

# *A bioeconomy initiative in Czech Republic*

---

ASSOC. PROF. EVA CUDLINOVA

UNIVERSITY OF SOUTH BOHEMIA – CZECH REPUBLIC

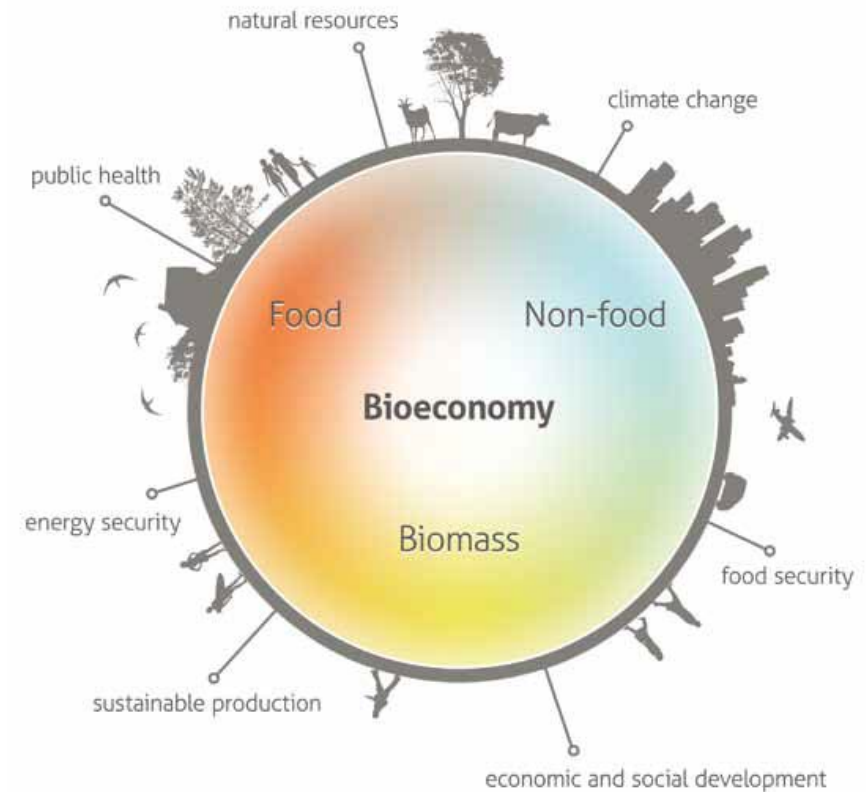
DR. GEORGE SAKELLARIS

IEM ACADEMY OF SCIENCES – CZECH REPUBLIC

# The Bioeconomy Concept

---

- The integration of the Science with Business and Society
- Achievement of Food security, Energy independency and Environmental safety
- Guaranteeing its operation in a sustainable frame
- Enhancing multidisciplinary



# Where next for the European Bioeconomy

---



Input from:

1. The Standing Committee on Agricultural Research Strategic Working Group (SCAR)
2. European Bioeconomy Panel
3. Executed by the EC

*Released on the occasion of the Bioeconomy Stakeholders' Conference organized by the Italian Presidency of the European Union in Turin on 8-9 October 2014.*

# The Regional Character of Bioeconomy

The concept of *Sustainable Biomass Regions* is a regionally differentiated strategy to prevent environmental harm and to facilitate social and economic growth

- ❑ Structural and operational challenges
- ❑ Public acceptance and consumers' demand
- ❑ Stimulating ecosystems at regional level
- ❑ The importance of smart specialization strategies
- ❑ Existing funding and supporting tools
- ❑ Key actors and regional clusters
- ❑ Interregional cooperation
- ❑ National strategies as a background for good regional strategies



# The Region of South Bohemia

- ❑ **10.000** Sq. Km & **650,000** population
- ❑ Produces **6%** of the National GDP
- ❑ GDP per capita: **85%** of the National average
- ❑ **12%** of the National Agricultural production
- ❑ Main Industrial sector: **Agrifood processing**
- ❑ Business activities: Mainly by **SME's**



# Background of the Initiative – 1

---

- ❑ Positive climate for the development of an initiative in the domain of Bioeconomy
- ❑ The University of South Bohemia, guarantees a multi-sectorial coverage in innovative technology and education
- ❑ National Funding Policy supports this form of activities having dedicated more than 1 billion Euros for structural and operational projects integrated in designed national priorities
- ❑ Majority of the National Funding focuses in the peripheries supporting the regional development
- ❑ Positive and disciplinary attitudes from the local stakeholders
- ❑ Supportive public perceptions in domains of Science, Technology and Innovation
- ❑ Relatively flexible regulatory frame
- ❑ Attractive Geographical position and prospecting cooperation



