

Territorial Perspectives and Circular Economy: Challenges and Opportunities

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Abstract

The present document aims to socialize a series of reflections regarding the conceptualization and implementation of various activities framed within the Circular Economy. These reflections were carried out through the CIBIECO Program, which took place at the end of May and the beginning of June 2023 in the cities of Rovaniemi and Kokkola, Finland. Anticipating the reading, it is important to highlight that the perspective from which this document was written finds its theoretical basis in the social sciences. Through these sciences, it seeks to problematize the logics that underpin, legitimize, and institutionalize the idea of "development" in society and its impact on the territory; approached from an environmental perspective.

Introduction

In the context of climate change, it is crucial for academia and governance begin to think about the environment from a systemic perspective, that is, understood as a complex environment that considers ecological conservation alongside the full development of human beings (and their social intentions), respecting the cultural particularities of respective territories (García and Priotto, 2009).

It is through the systemic perspective that the territory is understood as one of the constitutive elements of the environment, where its characteristics (sociocultural, political-institutional, and economic-productive) and the dynamics that unfold at the local level ultimately influence the effectiveness of the implementation and sustainability of environmental public policies.

In this regard, it can be argued that public policies associated with the territory are manifested in governance. With regards to the latter, it is crucial to emphasize that one of the

primary unresolved political and institutional challenges pertains to the necessity for environmental legislation to recognize and confront the linear connection between the dominant economic-productive model (which is highly extractive) and ecological degradation.

Considering the environmental challenges at hand, the Circular Economy emerges as a concept aimed at incorporating sustainability principles into production and consumption models. The notion of economic circularity originates from industrialized nations as a development model, stemming from industrial ecology, which examines the flow of materials within economic and social systems (Van Hoof, Nuñez, and De Miguel, 2022).

The influence of industrialized countries has contributed to the legitimacy and popularity of the circularity perspective concerning the development of business models oriented towards the transition to more sustainable production models. As a result, certain companies are increasingly interested in measuring and mitigating the impact they have on the environment.

Nevertheless, due to its recent emergence, the concept of circularity lacks a well-established theoretical framework. Instead, its various contributions primarily revolve around interpretations of Development and the societal benefits it brings. These interpretations are influenced by cultural and territorial factors.

Challenges and opportunities

As we arrive in Rovaniemi, we are greeted by a verdant landscape, a result of sudden temperature fluctuations in the last weeks of May. These rapid changes have accelerated the thawing processes and caused significant increases in water levels, posing a risk of flooding in certain areas along the riverbanks. While such phenomena are typical during seasonal transitions, they become more problematic within the context of climate change emergencies, where global temperature variations contribute to more abrupt shifts. This impact affects all territories equally, as geographic characteristics replicate adverse natural situations.

A similar situation can be observed in the Province of Córdoba, where in recent years, the eroded lands from monoculture and deforestation struggle to absorb the water from abundant rainfall, leading to river overflow and the flooding of roads and entire towns. Despite territorial specificities, a clear relationship can be observed between production

models and the deterioration of natural environments caused by human activities. Flooding has gained such prominence that it is now a significant consideration in municipal government agendas, leading to the implementation of mitigation policies and territorial organization.

During the activities of the CIBIECO program, the significance of the territorial element quickly emerged as a concept in the exchange of ideas among the group of professionals. While it was used in diverse senses related to the disciplines of the respective participants, collective parallels were drawn between the represented Argentine cities and regions and their Finnish counterparts, as a way to familiarize and identify similarities.

"Two Hearts and Two Endings/Beginnings of the World" the geographical hearts refer to the Argentine province of Córdoba (referred to as the heart of the country) and the city of Kokkola, whose heart is located in the west and on the shores of the Gulf of Bothnia. Similar parallels were drawn with the cities of Ushuaia and Rovaniemi, where the former is referenced as the city at the end of the world (or the beginning, depending on perspectives), in terms of its proximity to Antarctica (specifically 4649 km away), while Rovaniemi represents a similar significance, situated just a few kilometers from the Arctic Circle. Both cities serve as administrative capitals of their respective provinces.

The importance of territory and its significance is reflected even in the construction of the Arctic Center, which is oriented towards the North Pole. Similar symbolism can be observed in Latin American latitudes with monumental tributes to General San Martín, paying homage to his historical and geographical importance in the liberation of South American countries, with his finger pointing towards the Andes Mountains.

Territorial perspectives are those that understand the functioning of the world and are enunciated from the familiarity of their surroundings. These perspectives are influenced by territoriality (through which we question whether it is the end or the beginning of the world), and in turn, they influence the definition of the circular economy. Therefore, territory is a key element in the circular economy, as the study of its multiple scales allows us to understand the challenges and opportunities that arise in the implementation of this concept.

Territory, and its corresponding significance, constituted a vital element in the development of the CIBIECO program, which became evident through a series of particularities that directly and indirectly influenced the Finnish approach to the circular economy. The following are some reflections regarding them:

- The Arctic Territory: During the introductory presentations, a session was held to discuss the history and operations of the Arctic Center, affiliated with the University of Lapland. The center stands out for its solid research on the ecological, social, and political dimensions of development in the Arctic.

