Stockholm Environment Institute

Policy dialogue on a bioeconomy for sustainable development in the Baltic Sea region

SEI Workshop report
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1. Introduction

The SEI initiative on Governing Bioeconomy Pathways uses the definition of a bioeconomy coined at the most recent Global Bioeconomy Summit: "The production, utilization and conservation of biological resources, including related knowledge, science, technology and innovation, to provide information, products, processes and services across all economic sectors aiming towards a sustainable economy" (Global Bioeconomy Summit 2018).

Advances in the bioeconomy could help achieve the United Nations Sustainable Development Goals (SDGs) in high-income, emerging and low-income economies alike (Johnson and Silveira 2014; Johnson and Altman 2014) by alleviating dependency on fossil fuels and improving overall levels of well-being and productivity. However, the transition pathways to a bioeconomy will differ widely with different starting points for the use of bio-based resources. Low-income countries still rely significantly on bio-based resources, albeit at low efficiency (sometimes referred to as "the natural economy") while high-income countries rely heavily on a fossil-based economy.

The Policy Dialogues are being implemented as part of the SEI Initiative on Governing Bioeconomy Pathways. A series of dialogues, or stakeholder engagement workshops, are conducted in different countries to identify and discuss various potential pathways to achieving a sustainable and inclusive bioeconomy. The dialogues have national and regional scope and connect to local concerns and global markets by convening and engaging with a diverse group of stakeholders.

This workshop brief presents the results of the first in the series, the Policy Dialogue on a Bioeconomy for Sustainable Development in the Baltic Sea Region, which was held in Tallinn, Estonia on 27 February 2019. This workshop served as a pilot of the stakeholder engagement methodology developed for the project. This brief provides some background on the bioeconomy in the Baltic region and a summary of the stakeholder engagement methodology developed for the project. It also summarizes the group discussions during the workshop and reflects on the methodology and its future evolution.

2. Background to the bioeconomy in the Baltic Sea region

The Baltic Sea Region has the potential to become one of the world's leading regions for green growth and sustainable development. The region has well-developed infrastructure, a high level of technological and environmental knowledge, and a high concentration of biomass. The bioeconomy therefore offers many new business and employment opportunities through development in rural areas (Norden 2016).

Some countries in the Baltic Sea region already have holistic policies on the bioeconomy in place. Others are on the way to developing such policies. The approaches vary: some states are pursuing a bioeconomy as part of broader strategies for growth and sustainable development, while others include the bioeconomy in sectoral policies on agriculture, forestry, fisheries, research and innovation, rural development or the environment. Estonia and Latvia, for instance, have adopted national bioeconomy strategies to 2030. Lithuania and Poland, by contrast, do not have a national strategy but instead pursue bioeconomy-related actions through sectoral policies on agriculture, fisheries, forestry, regional development, the environment and innovation (Winters 2016).

3. Bioeconomy policy dialogue in Tallinn: Method and process overview

Chief among the goals of the policy dialogue was to draw out feasible pathways for achieving a sustainable bioeconomy by 2050. Driven by the question: 'How do we shift to a sustainable bioeconomy in the Baltic Sea region by 2050?', participants designed sustainable bioeconomy pathways in the form of step-by-step policy action plans. The participants were also provided with an overall framing of global sustainability for 2050 based on the "Taking the Green Road" scenario from the shared socio-economic pathways (SSPs) approach that is used in climate assessments (see Riahi et al. 2017). Every action was classified either as an enabler of or a barrier to the development of a sustainable bioeconomy. In addition, in their lists of the steps required in the development of a sustainable bioeconomy, the participants distinguished between short-term actions to be taken by 2030 and long-term actions to be taken by 2050. The dialogue also aimed to bring together and empower key actors and organizations in order to institutionalize strategic thinking about the bioeconomy within their work programmes.

One of the purposes of the policy dialogue was to build a shared understanding of the bioeconomy among the participants without imposing any bioeconomy definitions on them. Defining priority bioeconomy sectors in the Baltic Sea region was open to discussion between the participants. To this end, participants were asked to bring to bear their professional knowledge and experience relevant to achieving a sustainable bioeconomy.

The policy dialogue was organized in the margins of the conference "Bioeconomy: Creativity Sustainability for All", which was organized by the SEI Tallinn centre. Participants in the policy dialogue were selected from among those attending the conference and divided into three groups: businesses and civil society, government and research. Each group developed a conceptualization of a pathway to a sustainable bioeconomy in breakout sessions. The expectation was that each group would develop a distinct pathway to the development of a sustainable bioeconomy in the region. At the final stage of the policy dialogue, the participants compared their pathways and discussed possible synergies and the inconsistencies between them.

The event had 11 participants, two from the private sector, two from civil society organizations, two from government agencies and five from universities and think tanks. Seven of the participants were from Estonia, one from Norway, one from Finland and two from Sweden. In addition, four SEI facilitators took part in the event.

4. Workshop discussions summary: Critical steps to achieving a sustainable and inclusive bioeconomy in the Baltic Sea region

During the first part of the policy dialogue, participants were asked to identify the most relevant sector for the bioeconomy in the region. **Energy** was identified as the key sector driving sustainable development in the Baltic Sea region by 2050. Biomass-based energy was discussed, but also renewable energy such as solar and wind power. Participants highlighted that energy was also relevant to a circular economy, in which energy is generated as a byproduct rather than as the primary product.

