherence between supply and demand of food and non-food goods are enhanced
PRINCIPLE 10. SUSTAINABLE BIOECONOMY SHOULD PROMOTE COOPERATION, COLLABORATION AND SHARING BETWEEN INTERESTED AND CONCERNED STAKEHOLDERS IN ALL RELEVANT DOMAINS AND AT ALL RELEVANT LEVELS
Criterion 10.1. Cooperation, collaboration and sharing of resources, skills and technologies are enhanced when and where appropriate

