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# **Identification of challenges and problems in the implementation of the circular economy in the Baltic Sea Region**

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## **Abstract**

The article presents results of the first phase of the project *CCI: Circular Economy and Place*, which identified challenges and problems in the process of developing and implementing an economy model in the Baltic Sea Region that meets the assumptions of the EU's *Circular Economy Action Plan*. The comparison of project's original assumptions with the identified conditions made its authors realise the need to restructure methods and ways of action (in the second phase), making the prospect of achieving the fundamental goal more realistic: reducing the gap in the ability to run a circular economy in the peripheral Baltic Sea Region compared to the centre of the European Union. The desirability of analysing the conclusions formulated after the first phase of the project is justified by the importance of macro-regional conditions in processes of the EU mechanisms implementation, which are supposed to be identical for all parts of the European Union.

**Keywords:** Baltic Sea Region, economy model, circular economy

## Identyfikacja wyzwań i problemów w procesie wdrażania modelu gospodarki o obiegu zamkniętym w Regionie Morza Bałtyckiego

### Streszczenie

Artykuł prezentuje wyniki realizacji pierwszej fazy projektu *CCI: Circular Economy and Place*, w której dokonano identyfikacji wyzwań i problemów w procesie wypracowania i wdrożenia w Regionie Morza Bałtyckiego modelu gospodarki odpowiadającego założeniom unijnego planu działania dotyczącego gospodarki o obiegu zamkniętym (ang. *Circular Economy Action Plan*). Konfrontacja pierwotnych założeń projektu ze stwierdzonymi uwarunkowaniami uświadomiła jego twórcom konieczność przeformułowania metod i sposobów działania (w drugiej fazie), urealnijając perspektywę osiągnięcia zasadniczego celu: zmniejszenia różnicy w zakresie zdolności prowadzenia gospodarki o obiegu zamkniętym na peryferyjnym Regionie Morza Bałtyckiego w stosunku do centrum Unii Europejskiej. Celowość analizy wniosków sformułowanych po pierwszej fazie projektowej wynika z ukazania znaczenia uwarunkowań makroregionalnych w procesach wdrażania mechanizmów unijnych, które powinny być identyczne we wszystkich częściach Unii Europejskiej.

**Słowa kluczowe:** Region Morza Bałtyckiego, model gospodarczy, gospodarka o obiegu zamkniętym

A priority of the European Union's economic policy is a concept of the circular economy (CE). It means replacing the linear economic model (based on the assumption "take – use – throw away") with a model, in which the value of products and materials is maintained as long as possible. The waste is reduced to a minimum, as well as the use of resources, which remain within the economy once a product has reached the end of its usability, so that they can be reused and create additional value. This idea is included in all stages of the product's life cycle, from its design, production, distribution, consumption, waste collection and management (Szymańska et al. 2017: p. 44–45). It should be noted, however, that although the theoretical foundations of CE were formulated in the mid-1970s, the concept has gained popularity almost exclusively in academic circles without entering the mainstream of management. It is still seen as an idea based on ethical values rather than economically efficient approach (Posłuszny 2021: p. 9). In the quest to turn it real, it is therefore necessary to "create awareness and change consumer's behaviour. [...] A complete systemic change and innovations are required, not only in technologies, but also in policies, organisation, financing methods and society" (Smol et al. 2019: p. 169). "The transition towards the circular economy can bring about the lasting benefits of a more innovative, resilient and productive economy. The principal benefits of moving to the circular economy are as follows: substantial net material savings and reduced exposure to price volatility [...], increased innovation and job creation potential [...], increased resilience in living systems and the economy". Thus, CE "can be an important lever to achieve key policymaker objectives such as generating economic growth, creating jobs and reducing environmental impact" (Sheppard 2015: p. 23–24).