# Background of the Initiative – 2

---

## INSTITUTIONS

- ❑ The University of South Bohemia / Ceske Bujehovice
- ❑ The Central European Institute of Technology (CEITEC) / Brno
- ❑ Centre in life sciences and advanced materials & technologies research; Institute of Chemical Technology (ICT) / Prague
- ❑ The Czech University of Life Sciences Prague (CULS) / Prague
- ❑ Czech-Globe - Global Change Research Centre / Brno
- ❑ The Academy of Sciences , Czech Republic (ASCR)

## PROJECTS

- ❑ **MOBITAG** ('Building up modern **biotechnologies for agriculture**')
- ❑ **CAPACITIES** Theme, helped enhance research of novel biotechnologies with particular emphasis on **genome analysis**, exploitation of natural compounds, transgenosis, and safety aspects of **genetic modification**
- ❑ **CONFFIDENCE** ('**Contaminants in food and feed**: inexpensive detection for control of exposure')

# Past and History

---

- **May 2012 – Brussels** / *The Czech Liaison Office for Research and Development (R&D) and the Permanent Representation of the Czech Republic to the European Union :*

***“Towards a sustainable bioeconomy in Europe:  
How the Czech Republic is making the difference”***

- **January 2015 – Prague**

**“Bio-based Economy, Cooperation Opportunities, Bio-based Industries”**



# The Actions

---

- Education
- Research & Innovation
- Business (SME's Potential)
- Consulting and Advising
- Networking & International Cooperation

# The Bioeconomy Course of the USB – 1

---

*A post graduate course addressing to students of a wide spectrum of backgrounds and aiming to highlight the multidisciplinary of Bioeconomy. Goals:*

- To familiarize students with bio-economy trends over a broad range of industrial sectors
- To demonstrate to students the Intersectorial and interdisciplinary character of the bio-economy
- To highlight to students the economical-, societal- and policy context of the bio-economy
- To prepare students for responding to modern requirements of the market, insisting for highly specialized individuals in the domain.



# The Bioeconomy Course of the USB – 2

---

## STRUCTURE

- Basic Elements
  - Life Sciences & Biotechnology
  - Economics
  - Governance and Regulation
  - Communication
- Sector Elements
  - Environmental Issues
  - Agri-food sector
  - Biomass Exploration - Energy
- Case Studies

## CONTENT

- A flexible structure adapted to the current requirements and trends
- Always enhancing the connection between Technological innovation, Business perspective and societal impact
- The case studies will be executed in connection with an industrial partner or SME, dealing with actual issues

# The Bioeconomy Course of the USB – 3

---

## OUTCOMES

- Innovation and Strategy
- Policy and Regulation
- Governance
- R&D commercialization and Technology Transfer
- Intellectual Property and Financial Aspects
- Risk Assessment and Management
- Social and Ethical Issues
- Communication

## ADDITIONAL BENEFIT

Preparing competitive candidates for the future job requirements:

By the year 2030 Bioeconomy in Europe will be a business worth of:

- 2 trillion € turnover
- 23 million Employees
- 9% of the workforce in Europe
- 25 million tones of Bio-based market capacity

# Research and Innovation

---

## Bioeconomy is based on **Renewable Resources** and **New Operating Models**

- ❑ Define domains of application and priorities
  - Pioneering Biomass Utilization and Bioenergy Production and Use
  - Diversification through bio-based products
  - Increased use of Bio-based materials in the Chemical Industry
  - Boosting the Food Industry turnover
  - Enabling Growth in the Health Sector
- ❑ Creating preconditions for Bioeconomy through Research
  - Incorporate the Bioeconomy theme in the Strategic Research Decision Process
  - Intensify trans-sectorial cooperation
  - Improving the International transactions
- ❑ Guaranteeing the road to the Industry and the Application