Alongside the institutional description of the center, a series of data were shared that highlighted a significant characteristic of the studied environment. In this case, the territorial element emerged through the territorial delimitation. The Arctic is a vast region comprising countries such as the United States, Canada, Russia, Iceland, Sweden, Norway, Denmark, and Finland. Rovaniemi is one of the largest populated centers in Europe, located near the Arctic Circle, with a population of around 60,000 habitants in 2020 (a population that fluctuates between seasons).

The Arctic region is unique in nature. From a perspective of physical, chemical, and biological balance, the Arctic occupies a crucial position. It is particularly sensitive to climate change and serves as a global reflection of the state of the environment. Its sensitivity to change makes it an early warning system for climate change research. In this regard, the Arctic has a council that acts as an intergovernmental forum, addressing common issues in the Arctic region, particularly related to sustainable development and environmental protection.

However, it is worth noting that the extreme conditions of the Arctic have made its study challenging, often conducted in fragments. As a result, there are disputes over territorial control, influenced by the geopolitical conflicts among the countries in the region. An example of this is the potential restructuring of the Arctic Council due to the war between Russia and Ukraine, which has implications for supply chains, increased prices of agricultural commodities, fuels, minerals, and fertilizers, higher costs of international transportation, and accelerated global inflation rates (National Directorate for International Economic Affairs, 2022).

An important reflection arises from this political and institutional particularity: when considering the challenges faced by the circular economy in terms of sustainability, the impact of geopolitical dynamics, especially conflicts arising from sovereignty claims, on production matrices and consumption patterns in territories organized within political communities of integration and governance must be taken into account. This helps identify conditions of opportunity for the incorporation of circular practices into more local productive sectors.

- "The circular economy continues to stress the economy; the problem is not in circularity." As mentioned earlier, territory and the analysis of its perspectives play a key role in the operation of the circular economy, as it materializes governance. In terms of socio-environmental considerations, governance faces a pending challenge in terms of climate change adaptation and legislation of circular economy policies.

One of the most important pieces of information recorded during the program relates to a series of descriptions of the political institutional functioning of one of the main regional political bodies: the European Union (EU). It is related to the statement made by one of the researchers participating in the panel of presentations regarding the fact that most environmental policies and legislations focus on waste management and disposal.

In this regard, it is important to highlight that while these legislations make significant contributions to the environmental cause, in terms of individuals exploring and supporting different economic circularity policies, the main challenge faced by the circular economy in valuing local organizational and productive characteristics lies in the difficulties generated around the standardization processes that have greater efficiency in resource use and management, as experienced in the slaughtering process of the indigenous Saami people.

In this sense, it is important to note that while the context of climate change challenges governance to address deterioration on a global scale, the path towards homogenizing environmental sustainability policies may overlook other indigenous knowledge systems, which possess substantial ecological knowledge of the inhabited lands due to the prevalence of alternative forms of relationship with nature.

The theme of standardization (and the reflection around it) appeared exemplified again in the collaboration between one of the laboratories belonging to Centria University and organic cosmetic producers, aiming to certify production sustainability and enhance the value of their products in the market. In these terms, it is worth noting that another challenge generated by the pursuit of standardization (a term legitimized within industrial production) does not equally consider the heterogeneity of institutions and actors involved in environmental issues, thus hindering the potential development of circular economy entrepreneurs who are unable to compete on equal footing (with large companies) regarding sustainability certification.

Having stated this, a deeper reflection emerges regarding the inherent link between the circular economy and the commodification of certain practices. In this regard, the circular

economy is understood as a systemic model that allows for the maintenance and even increase of consumption dynamics; it does not promote consumption per se but advocates for perspectives with lower ecological impact and the ability to adapt to climate change phenomena. This example can be contrasted with the development of new tourist circuits in certain Finnish regions that depend on the tourist flow driven by snow.

- The circular economy at the local level: Far from any pretense of conceptual resignation, the circular economy generates numerous conditions of possibilities through which significant prominence is given to the local scale of the territory.

Indeed, the circular economy is being shaped as a system that promotes mechanisms for adaptation to climate variation, in which important commercial strategies are deployed, capitalizing on the extensive knowledge of the territory and advocating for local consumption. This situation was reflected in the narratives of various local fruit and vegetable enterprises, as well as the visited gastronomic establishment, which have successfully incorporated ancestral cultural practices into their activities and emphasized the quality of their natural and/or organic products.

Furthermore, it fosters innovation and entrepreneurial spirit, providing opportunities for the development of new sustainable business models, products, and services. At the same time, the implementation of circular practices involves and stimulates the participation of the local community, businesses, and organizations, strengthening social ties and promoting collaboration. These opportunities create a condition of possibility for respective local communities to reduce their dependence on external resources and global markets, making them more resilient in the face of disruptions in supply chains and increasing governmental capacities over the territory.