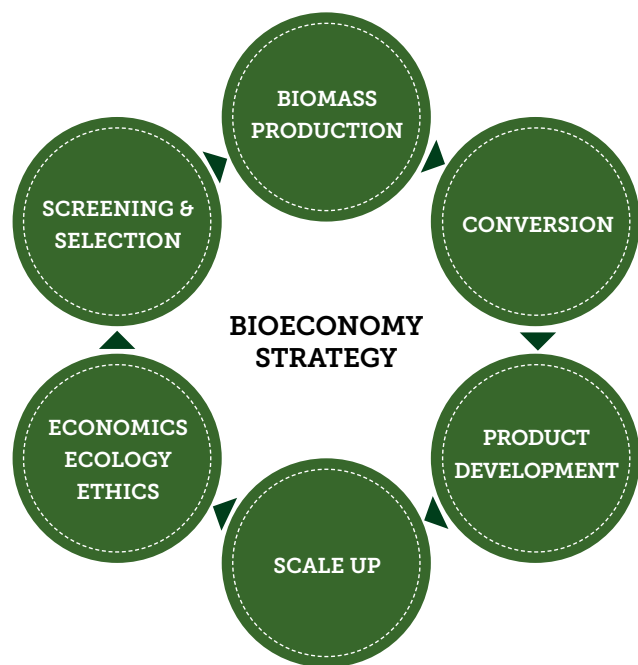


INTERDISCIPLINARY RESEARCH ALONG INNOVATIVE VALUE CHAINS

This research program implements Baden-Württemberg's systemic research strategy for bioeconomy. It contributes to the development of new economic strategies which use biomass instead of fossil resources and at the same time ensure global food security. An interdisciplinary systemic approach is necessary to analyze entire value chains in order to develop sustainable products and processes. This includes the selection of genotypes, biomass production and conversion, product development as well as economic, ecologic, ethic and societal aspects.



This is being realized through the interaction of excellent universities and research centers, that are collaborating in more than 50 projects selected in a peer review process. Existing expertise in Baden-Württemberg is focused on the common goal of the enhanced use of renewable resources. At the same time Baden-Württemberg is investing in training of young bioeconomy experts in order to shape the future with bioeconomy.

CONTACT

Coordination Office
 Bioeconomy Research Program Baden-Württemberg
 Dr. Annette Weidtmann
 Wollgrasweg 43 | 70599 Stuttgart | Germany
 P +49 (0)711 459-22827
 E bioeconomy-bw@uni-hohenheim.de

www.bioeconomy-research-bw.de

CHAIRS

- › Prof. Dr. Thomas Hirth (Steering Committee)
- › Prof. Dr. Enno Bahrs (Biogas)
- › Prof. Dr. Nicolaus Dahmen (Lignocellulose)
- › Prof. Dr. Harald Grethe (Modeling)
- › Prof. Dr. Jochen Weiss (Microalgae)
- › Prof. Dr. Thomas Rausch (BBW ForWerts)

PARTNERS

- › Karlsruhe Institute of Technology (KIT)
- › University of Freiburg
- › University of Heidelberg
- › University of Hohenheim
- › University of Stuttgart
- › University of Tübingen
- › University of Ulm
- › BIOPRO Baden-Württemberg GmbH
- › Centre for European Economic Research (ZEW)
- › DVGW-Research Centre at the Engler-Bunte-Institut of the KIT
- › Forest Research Institute Baden-Württemberg
- › Fraunhofer Institute for Chemical Technology (ICT)
- › Max Rubner-Institute
- › University of Applied Forest Sciences Rottenburg

Funded by



Baden-Württemberg

MINISTERIUM FÜR WISSENSCHAFT, FORSCHUNG UND KUNST



SHAPING THE FUTURE WITH BIO-ECONOMY



INNOVATIVE PRODUCTION AND USE OF BIOMASS

THE RESEARCH PROGRAM IS FOCUSING ON THE FOLLOWING RESEARCH AREAS:



