

ICA Bioeconomy Committee



Josef Glössl

Vice Rector for Research and International Research Collaboration
University of Natural Resources and Life Sciences, Vienna, Austria (BOKU)

ICA Board and General Assembly

October 18, 2017

Louvain-la-Neuve, Belgium



University of Natural Resources
and Life Sciences, Vienna

The Bioeconomy



- The Bioeconomy encompasses the production of renewable biological resources and their conversion into value added products, as food, feed, bio-based products and bioenergy.
- Its sectors include agriculture, forestry, fisheries, food and pulp and paper production, as well as parts of the chemical, biotechnological and energy industries

(EU, 2012)

ICA Bioeconomy Committee

re-established from the “ICA Bioeconomy Task Force”



Aims (as defined by the ICA Bioeconomy Task Force; may be further developed by the Bioeconomy Committee)

- Define ICA as representing the European Life Science Universities in the development of the Bioeconomy at the European level
 - Contribute to the implementation of the EU action plan for bioeconomy in education, research and innovation by seeking synergies among ICA members and other EU and international institutions, industries, and networks
-

Selected Activities of the Task Force



- Support of the programme development of two ICA Fora, which have addressed bioeconomy topics:
 - Engagement of Life Science Universities in Supporting the Growth of the Bioeconomy – the social, environmental and economic implications (Gent, 2013), and
 - Educating the Young Professionals to Feed the Planet & Provide for the Sustainable Bioeconomy (Milano, 2015)
- Both Fora have engaged actively with the EU Commission and stakeholders. The 2015 Forum was held in the EU Pavilion at the Milan EXPO.

Selected Activities of the Task Force



- A workshop was planned by the Task Force for November 2015 with the objectives to:
 - raise awareness for the need to develop and adapt curricula that ensure a skilled and qualified workforce for the bioeconomy
 - foster engagement between policy makers, industry and universities
 - exchange good practice examples for bioeconomy curricula and cooperations with industry partners
- Finally, the Workshop was not held because of a clash of date with the Global Bioeconomy Summit (Nov. 2015 in Berlin) and was not rescheduled in 2016.

The need of an ICA Bioeconomy Committee



- No other networks focusing on the development of the knowledge, skills and competences of the bioeconomy workforce
→ **Continuing need for ICA to focus on the Bioeconomy in supporting universities** to:
 - ❑ embed the concept of the Bioeconomy in the ethos of the life science university at the strategic level
 - ❑ to embed the concept of the Bioeconomy in the mindset of academic staff, (in the same way as sustainability should be embedded across the degree programme curricula)
 - ❑ support the development of curricula so that the concept of bioeconomy is clearly embedded in the mind sets of the graduates.
 - ❑ support the concept of the circular economy for the bioeconomy and *vice versa*
 - ❑ support universities to engage in developing the concept of bioeconomy regional clusters for enterprise engagement in the circular bioeconomy

Extract from the Communiqué from the 1st Global Bioeconomy Summit 2015, Berlin



Expanding education

- Education and research are the basis for creating and understanding the significant body of knowledge needed to shape a sustainable bioeconomy. It is key not only to develop bioeconomy-related capacities but to also tailor them to the circumstances and requirements at international, national and local levels. For this reason, **a strong interconnection among education providers, researchers and innovators and, ultimately, bioeconomy employers, should be supported and facilitated.** The provision of appropriate knowledge and skills needs to be integrated in primary education, in vocational and continuous training and in academic studies. **New interdisciplinary and international study programs should be conceived.** International sharing of teaching programs, for example through open learning platforms, will enhance the mutual capacity building for the worldwide implementation of bioeconomy.

Next steps – first proposals

Proposal 1



- **2nd Global Bioeconomy Summit** in 18 -20 April 2018 in Berlin (GBS 2018)
 - Workshop proposals for breakout sessions are welcome
 - ICA could propose to organize a session focusing on the education and training of skilled bioeconomy workforce
 - This could fit to the predefined Topic “**Building the human and institutional resource base for the bioeconomy**”
 - Collaboration with **ICA-Edu** to develop the proposal would bring synergies between both committees
 - Proposal submission deadline: 15 December 2017
- ❖ JG is a member of the International Advisory Council (IAC) of GBS 2018