Efforts to create an environment conducive to the implementation and development of CE are currently being made throughout the European Union, but with a high degree of variation in terms of (declared and actual) scope, intensity and (achieved or anticipated) results, not only between Member States, but sometimes even between

regions within the same state. Disparities are particularly evident in large macro-regions, where geographical, historical, political, economic, social, and other factors, while implying a weakness of internal relations, are at the same time determinants of different approaches to CE by different communities (and authorities) at national and regional levels. A case in point is the Baltic Sea Region (BSR), whose size and internal diversity imply that the processes of shaping enabling conditions for the implementation (and subsequent development) of CE take place at different speeds and with different degrees of involvement of public, private and civil society actors, resulting in the BSR states being at different stages of transformation towards CE. Each of them either already has a national CE implementation strategy and/or action plan or is in the process of developing them. However, these documents vary considerably in subject matter and scope, resulting in the identification of differing objectives and means of achieving them. Moreover, while in some countries the implementation of CE has the status of a priority (being the subject of governmental decisions), in others the support for the concept and the involvement in its implementation of the public administration remains at a very low level (Danish Cultural Institute 2021a: p. 12). It must, therefore, be concluded that the BSR is still at the beginning of the transformation towards circular economy (European Commission 2020a).

There is no doubt that effective implementation of the CE across the BSR requires commonality of the content of the objectives (taking into account the hierarchy of needs and the actual possibilities to fulfil the assumed commitments) of the states and regions, followed by close correlation of their actions aiming at achieving the set results in defined timeframes. However, the process of integrating the macro-region around the CE concept cannot take place without first identifying the challenges and problems faced by the BSR as a whole and its individual components. An attempt to carry out such a review has been made, among others, by a consortium operating within the framework of the project *CCI: Circular Economy and Place*, the first phase of which (implemented in 2021–2022) was dedicated precisely to the analysis of existing conditions (especially obstacles) for the implementation of a unified CE formula across the BSR area. This article presents how the research material in this project was selected and evaluated, as well as the conclusions reached to identify the optimal implementation path for CE in the BSR countries (and regions), taking into account the specificities of their geopolitical location and socio-economic conditions.

Based on a critical analysis of existing documents<sup>1</sup>, the authors of the article compared the planned results (in line with the guidelines formulated at the EU level) with the actual achievements in regional and national dimensions (i.e. in individual regions and states covered by project activities), as well as macro-regional. The assessment of the existing discrepancies was possible thanks to the use of comparative method and qualitative analysis, with the proviso, however, that the scarcity of the source material made it possible to formulate only general conclusions regarding the prospects and scope of

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<sup>1</sup> i.e. unpublished materials containing the original project assumptions with reports on the implementation of the first phase of the project.

leveling (or at least reducing) the identified differences. In this respect, the conclusions of the authors of the article are consistent with the conclusions contained in the reports summarising the project activities carried out until the end of 2022. The purpose of the article is, therefore, to present the achievements of the first phase of the project *CCI: Circular Economy and Place*, as well as to provide answers when asked about the directions, forms and methods of activities to ensure the achievement of effects at least similar to the original project assumptions. The correct identification of factors, temporarily or permanently preventing the implementation of the next phase, seems to be crucial not only for this particular project, but also for the implementation of the wider CE trend (which is part of the EU concept of sustainable development). The importance of the considerations regarding the project *CCI: Circular Economy and Place* is, therefore, expressed in the possibility of relating them to similar projects undertaken in various thematic areas and in various parts of the European Union.

The next parts of the article define: the main and specific aims of the project, its participants, adopted research methods, obtained results, and the conclusions formulated after the end of the first phase. The assessment of the activities carried out (so far) under the project effectiveness is included in the final conclusions of the article.

### **Subject and object considerations regarding the project *CCI: Circular Economy and Place***

The overall objective of the project was to generate the capacity to expand CE systems locally, particularly in the *Culture and Creative Sectors* (CCS), by increasing consumer engagement (Województwo Pomorskie 2020: p. 14). On the other hand, the following specific objectives were identified:

- 1) development of the long-lasting platform of stakeholders interested in the implementation of CE in the BSR (especially in CCS), i.e. politicians, representatives of regional and municipal authorities, CCS actors, entrepreneurs, NGOs, universities, and independent experts, in order to promote knowledge and exchange experience on the CE implementation;
- 2) giving regional and city authorities and civil society a leading role in supporting actors (especially entrepreneurs), who introduce CE-friendly solutions in their activities (sectoral and general);
- 3) developing solutions to enhance the capacities of regional and municipal authorities, CCS actors, entities and organisations supporting the development of small and medium-sized enterprises and the creation of start-ups, in particular by removing so-called "gaps of poor authority", regulatory (legal and administrative) barriers and restrictions on access to funding to support CCS development or CE implementation;
- 4) initiating or accelerating changes in human attitudes and behaviour (in individual and collective dimensions) by raising awareness of the existence of sub- and local opportunities of action towards the transition from the linear model to the

CE and creating clear links between the postulated changes and cultural factors (Toszek 2022: p. 3–4).