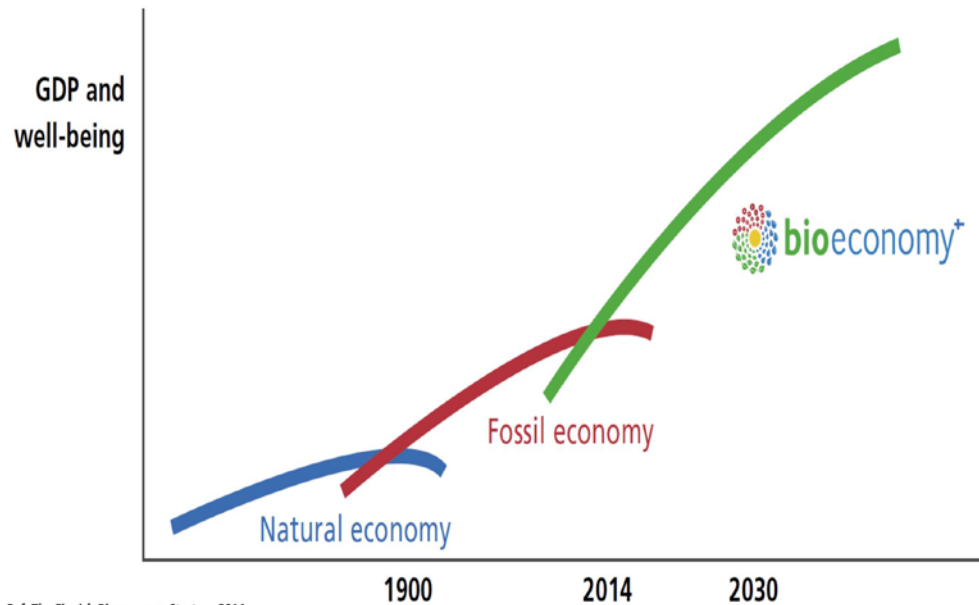
# Enabling the SME potential

---

- ❑ Registering and Networking the SME's of the region and detecting their potential for Bioeconomy related activities
- ❑ Incorporating the Bioeconomy theme in the National Strategy plan for the SME's
- ❑ Establishing a systematic information channel for the SME's
- ❑ Enabling existing networks and channels of cooperation
- ❑ Enhancing the participation in Research projects and action plans



# Consulting and Advising



Ref: The Finnish Bioeconomy Strategy 2014

- Highlight and demonstrate the significance of Bioeconomy to the National Economy
  - In Manpower
  - In Business domains, products and services
- Analyze the cost-effectiveness on a case by case basis
- Prioritize the Policy Actions
  - Implementing Bioeconomy in Strategic Policy Decisions in all levels
  - Promoting Bioeconomy
- Use the Benefit of the strong European Support

# National Funding

---

- ❑ Ministry of Education
  - Operational Program for Research and Innovation
  - Operational Program for Scientific Excellence
  - European Structural Funds (ESF)
- ❑ Ministry of Industry
  - Operational Program Enterprise and Innovations for Competitiveness
  - Operational Program for Industrial development and growth
- ❑ EC Funding
  - Horizon 2020
  - SME Integrated Instrument
  - COSME
- ❑ Other Resources
  - Bilateral Agreements and International Cooperation with non-EU Countries
  - Public Private Participation





# Networking & International Cooperation

Bioeconomy Initiative of the European Commission



European Federation of Biotechnology – Bioeconomy Task Force



EUROPEAN FEDERATION OF  
BIOTECHNOLOGY

EuropaBio



Bio-Tic Consortium



Bio-Based Industries



Other Platforms (Danube Network, CEI, Vysegrad Network)

EU Countries Bioeconomy Initiatives, Clusters & Regions (Finland, Baltic Sea, Germany, IFIB)

Non-EU Countries Bioeconomy Initiatives (Malaysia)



# Conclusions

---

- ❑ The Objective on the initiative is to catalyze a new potential for the region of South Bohemia which will be integrated in the National Initiative for Bioeconomy in the Czech Republic
- ❑ The Aim of this activity is to generate new economic growth by creating new jobs in the Bioeconomy business and from high added value products and services while securing the operating conditions in a sustainable form
- ❑ For achieving this aim is mandatory in mobilize the regional actors (University, SME's, Public Administration and Stakeholders) in a cooperative effort, also clustering the activities in a complementary and inter-sectorial way
- ❑ Education is a basic tool of this activity creating highly specialized candidates for the demanding requirements of the near future
- ❑ International cooperation is a both-ways channel, beneficial from the technology know how and market potential for the region, but also contributing in the European Integration and Growth



<http://bei.jcu.cz/>

Thank you for your attention !!