Open Call for Workshop Proposals for GBS 2018



■ Predefined topics for the Workshops at GBS 2018

	Topic
1	Thematic clusters of bioeconomy strategies or developments
2	Bioeconomy of world regions and for regional development
3	Measuring the bioeconomy and impacts on SDGs
4	Innovations from industry for a vibrant bioeconomy
5	Transformative science and technologies for the bioeconomy
6	Blue/marine bioeconomy
7	Building the human and institutional resource base for the bioeconomy
8	Bioeconomy financing with national and global capital markets
9	Biodiversity as a foundation for bioeconomy
10	Bio-city: bio-innovations and urbanization
11	Bioenergy and biorefineries: innovations and futures
12	Bioeconomy regulatory regimes and scope for international harmonization
13	Sustainable lifestyles, consumer behavior, cutting waste
14	Good governance of the bioeconomy and societal participation

Next steps – first proposals

Proposal 2



- Revisit the 2015 planned workshop **Life Science Universities as Partners for Developing the Bioeconomy**
 - The workshop was designed to involve delegates from the European Commission and Parliament, European Technology Platforms (ETPs), universities, national research councils and international student associations to share their knowledge and discuss their visions on the workforce for the bioeconomy

Next steps – first proposals

Proposal 3



- Joint proposal for the **European Forum Alpbach** 2018 by BIOS Science Austria, Ecosocial Forum Austria and ICA:
 - Workshop on “**CAP and Bioeconomy - Contributions to a Sustainable and Resilient Future Economy**”
 - Date: End of August, 2018 (either August 23-25 or 28-30)
 - General theme of European Forum Alpbach 2018: “**Diversity and Resilience**”
 - Suggested approach: links between SDGs – bioeconomy – CAP
 - General question: How can CAP and regionally adapted bioeconomy strategies contribute to the transformation towards a sustainable and resilient future economy?

<https://www.alpbach.org/en/europaeisches-forum-alpbach-2018/>

- President of Forum Alpbach: Former European Commissioner Franz Fischler

Next steps – first proposals

Proposal 4



- Development of concepts for **Further Education** and **Life Long Learning** in fields relevant for bioeconomy
 - Proposal to join forces with **Academia Danubiana**, an initiative of BOKU University for Further Education in European networks, with a focus in the Danube Region

Academia Danubiana – goals and scope (1)



(1) history

- Founded in 2003 by Prof. Kvarda.
- Academic exchange on the Danube Region including research and teaching (e.g. summer school)

(2) goals

- Promoting sustainable development and in the Danube Region, for a better exchange between universities and public authorities in science and governance.
- Support the regional integration within the countries of danube region.
- Cooperation of academic networks in the Danube Region
- Establish customised education programmes



EUROPEAN COMMISSION

Brussels, 8.12.2010
SEC(2010) 1489 final

COMMISSION STAFF WORKING DOCUMENT

ACTION PLAN

Accompanying document to the

**COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN
PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL
COMMITTEE AND THE COMMITTEE OF THE REGIONS**

European Union Strategy for the Danube Region

{COM(2010) 715 final}
{SEC(2010) 1490 final}
{SEC(2010) 1491 final}

Academia Danubiana is
mentioned in the Action Plan of
the EU Strategy for the Danube
Region (EUSDR)

⇒ *Example of project - “To implement the strategy for soil protection” - Responsible, multifunctional use of land and soil and interlinkages to the regional development, as well as new governance tools and the "learning region" concept would be developed. The project should link to the work already undertaken by the Academia Danubiana⁶⁷ in this field.*

⁶⁷ Academia Danubiana is an institution that focuses on a scientific and educational network of universities and other institutions of the Danube Region.

Academia Danubiana – goals and scope (3)



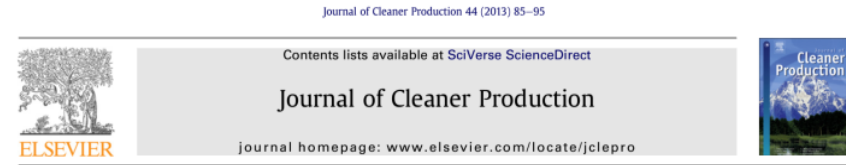
Scope

- ❑ Supplement universities' 3rd Mission activities
 - ❑ Establish Academia Danubiana as Academy of Further Education for the Danube Region
 - ❑ Cooperations with the ICA-CASEE network and other initiatives (e.g. Danube:Future and EU's Danube Region Strategy)
 - ❑ Customised education offers in the BOKU main topics energy transition, climate protection and changes in bioeconomy
 - ❑ Integration in BOKU's continuing education activities.
-

