



VISION DECLARATION

"Scaling-up the low carbon bioeconomy: an urgent and vital challenge"

Ministers and high-level representatives of Argentina, Brazil, Canada, China, Denmark, Egypt, Finland, France, India, Indonesia, Italy, Morocco, Mozambique, Netherlands, Paraguay, Philippines, Sweden, United Kingdom, and Uruguay gathered together on November 16, 2017, in Bonn, Germany, and stated the following:

Context

1. The overarching objective behind the conformation of the Biofuture Platform, launched by our countries one year ago in Marrakesh, is to increase the use of low carbon sources (i.e. sustainable biomass) as the feedstock for the production of energy, chemicals and materials. In the not-so-distant past, the world relied almost entirely on renewable resources, including biomass, for food, energy, and shelter. We ask you to envision a future where this is once again true – many modern needs including plastics, materials of construction, clothing and more importantly energy, can be met by biomass. It has been estimated that, by 2050, half of world's chemicals and materials could be produced from renewable resources.
2. In terms of energy, the need is critical. According to recently updated analysis and long-term scenarios by key international agencies - such as the International Energy Agency (IEA) and the International Renewable Energy Agency (IRENA) - sustainable bioenergy is an indispensable component of the necessary portfolio of low carbon measures, with a high risk of failing to meet long-term climate goals without its contribution. Bioenergy is key in several areas, including heating and transport, and particularly in heavy freight, maritime, and air transport where other practical options are scarce.
3. In order to limit the increase in global average temperature to well below 2°C above pre-industrial levels and pursue efforts to reach 1.5°C, bioenergy and biofuels share in the global energy matrix must be accelerated to achieve at least a doubling in the next 10 years, even assuming much higher levels of energy efficiency, high levels of electrification of transport, and deployment of other renewables. Bioenergy can also reduce other forms of atmospheric pollution and enhance energy diversity and security.
4. The expanded bioeconomy (defined, for the purposes of this Statement, as a set of economic activities related to the invention, development, production and use of biological products and/or processes for the production of renewable energy, materials and chemicals) must be based on sustainable practices to ensure unequivocal carbon savings and to avoid any other detrimental environmental, social or economic impacts. Realizing this potential will require the development, demonstration and deployment of a number of innovative processes, fuels and materials which can meet demanding performance standards while meeting strict sustainability criteria. An expanded sustainable bioeconomy, respecting biodiversity, can also provide wider environmental, social and economic benefits by replacing fossil feedstocks, by creating jobs and by promoting regional development, in alignment with Sustainable Development Goals (SDGs).
5. The UN Food and Agriculture Organization (FAO), IEA-Bioenergy, IRENA and others have maintained that sustainably scaling up the bioeconomy is possible, given smart agricultural practices, better use of rural and urban waste, and proper policies. Forests, plants, and marine organisms convert over 250 billion tons of atmospheric CO₂ into potentially high value products every year. Recognizing and

safeguarding the role of biomass and biomass based products as a long term carbon sink, the potential certainly is there, but its realization will require significant innovation and investment, and its achievement will require ongoing collaboration and collective action.

6. Despite this growing consensus, however, bioenergy and bio-based product deployment and investments are not growing quickly enough, and the technology suffers from a number of barriers, including early stage scale challenges, financial risks, oil and feedstock price volatility and policy uncertainty. *This is why creating the conditions for scaling up the low carbon bioeconomy is both an urgent and vital challenge.*

Vision and Aspirational Targets

7. According to the best available projections by international agencies such as the IEA and IRENA, by 2030 there will need to be a widespread increase in the production and use of sustainable biofuels and bioproducts, including a doubling of the contribution of sustainable modern bioenergy to final energy demand and a tripling of the share of sustainable, low carbon fuels as a percentage of transport fuels, including sea and air transport.

8. Noting those projections, our countries are determined to lead the way forward by contributing, according to their own national circumstances, policies, targets, and points of departure, to the following aspirational, collective goals for 2030:

- Significantly increase the contribution of sustainable modern bioenergy to final energy demand.
- Significantly increase the share of sustainable, low carbon biofuels as a percentage of transport fuels (including sea and air transport).
- Progressively increase the average lifecycle carbon savings from biofuels production compared to fossil fuels.
- Spur bioeconomy innovation and the commercial advancement for production of low carbon biofuels at scale so that they become broadly cost competitive with fossil fuels when the value of the carbon savings is taken into account.
- Significantly increase global investments in the sustainable low carbon bioeconomy, including on advanced, flexible biorefineries capable of producing energy and bio-based products.
- Multiply the expenditure by governments and industry on research and innovation in the bioeconomy.