The implementation of the project has been spread over two phases:

- 1) the first phase consisting of the identification of contributing factors and barriers to the implementation of CE in the sectoral (i.e. in relation to CCS) and general dimensions,
- 2) the second phase (scheduled for 2023–2025) coming down to the materialisation of the general and specific objectives, subject to the need to take into account the constraints identified in the previous phase.

In the first phase, an international public-private consortium was formed including the Danish Cultural Institute (*Dansk Kulturinstitut*) as project leader, the Pomeranian Voivodeship in Poland, the German (federal) cultural institution *Goethe-Institut e.V.*, and NGOs from Latvia and Estonia, i.e. the *Northern Dimension Partnership for Culture* and *Let's Do It World MTÚ* respectively (Województwo Pomorskie 2020: p. 3). The task of the consortium was to analyse the conditions in the BSR that influencing (positively and negatively) the process of implementation of the CE model advocated by the European Commission, i.e. providing the planet with more than its current needs, aiming to keep the consumption of resources within the planet's carrying capacity, thereby reducing the consumption of these resources and increasing the scope of their use (European Commission 2020b: p. 4).

## Methodological assumptions of the project

The research work used social science methods, i.e., institutional-legal analysis and micro- and macro-economic analysis combined with comparative and qualitative methods to compare and identify the best legal, organisational, financial and market solutions across countries and regions. In addition, each consortium members conducted the qualitative interviews (3–5 reviews) among two stakeholder's groups:

- 1) representatives of national or regional authorities (those responsible for implementing CE, supervising the operation of CCS, creative incubators or start-ups, public cultural institutions, etc.),
- 2) entrepreneurs and representatives of non-profit organisations involved in the implementation of CE or community development, start-ups in CCS, entities designing products or services for CE, NGOs involved in placemaking, environmental protection, etc.

There were 24 stakeholders participated in the study using interviews, including 3 Danish (organisation *Lifestyle and Design Cluster*, Aarhus Municipality and Midtjylland Region), 3 Estonian (organisation *Estonian Design Centre*, Estonian Business School and Tallinn Municipality), 1 Finnish (Turku Municipality), 3 Lithuanian (organisation *Resources for Sustainable Development*, Kaunas and Vilnius Municipalities), 2 Latvian (Latvian Investment and Development Agency, and Riga Municipality), 3 German (*Heinrich Böll Stiftung*, Municipality of Kiel and Schleswig-Holstein Region), 4 Polish (Gdansk Entrepreneurship Foundation, Gdansk City Culture Institute, Pomeranian Science and Technology Park in

Gdynia, and Gdansk Municipality), 1 Russian (Foundation for the Development of Small and Medium Enterprises in St. Petersburg) and 3 Swedish (organisation *Media Evolution*, Malmö Municipality and Skåne Region) respectively (see more: Danish Cultural Institute 2021b: p. 34–37).

The purpose of the qualitative interviews was to complement the research conducted by other methods, by taking into account the way of valuing adopted by external [i.e. non-consortium] entities in the BSR. The interviews helped understand how the cultural and creative industries (CCI) work together with communities in transition towards CE, and which policies, strategies and initiatives best contribute to the collaboration in question. They allowed to formulate answers to the same questions that were addressed in the internal analysis, specifically:

- 1) what is the general situation in the field under study, i.e. what is the political and social environment of the CE idea, what is the legal framework and the approach of the state authorities?
- 2) what problems and/or challenges have been identified in this field?
- 3) what are the needs of the social groups [represented by the survey entities]?
- 4) what actions to implement CE have been taken so far? (Danish Cultural Institute 2021a: p. 6).