Customized education programmes

Oriented on action research principles

- definition of knowledge demand with communities of practice
- Education in specific knowledge gaps concerning real-life problems
- provision of courses by universities
- short intensive courses



Universities as change agents for sustainability – framing the role of knowledge transfer and generation in regional development processes

Verena Peer, Gernot Stoeglehner*

University of Natural Resources and Life Sciences, Department of Landscape, Spatial and Infrastructure Sciences, Institute for Spatial Planning and Rural Development, Peter Jordan Str. 82, 1190 Vienna, Austria

ARTICLE INFO

Article history:
Received 3 July 2012
Received in revised form
28 November 2012
Accepted 2 December 2012
Available online 23 December 2012

Keywords:
University
Change agent
Sustainable development process
Ownership
Knowledge

ABSTRACT

This paper explores opportunities for universities to contribute to local and regional development processes, apart from classical knowledge transfer within education and lifelong learning. In order to draft an analytical framework for the university-society relationship in regional development processes, we introduce three theoretical frameworks: planning, learning, and implementation theory, as well as shift the research perspective from university to regional development processes. The elaborated framework is applied to two case studies in Austria: the Montagsakademie, an initiative of the Karl-Franzens University in Graz, and PlanVision, an energy research project between the University of Natural Resources and Life Sciences Vienna and the Town of Freistadt. From the analysis can be concluded that knowledge provision is not enough to establish the university as a change agent. In order to reach this effect, "ownership" of knowledge within local and regional communities has to be achieved. This ownership affects the level of values (shared visions and objectives concerning sustainable development) and the level of facts (addressing the skills for implementation and action) and can best be attained through joint knowledge generation. Universities that want to act as change agents have to thoroughly consider collaborative ways of research and education in informal learning environments so that knowledge demand, knowledge transfer and knowledge generation can be negotiated and jointly determined between local and regional societies and universities.

© 2012 Elsevier Ltd. All rights reserved.

1. Introduction

At the end of the 1980s, the Brundtland Report "Our Common Future" (WCED, 1987) introduced the concept of *sustainability* into local, regional, national and global development processes. Striving for balanced social, ecological and economic development, the concept of sustainability offers a productive encounter with complexity, to the extent that it neither denies this complexity nor reduces it in an unacceptable manner (Adomssent et al., 2007). The concept of sustainability launches several new principles: (a) increasing significance of the local and regional level ("think global, act local"); (b) public and stakeholder participation; and (c) integrative, holistic approaches to regional and local challenges. To implement these principles in regional development (RD) processes the action programme "Local Agenda 21" (LA 21) was brought into being. The sustainability concept enlarged the "traditional" means in RD (such as financial incentives) with several

others, including technology transfer, education, public awareness raising, training, information for decision making etc. (Section IV "Means of Implementation" of the Agenda 21 declaration). This shift in the orientation of RD processes towards sustainability, among other things, changes the perception of Higher Education Institutions (HEIs) within RD: from their "traditional" roles as mere educational infrastructure and research institutions, to "new" roles as drivers for innovation and stakeholders in public and private partnerships as well as in planning processes (Chatterton and Goddard, 2000).

This change of expectations around the role of HEIs in RD is influenced by supra-national European Policy: the European Union aims to establish a competitive, knowledge-based and innovative European region; at the same time the sustainability of this development has to be assured (KOM, 2001). Within these policy frameworks (Lisbon Agenda, Gotheburg Strategy, European, 2020 strategy), RD processes striving for sustainability focus on the following aspects relevant to HEIs:

- empowerment of the local population through education and lifelong learning (ÖROK, 2002);

* Corresponding author.
E-mail addresses: verena.peer@boku.ac.at (V. Peer), gernot.stoeglehner@boku.ac.at (G. Stoeglehner).

Potential topics of Academia Danubiana

- energy transition and climate protection
 - bioeconomy
 - implementation of EU environmental policies
-

Potential organisational structure of Academia Danubiana

- framework and umbrella for further education projects
 - joint development of courses
 - teacher's exchange
 - teaching on site in the respective mother tongue
 - openness of themes
-

How to proceed?



- Formation of the ICA Bioeconomy Committee:
 - Volunteers interested to be Committee members
 - Former members of the Bioeconomy Task Force as well as further members welcome
 - Development of Terms of Reference
 - Development of an Action Plan
 - Identification of contact persons playing a key role in bioeconomy related activities at ICA member institutions
 - To be discussed