LIGNOCELLULOSE – ALTERNATIVE RESOURCE PLATFORM FOR NEW MATERIALS AND PRODUCTS

- Biomass from agriculture and forestry: selection, breeding, cultivation and harvesting
- Impact of biomass production on ecosystems
- Efficient conversion and preparation techniques
- Development of new processes and products derived from cellulose- and lignin fractions
- Systemic analysis of value chains



BIOGAS – SUSTAINABLE AND FLEXIBLE VALUE CHAINS IN BADEN-WÜRTTEMBERG

- New and optimized technologies for biomass production, conversion and use
- Potential of biogas production in context of new German legislation (EEG 2014)
- Modeling of food- and non-food markets (including other regenerative energy and bioenergy production)



MICROALGAE – INTEGRATED USE FOR FOOD AND FEED

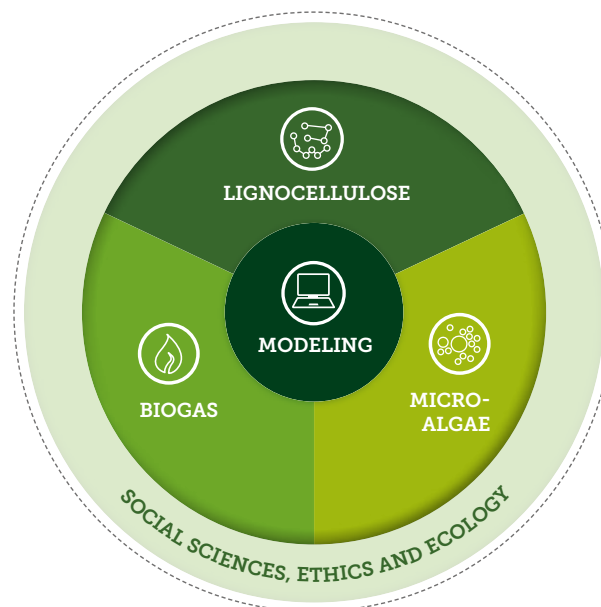
- Resource saving production of proteins and essential fatty acids in microalgae
- Optimization of cultivation, harvesting and processing
- Functionality in food technology
- Nutrition physiology
- Sustainability assessment, consumer acceptance, economic modeling



COMPETENCE NETWORK MODELING THE BIOECONOMY

The availability of biomass is limited by the availability of land. With an increasing demand of biomass world wide, competition between the production of food, feed, energy and other products will increase. The competence network aims to analyze, compare and evaluate potential biomass value chains for their direct and indirect economic and ecologic impacts. Different technological and economic simulation models at various aggregation levels will be adapted, combined and applied.

- Farm-, agricultural sector and economic models
- Modeling of energy systems and biomass conversion plants
- Models for ecological impact and life cycle analysis



SOCIAL-SCIENTIFIC AND ECOLOGICAL ACCOMPANYING RESEARCH

The impact on ecosystems and health, as well as consumer acceptance of new technologies and products will be addressed in partner projects using methods from the social sciences and ecology.

INTERDISCIPLINARY TRAINING OF FUTURE BIOECONOMY EXPERTS

PhD students in the bioeconomy research program Baden-Württemberg are located and supervised in one of the participating research groups and can rely on additional collaborations at the partner institutions.

BBW FORWERTS GRADUATE PROGRAM

In addition to the training provided at their home institutions, the integrated BBW ForWerts Graduate Program (Bioeconomy Baden-Württemberg: Exploring Innovative Value-Added Chains) provides an interdisciplinary curriculum and networking opportunities through

- Summer schools and Workshops
- Method courses
- Excursions



The aim of this program is to qualify future bioeconomy experts to work on multifaceted challenges as well as to do independent research in their specific fields. Additionally, international collaboration is fostered by integrating international PhD students into this program with English as the working language.

Further information about BBW ForWerts is available at www.bbwofforwerts.de