## **Outcomes of phase I of the project**

A thorough and multifaceted analysis of the research material, collected on the basis of the institutional knowledge and own experience of the consortium members, as well as (or rather primarily) through extensive qualitative interviews, allowed the identification of the problems and challenges faced by the BSR in the process of CE implementation. These factors were divided into three groups:

### **1) market issues:**

- a) production of goods intended for circular economy circulation is based on pioneer technologies and involves significant costs, which undermines the competitiveness of these products compared to single-use products manufactured using proven (in terms of cost-effectiveness) and cheaper methods;
- b) lack of proven business solutions means that starting up and running a circular goods business is a high financial risk, which in turn requires the high (compared to the linear model) public sector support;
- c) small number of entrepreneurs producing circular goods has an impact on the low cross-competitiveness of these goods, with the risk of their quality being compromised by producers;
- d) small number of developed industry infrastructure, or the complete absence of such infrastructure, results in entrepreneurs who decide to produce circular goods slowly and independently gaining knowledge and experience with regard to acquiring raw materials and sources of financing, establishing cooperation with market partners (e.g. suppliers), ways of reaching customers, etc;

- e) small number of entrepreneurs producing circular goods is not conducive to the creation of networks between them, especially as some entrepreneurs are unwilling to share market space, make their knowledge and experience available, or are too busy to cooperate;
- f) lack of tangible incentives for the general consumer to buy goods produced in a circular manner rather than those produced in a linear model;

**2) problems related to public sector participation:**

- a) unfamiliarity or limited knowledge of the CE concept (most often expressed by reducing it to a waste management policy), resulting in low involvement in CE implementation processes, whereby while in the Nordic countries this involvement is noticeable, in the Baltic States, for example, the leadership of most initiatives is provided by private companies, non-profit organisations or citizen groups. Public sector awareness and range of expertise is at a low level, which poses a challenge in collaborating, creating synergies or gaining support (Danish Cultural Institute 2021a: p. 16–17);
- b) limited decision-making powers, as well as organisational and financial capacities of regional and local level entities, which, combined with the absence (or facade) of strategies, policies and action plans developed at national level, result in a formal inability of the public sector to effectively initiate and/or support CE implementation processes;
- c) many administrative barriers that discourage entrepreneurs producing circular products from seeking information about support instruments or building ongoing cooperation with the public sector, due to the time-consuming and difficult nature of the procedures;
- d) short-term project thinking meaning that entrepreneurs need to align their development plans with current programmes and initiatives providing funding for CE activities;

**3) problems related to access to public and private sources of funding:**

- a) lack of financial support to ensure the uninterrupted development of CE businesses and organisations (particularly in Russia, the Baltic States and Finland);
- b) difficulty of obtaining information on funding mechanisms and the high degree of bureaucratisation of the procedures involved in accessing public funds;
- c) preference for funding companies based on proven business solutions, i.e. producing a product in a linear model, whereby in this respect, entrepreneurs and organisations in the Nordic countries are in a slightly better position, showing the greatest degree of progress in implementing CE, while the Baltic States are only at the stage of developing national development strategies, and the focus of the public sector is still on economic and social capacity building rather than on concrete implementation measures (Danish Cultural Institute 2021a: p. 17);
- d) substitution of hard financial instruments by intangible measures (advice, training, etc.), which, while serving to spread the idea itself, does not have a direct impact on the development of enterprises making an effort to adapt their production to CE requirements;

- e) lack of instruments to support benchmarking (in the planning, prototyping and testing phases of market solutions), which makes it difficult, or not impossible, to effectively analyse the causes in the event of the market failure (in particular to assess the correctness of the remuneration structure and operational expenditure);
- f) funding schemes by public institutions limiting or excluding from the group of potential beneficiaries consortia with a heterogeneous structure, i.e. including entities linked by a supply chain (whose interconnectedness is conditioned by "exploiting opportunities arising in markets where branches of corporations are located or where suppliers of parts and components operate" (Łasak 2013: p. 25)), operating in the framework of cooperation between business and academia, public-private partnerships, etc.;
- g) distrust of private investors of engaging with companies with an easily copied business model or in ventures with a high risk of failure;
- h) reluctance of enterprises (especially small and medium-sized ones) to incur organisational and financial efforts to break through technical and technological barriers, resulting from the awareness of the low potential to find new applications for existing solutions and to generate new solutions (PARP 2020: p. 8; see also: Danish Cultural Institute 2021a: p. 16–18; Hansen et al. 2021: p. 3–5).

