



Federal Ministry  
of Education  
and Research

# Bioeconomy International

**Global collaboration for bio-based economy**



# Applying global knowledge – strengthening bioeconomy

**To supply the world sustainably with food, renewable raw materials, and environmentally friendly energy, bio-based economy is essential – as is worldwide collaboration. With the increasing internationalization of science and research, the German federal government has undertaken responsibility for the global challenges of world nutrition, climate and environment protection as well as strengthening Germany in its role as a bioeconomy hub.**

The challenges of the future can be met only in joint efforts. By the middle of this century, eight to ten billion people will need sufficient food for healthy nourishment. Our finite supply of fossil raw materials, and threatening climate change, demand the development of an economy based on renewable resources. With the aid of sustainable agriculture, bioeconomy contributes toward assuring sufficient world nutrition and, in addition, supplying bio-based products and energy.

With its funding programme Bioeconomy International, the German Federal Ministry of Education and Research (BMBF) supports model international research and devel-





opment projects between German partners and partners outside Europe. Three rounds of calls for proposals had taken place by 2015, **and additional yearly calls are planned.** Joint ventures with Argentina, Brazil, Canada, Chile, China, India, Malaysia, Russia and Vietnam enjoy priority, but associations with partners from other non-EU countries are also possible.

### **Jointly pursuing the vision of a bio-based economy**

The BMBF funding programme Bioeconomy International is a part of the National Research Strategy Bio-economy 2030 of the German federal government. The funded projects are expected to provide significant contributions to one of the five fields of action of the National Research Strategy:

- Securing global nutrition
- Ensuring sustainable agricultural production
- Producing safe and healthy food
- Using renewable resources for industry
- Developing biomass-based energy.

One example from the funding programmes: Within the context of climate change, rising water levels are expected for the two large Vietnamese river deltas. Moreover, the Vietnamese population continues to increase. As part of the BMBF-funded collaborative project DeltAdapt, research is taking place in the sustainable cultivation of rice, aquacultures and rice-shrimp systems. Scientists are studying not only questions concerning water quality, soil fertility and the environment – but are also investigating socio-economic aspects such as impact on income and rural depopulation.

Other projects with Argentinian, Chilean and Russian teams are researching the optimization of value-added chains. New processes for waste recycling are an important key for sustainable use of the resources of land and water.

### **Nutrition has priority**

The transformation to a bio-based economy results from the interplay of many factors. This shift is being decisively driven by scientific and technical innovations, but its success will also depend on social processes as well as on the interactions among society, technology, economy and ecology. Factors include population growth, land-use conflicts and competition for scarce resources. The German federal government, however, is determined that transformation to a bio-based economy must not lead to use conflicts over fertile land. Safeguarding the supply of food has priority over the material or energetic use of biomass.

The BMBF funding programme supports the German project partners. The contribution of the foreign partner should be financially secured and should be comparable in extent to the German share. Applications for funding can be made by universities and non-university research facilities, German state and federal organizations as well as companies registered in Germany – especially including small and medium-sized enterprises.



**International collaborative projects support the strategy of the German federal government in the internationalization of science and research efforts, and in developing new innovation potentials.**

Establishing more international cooperation is a key cross-sectoral activity of the German National Research Strategy Bioeconomy 2030. The government funding programme Bioeconomy International pursues the following primary goals:

- Strengthening of research collaboration with leading international institutions
- Development of international innovation potentials
- Sustainably strengthening collaboration with developing countries in education, research and development
- Assuming international responsibility and meeting global challenges

International collaboration offers the opportunity of making new, bio-based products, processes and services available for Germany as a bioeconomy hub – as well as acquiring needed competences and sharing expertise and leading technologies. For funding of projects, one selection criterion is accordingly their contribution to implementation of the German National Research Strategy.



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