Taking action

9. Delivering this inspiring but challenging vision will require a coordinated international effort involving a wide number of stakeholders. It will be up to individual countries and stakeholders to explore the potential of possible actions and implement a strategy given their circumstances. It will be important for governments at all levels, academia, industry and finance institutions to work together to develop a comprehensive suite of actions for consideration and to collectively pave the way to a lower carbon future.

10. Taking action is urgent, and some actions already being implemented by different countries and other stakeholders, which may serve as examples for others to consider, include the following:

By governments:

- Provide supporting policies, programmes and regulatory frameworks to enable the development and deployment of sustainable biofuels and bio-products. Examples of such policies – a number of them already being implemented in Biofuture countries, according to their national reality and circumstances, include:
 - Removing inefficient subsidies for the production and use of fossil fuels;
 - Introducing carbon pricing regimes covering a wide range of energy sectors and scales of operation;
 - Establishing specific targets and/or mandates for deployment of biofuels in transport;
 - Facilitating market development by active national procurement of advanced biofuels and bioproducts when performance specifications are achieved;
 - Implementing specific incentive regimes for more efficient forms of bioenergy, directly tied to their carbon emission savings;

- Incorporating the low-carbon bioeconomy in emerging national circular economy strategies, including the use of rural and urban waste as feedstocks;
- Establishing integrated value chains linking a wide range of industries and organizations from biomass growers to bio-product and bioenergy users;
- Promote international biofuels trade by fostering sustainability and quality standards for bio-fuels;
- Design and implement practical, science-based sustainability frameworks and regulations, including, among other mechanisms, carbon life-cycle (well-to-wheel) analysis and risk-based approaches;
- Enable the development and commercialization of novel sustainable bio-based fuels and products by specific policies targeting early stage technologies;
- Encourage the use of solid biomass in efficient stationary applications, including combined heat and power (CHP) systems and district heating systems, to provide energy to industry and buildings;
- Implement smart agricultural policies to promote a sustainable, reliable and affordable supply of feedstock, including restoration of degraded lands and protection of biodiversity, introduction of short rotation and perennial energy crops, reducing loss and waste, improving residue collection and promoting intercropping and agroforestry;
- Increased support for research, development and demonstration for the low carbon bioeconomy, including on new, innovative and cost-effective products and chemicals from biomass;
- Establish collaborative international capacity building including training and incentives for researchers and students.

By industry:

- Increase investment in development and innovation aimed at sustainably producing high performance equipment, components, processes and end products in the energy, materials and chemical sectors, helping them to become competitive with fossil based products when external environmental costs are factored in.
- Become users of advanced bioproducts when performance specifications and sustainability requirements are achieved and products are competitive taking carbon and other benefits into account.

By the finance community (including international financial institutions, development banks, and private finance institutions and funds):

- Increase priority given to low carbon sustainable bioeconomy projects as a key part of renewable energy, climate change mitigation and "green" financing portfolios, greatly increasing available resources.
- Deploy loan guarantees and other financial instruments to facilitate development, production and market deployment of low carbon fuels and bio-based products.

By the research community:

- Lead high quality research into new and/or improved bio-based processes and products and conversion and utilization systems optimized for bioenergy.
- Provide high quality evidence and analysis relating to the sustainability of bioenergy and bioproducts so as to build public confidence and consensus.
- Produce technical advice to support government design of public policies for the bioeconomy.

11. The role of the Biofuture Platform, in collaboration with international organizations and initiatives such as those mentioned in its Launch Statement, is to provide a forum to support this collaborative effort and help monitor progress towards achievement of the vision. Following the present Vision Statement, the Biofuture Platform shall undertake a detailed analysis, using recent data and reports from national and international agencies and initiatives, national strategies, and inputs such as the Biofuture State of the Low Carbon Bioeconomy report, with a view to: a) work towards more specific targets; b) devise an action plan outlining detailed actions to support achieving the targets; and c) develop a reporting mechanism to track progress.