Participants were then asked to characterize the bioeconomy under a sustainable development scenario for the region. The participants identified three characteristics of a bioeconomy: (a) that a sustainable bioeconomy should increase **value added** – the Baltic Sea region is already a producer of raw biomass-based materials but more high-value-added components and bio-based products are needed; (b) a sustainable bioeconomy should consider a **shift from the global to the local scale**; and (c) a sustainable bioeconomy should consider the **consumption dimension**, as shifting consumer

thinking is an important step and such a shift will require education. In addition, the Baltic region has an aging population and this might affect consumption patterns and the need for certain products. The bioeconomy in the Baltic Sea region will require decision making at the community level, focused on rural needs and the development of localized value chains.

The breakout sessions concentrated on the development of pathways based on the perspectives of each group. The guiding question meant that the pathways developed were more a collection of enabling factors and drivers that needed to be present all the time, at both the 2050 and the 2030 milestones, rather than a collection of policy-relevant sequential actions. Five enabling factors were prominent in most of the pathways developed.

a. **Development of policies aimed at achieving a bioeconomy with specific goals.** Having a clear policy goal to provide a vision for the transition to a sustainable bioeconomy was identified as an essential enabling factor. Policies are required that will frame the development of the transition to a bioeconomy, and therefore define policy-specific goals such as a circular economy, a fossil fuel-free economy or a zero carbon economy. Such policies are expected to help with identifying from where and to what extent bio-based resources can be sustainably sourced. They will also set resource management standards in sectors critical for biomass sourcing, such as agriculture and forestry, and identify priority areas for research. In addition, they could help to map policy gaps to facilitate a speedier transition. Examples of such policies were discussed, such as national bioeconomy strategies that showcase national visions of the bioeconomy (e.g. the bioeconomy strategy for Estonia), but also the inclusion of bioeconomic elements in sectoral plans, and specific measures such as carbon taxes on fossil fuels (e.g. a carbon tax for natural gas imports and the end of fossil fuels subsidies) and tax breaks to support the sustainable use of biomass. Policies are expected to be developed at all levels, from the international to the national and subnational, and to link the bioeconomy with other environmental policies, such as those related to climate change (e.g. Nationally Determined Contributions).

b. **Support research, technology and innovation for a knowledge-based bioeconomy**. Support for technology development and research is the basis for creating value-added, but a bioeconomy also requires support for innovation, which plays a significant role in business development and is not necessarily sequential to research and development . Innovation requires triple (university, industry and government), quadruple (adding civil society and media) and quintuple (adding the natural environment) helix models of interaction and information sharing. A systemic change in terms of funding resources for innovation is urgently needed, with predictable funding available for 10 or more years in order to develop technological breakthroughs.

c. **Ensure demand for sustainable bioeconomic products and services.** Ensuring demand can be done from the top down, led by public procurement at the national and subnational levels, and from the bottom-up, through education and communication to raise awareness of the principles of the bioeconomy and promote transparency and traceability in the bioeconomy. This will increase understanding of the bioeconomy and promote bioeconomy-based consumption and lifestyles.

d. **Cross-sector cooperation.** Due to competition for the use of limited biomass resources, the bioeconomy has the potential to increase conflict among different industries and sectors (e.g. the food industry, the pharmaceutical industry, the packaging industry, fisheries, agroforestry, transport and renewable energy). Cooperation is needed across sectors, but also among geographic regions (including rural and urban spaces), and between public sector and private sector interests. To achieve such cooperation, trust and knowledge transfer will also be required, and information and communication technologies (ICT) will play an increasingly important role in this at the local, national and international levels.

e. **Build in circularity with the availability of bio-resources or their scarcity in mind.** The states of the Baltic Sea region have similar bio-conditions, particularly in terms of agriculture and fresh water. This can be an advantage in terms of planning and the use of bioresources at the regional level, but policies should also focus on ensuring long-term and sustainable availability of biomass and bioresources, as well as preserving biodiversity. Circularity as a principle for a sustainable bioeconomy can be a way to optimize the use of biomass in the region.

5. Reflections and discussion on the methodology used in the Tallinn dialogue

The Tallinn dialogue functioned as a pilot in which the methodology was tested prior to use in other dialogues/workshops. This section discusses those elements which did not work so well and how the methodology has been changed accordingly.

The bioeconomy vision was not tailored to the Baltic Sea region: The bioeconomy vision for 2050 was pre-selected before the workshop. As noted above, the choice of the global sustainability scenario for 2050, SSP1: Taking the Green Road (Riahi et al. 2017), was used to frame the creation of pathways. This vision was too general and confusing for the participants, however, and different visions of a sustainable bioeconomy were developed autonomously during the group discussions. Some groups identified the bioeconomy vision as 100% circularity of a bioeconomy; others emphasized the development of a fossil fuel-free economy. A more tailored bioeconomy vision will be used in subsequent workshops.

Groupings by type of organization: In this first workshop, we organized the break-out groups according to the nature of the organizations to which the participants belonged: private sector (business and civil society), public sector (government agencies) and academic (universities and think tanks). The reasoning behind this grouping was that the groups may have different priorities and interests, and therefore might produce different pathways. However, these groups did not produce the desired results. Instead, the groups developed very similar pathways containing very broad elements. In addition, businesses and civil society organizations came at the problem from very different perspectives, and significant time was spent on discussion of which position was right or wrong. For the subsequent workshops, the groupings will be based on economic sectors (e.g. energy, forestry and food).

The structuring question was not conducive to pathway identification. The question 'How do we shift to a sustainable bioeconomy in the Baltic region by 2050?' focused on the enabling factors or drivers of the bioeconomy. This question did not lead to the identification of specific actions needed to develop a pathway. In addition, enabling factors need to be present at all times along the pathway. The division between 2030 and 2050 therefore did not work in the exercise as the same factors were required. As noted above in section 4, this resulted in enabling factors that would be required for most goals, not just for bioeconomy development. The question will be changed to identify the specific actions and actors required to achieve a sustainable and inclusive bioeconomy.

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