

Bioeconomy policy: implications of feedback dynamics between society and the environment

The Bioeconomy policies must deal with social, environmental and climate challenges. These challenges do not emerge in silos, but they are interrelated and interdependent. Changes in the ecosystem or climate lead to societal responses that will fire back on the environment. Changes take time and societies, and human beings, do not have the instruments to plan long-term.

Bianca Cavicchi studied the bioenergy sector development to better understand how to address the challenges of the interrelations between social and environmental processes. She studied the case of Emilia Romagna (Italy) and Hedmark (Norway) bioenergy development. Her findings show that the society and ecosystem dynamics are irreducibly linked through human and social cognition.

The key implications of this finding concern policy analysis and policy making. First, national and regional bioeconomy policies should be equipped with revision mechanisms that allow for adjustments in the medium-term. Abrupt changes in policy designs prove to be more detrimental than gradual adjustments. Second, policy analysis and evaluation should also assess processes and look for contextual explanations of outcomes rather than only using indicators. Indicators do not account for complex causal processes and cannot explain the reason for changes in the long-term. Third, local decision-makers could be responsible for trying to build a common narrative around new practices, products and technologies so to increase acceptability and thus the long-term effectiveness of systemic transformations.