DIGITALISATION AND CIRCULAR ECONOMY:
forestry and forestry based industry implications

12th International Scientific Conference WoodEMA 2019

Varna, September, 11-13, 2019

THE OPPORTUNITY OF USING CHAIN OF CUSTODY OF FOREST BASED PRODUCTS IN THE BIOECONOMY

Roman Dudík

Petra Palátová

Marcel Riedl

FFWS CULS Prague

Introduction

- Bioeconomy issues are of a great importance nowadays
- Forestry is one of key areas in bioeconomy
- Connection with project *Diversification of the Impact of the Bioeconomy on Strategic Documents of the Forestry-Wood Sector as a Basis for State Administration and the Design of Strategic Goals by 2030* (granted by National Agency for Agricultural Research)
- certification
  - CoC

Bioeconomy

- Differences in definiton, in perception, in contribution to GDP, existence of bioeconomy strategies etc. exists among states
- Traditional definition (EC, 2012) remains valid
  - Some approaches are to be found, e.g. *Technological* and *Social*

Chain of custody system requirements can be divided into following areas:

- Identification of the material category of material/products
  - Identification at delivery (incoming) level
  - Identification at supplier level
- Minimum Due Diligence System (DDS) requirements
  - General requirements
  - Gathering of information
  - Risk assessment
  - Substantiated comments or complaints
  - Management of significant risk supplies
  - No placement on the market

- Chain of custody method
  - General
  - Physical separation method
  - Percentage based method
- Sale and communication on claimed products
  - Documentation associated with sold/transferred products
  - Usage of logos and labels

- Minimum management system requirements
  - General requirements
  - Responsibilities and authorities
  - Documented procedures
  - Record keeping
  - Resource management
  - Inspection and control
  - Complaints
  - Subcontracting
- Social, health and safety requirements in chain of custody
  - Scope
  - Requirements
- Annexes
  - Specification of the PEFC claims
  - Implementation of the chain of custody standard by multisite organisations

Different views on bioeconomy

	Technological approach	Social approach
Focus on	- Technological innovations - Large scale investments - Value chain perspective - Sectoral development - Vertical integration	- Social innovations - Small scale - Networks - Cross-sectoral development - Horizontal integration (forests and agriculture as the green infrastructures for rural development)
Input/output diversification	- 1 or more inputs - Diversification in outputs	- Diversification in the use of inputs - High added value products & services
Market power	- Increasing role of business owning/controlling the (new) technologies	- Role of networks, groups, associations, public-private partnerships…
Model regions	- Northern EU (UK, Scandinavian countries)	- Southern EU (Mediterranean region)

Source: Secco et al., 2016

Some conclusions

- In the above mentioned context (technological and social approach):
  - PEFC C-o-C standard is usable in a very good way for fulfilling the principles in the traditional and technological approach in bioeconomy
    - considers the use of raw materials (wood, wood chips etc.), where C-o-C standard defines clear requirements, but:
  - Is less tangible by social approach
    - PEFC C-o-C standard cannot properly evaluate e.g. the social acceptability, gender issues and discrimination, distribution of income etc. in detail

Thank you for your attention

The authors are grateful for the grant supported by the National Agency for Agricultural Research of the Ministry of Agriculture of the Czech Republic (projects No. QK1920391 and No. QK1820041).

References

- European Commission (2012): *What is the bioeconomy?* URL: https://ec.europa.eu/research/bioeconomy/index.cfm?pg=home.
- European Commission (2018): *Bioeconomy: the European way to use our natural resources*. Action plan 2018. URL: https://ec.europa.eu/research/bioeconomy/pdf/ec_bioeconomy_booklet_2018.pdf#view=fit&pagemode=none.
- Falcone, P. M., Imbert, E. (2018): *Social Life Cycle Approach as a Tool for Promoting the Market Uptake of Bio-Based Products from a Consumer Perspective*. Sustainability 10 (1031); doi: 10.3390/su10041031.
- Halaj, D., Brodrechtova, Y. (2018): *Marketing decision making in the forest biomass market: The case of Austria, Finland and Slovakia*. Forest Policy and Economics 97 (C): pp. 201-209; doi: 10.1016/j.forpol.2018.08.009.
- Palus, H., Parobek, J., Sulek, R., Lichy, J., Salka, J. (2018): *Understanding Sustainable Forest Management Certification in Slovakia: Forest Owners' Perception of Expectations, Benefits and Problems*. Sustainability 10 (7); doi: 10.3390/su10072470.
- Priefer, C., Jörissen, J., Frör, O. (2017): *Pathways to Shape the Bioeconomy*. Resources 6 (10); doi: 10.3390/resources6010010.
- Secco, L., Masiero, M., Pisani, E., Pettenella, D. (2016). *Technological vs. social approach towards the bio-based economy in the European forestry sector: a latent ambiguity in policymaking*. URL: https://tesaf.unipd.it/en/sites/tesaf.unipd.it.en/files/Secco%20et%20al_.pdf.
- Šupín, M., Dzian, M. (2018): *Influence of bio-economy on the development of wood and wood products consumption.* In: INCREASING THE USE OF WOOD IN THE GLOBAL BIO-ECONOMY. Proceedings of Scientific Papers. Belgrade: University of Belgrade – Faculty of Forestry; Zagreb: WoodEMA, 2018. p. 30-37. ISBN: 978-86-7299-277-9.