## Conclusions following the phase I of the project

The identification of problems and challenges has made it possible to formulate conclusions about optimal methods and ways of action in the process of shaping the CE model corresponding to the specificities of the BSR conditions. These conclusions can be summarised into the following recommendations:

- 1) creation or extension, unification and correlation of information and education policies conducted individually at national and regional levels, as well as the development of analogous macro-regional policies;
- 2) running community-wide campaigns (involving small and medium-sized enterprises, start-ups and non-profit organisations) to raise public awareness of the need to implement CE, creating fashion for reuse, repair and recycling, and empowering businesses and organisations working on CE;
- 3) creation and systematic expansion of support programmes to facilitate pilot projects, the testing of innovative technological and market solutions, prototyping, market research, the sharing of knowledge and experience (across borders, sectors and value chains), and the development of production and services;
- 4) increasing the amount and availability of funding (public and private) to support companies starting up and experimenting with business models within a circular economy, in particular to cover the costs of leasing or renting real estate, staff salaries, business development planning and product development, as well as building partnerships and innovating in a value chain in which several companies



collaborate to create, test and implement products and services for a circular economy (Danish Cultural Institute 2021a: p. 20).

The emergence of the need to address the problems and challenges identified in the initial phase of the project led to a significant modification not only of the methods and measures, but also (or, rather, above all) of the lines of action planned for the implementation phase. In the transition from a linear economy to CE, it was decided to place greater emphasis on using the existing infrastructure (i.e. legal, institutional and financial solutions) and social behaviour already developed<sup>2</sup> to enable the implementation of certain elements of the target economic model, even if this means that CE would be implemented in different countries and regions and in different economic sectors at an uneven pace and scope. The importance of building sustainable market support mechanisms "to strengthen and scale the potential of repair, rework and reuse of things [...], the exchange of knowledge and experience between businesses, organisations involved in the implementation of CE, public administration units and political communities" was also emphasised (Danish Cultural Institute 2021b: p. 7). The systematic strengthening of the cooperation of all actors involved in CE implementation should eventually lead to a sense of community of interest among them. As it were, the threshold of distrust between public and private actors considering investing in or financing ventures involving the production of circular goods would automatically decrease. Moreover, the consolidation of the business community, public administration and politicians around the idea of CE would facilitate the development of a convincing and coherent (in regional, national and macro-regional dimensions) formula for presenting the benefits of a change in the economic model. Combined with the successive involvement of the entire BSR population in the implementation activities, the indicated processes would eventually lead to the creation of a "circular society" (Danish Cultural Institute 2021b: p. 6–7).

## Final conclusions

Although phase I of the project *CCI: Circular Economy and Place* was only one of many similar initiatives implemented within the BSR and – more broadly – across the EU, due to the comprehensive approach to the analysed issue (in sectoral and geographical dimensions), the applied methodological workshop (including the large number and high level of diversity of the participating actors) and the wide range of developed conclusions, can serve as an example of analysing the possibility of actually implementing the CE model postulated by the European Commission. The authors of the research did not limit themselves to the identification of problems and challenges in the implementation process, but, recognising their importance, proposed tangible practical solutions, the application of which should bring the BSR closer to achievement of the basic project goal in a closer (i.e. defined by the project framework) or longer perspective. It should be noted,

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<sup>2</sup> e.g. the tendency to repair and rework things, reuse them completely, segregate waste, etc.

however, that the wide range of identified problems and challenges, their considerable significance, and their high degree of diversity in sectoral and geographical dimensions, lead to the conclusion that CE, understood as a primary (rather than merely alternative) economic model, is most likely not feasible. This does not change the fact that if we really want people to have a decent life on the planet, we need to move quickly and decisively towards a circular economy. "During this process, we will learn how to develop our concepts, our tools, our consumption patterns and behavior as well as our technologies." (Ahlgren 2019: p. 17).

The analysis of the conclusions formulated after the completion of the first phase of the project leads to the belief that the CE model advocated by the European Commission seems to be treated like a benchmark than an actual (i.e. achievable) goal. Despite this, due to the unquestionable benefits of even partial (in geographical or material dimension) implementation of CE, any action that brings it closer (such as the project *CCI: Circular Economy and Place*) on both the micro- and macro-scale should be viewed positively as having an impact (actually or potentially) on improvement of the quality of life for current and future generations. The presented project is important, because in the area of the BSR it is one of the first macro-regional initiatives that allow to assess not only potential but also the level of awareness (and consequently – the determination to undertake implementation activities) of individual states and regions in the process of building the circular economy model.

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