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POLICY BRIEF

Nurturing RRI, responsibility and sustainability in regions

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Introduction

This policy brief draws on the findings of four European regions, namely Cantabria, Karlsruhe, Tampere and Szeged-Timisoara (see: <https://tetrris.eu/>). It introduces how regional implementation context affects development of Responsible Research and Innovation (RRI), and what should be considered when introducing social and environmental values besides economic value in regional or local innovation and business ecosystems.

In the Policy recommendations section, we describe the challenges identified, elaborate these with regional perspectives (drawn from our Deliverable 6.2 'Pilot territory-specific policy briefs') and propose recommendations.

Policy recommendations

RRI is an approach to solve expanding societal, ethical, and environmental challenges. While it has been gaining attention in EU policy, there are still challenges in its implementation, for instance governance models, cultures and values, and understandings of RRI also vary in different domains of research and innovation¹.

One of the unexplored areas is the regional dimension of RRI². There are open questions and room for reflecting the relationship between RRI and regional innovation development and policy for instance in terms of managing and governing change towards more sustainable and responsible region.

Nurturing responsibility and sustainability at regional level: Organizing regional actors

Our approach has similarities with the well-known Transition management (TM) framework, which offers a lens to processes for managing transition to a more sustainable future³. Like our approach, it emphasises a multi-stakeholder and participatory approach that seeks to understand interplay and balance between stability and radical change needed for sustainability. TM has been used to address a variety of sustainability challenges, such as climate change, energy transition, and sustainable cities, and it is agile for different contexts from industrial sectors to regional and national contexts⁴. Like TM, our observations and experiences emphasize the embeddedness in local problems, the role of change agents, a need for shared visions and platforms as well as stepwise development.

How to foster sustainability and responsibility change regionally?

The tetRRIS project showed that creating sustainability change in the regions demand sensitivity to existing dynamics and balancing between long-term ambition and visions and short-term concerns and conflicts. For this reason, to institutionalize RRI, sustainability and responsibility perspectives and related actions should be integrated

¹ Blok, 2022; Tabarés et al., 2022

² For example, Thapa et al., 2019

³ Kemp, Loorbach & Rotmans, 2000

⁴ Loorbach & Rotmans, 2010

into current structures such as processes and platforms, and practices and agendas of the regional actors. Activities also need to be designed so that they consider the needs and interests of local actors, and embed process as inside-out rather than outside-in activity in the region.

“The deployment of the concept, particularly with regards to the pilot actions in the TRK region has shown that being sensitive to the existing institutional structures in the territory and local actors’ interests, and shaping own activities to fit with these is one of the main success factors.” **Karlsruhe pilot, Germany**

“To this extent, embedding RRI in the challenges that face the regional innovation system and beyond individual projects ensures that RRI can be perceived as a horizontal element of the entire ecosystem. This also helped to promote bottom-up approaches and activities aimed to address societal needs and contributing to regional development.” **Cantabria pilot, Spain**

To institutionalize RRI, sustainability and responsibility perspectives and related actions should be integrated into current structures such as processes and platforms, practices, and agendas of the regional actors.

Moreover, to create regionally shared ambition and values for sustainability and responsibility, it became evident that RRI needs to be interpreted in language and situated in actions the actors are familiar with. Addressing RRI broadly through sustainability and responsibility approaches, combined with specific RRI elements such as engagement, is helpful.

“Demonstrating tangible benefits to society, as well as stakeholders can help to promote the value of RRI to R&I practitioners and taxpayers. In this regard, during the workshops held at Cantabria, RRI was presented through practical examples and specific good practices that stressed the socio-ethical implications that the development of these practices can have.” **Cantabria pilot, Spain**

“Consequently, several practices were tested during the lifespan of the project for the adoption of RRI into the territory. These practices do not have an instrumental character, instead they present ways for acting, behaving, and reflecting. They belong to the cultural dimension of a particular group of people or a specific territory.” **Szeged-Timisoara pilot, Hungary-Romania**

To strengthen responsibility and sustainability vision, interpret RRI in language and situate it in actions the actors are familiar with in the regions.

One of the main learnings of tetRRIS was that scientific support from innovation research can increase acceptance of RRI in the region significantly. Given that gaining acceptance among the different actors in the region is important, the efforts to communicate and justify the objectives, intentions, and practices to local context are crucial. A scientific partner can help to translate and bridge the scientific and often obscure concepts into understandable language and existing actions that support attaining shared ambition in the region.

In addition to shared ambition and links to existing regional processes and structures, as well as having scientific support, one of the main learnings of tetRRIS is how

important it is to identify a change agent(s) (either organisations or individuals) to ensure that perspectives of sustainable and responsible development remain intact in regional development agenda.

“The participation and commitment of the Directorate General for Innovation of the Government of Cantabria has been essential from the very beginning of the project. This involvement is considered a key factor for the project execution and has helped significantly as being the leading institution to coordinate the different fields of regional innovation.”

Cantabria pilot, Spain

“The Council of Tampere Region has actively promoted and been involved in RRI focused projects in the region. The Council has also made concrete efforts (i.e., the updated regional plan and smart specialisation strategy) to incorporate wider understanding of sustainable and responsible development into regional development agenda.” **Tampere pilot, Finland**

To ensure implementing of transition, identify sustainability and responsibility change agent(s) to ensure that perspectives of sustainable development remain intact in regional development agenda.

Also, it became evident that continuation creates one of the major challenges in responsibility and sustainability transitions in the regions. Therefore, it is important to identify and engage not only a capable and suitable orchestrator but also organisational actors with special RRI knowledge to create continuity. These change agents can maintain and continue RRI-related operations over projects and action periods.

“Apart from the micro level of firms, the intermediary actors, especially TRK GmbH as the networking platform and agency were crucial because of the ability to assess the basic possibilities, interests, and barriers within the regional network. Therefore, an important lesson learnt is a capable platform or agency acting close to policy makers, administration, and the companies.” **Karlsruhe pilot, Germany**

To avoid discontinuity and political vulnerability of RRI, it is important that cross-functional and multi-sectoral activities and structures are developed and maintained in the regions. Furthermore, national, and regional level policies should ensure longevity of responsibility and sustainability objectives in the national innovation and technology agendas, strategies and action plans so that regional research and innovation (R&I) stakeholders have a mandate to act accordingly and there is continuity in the operational environment.

To ensure continuity of RRI, cross-functional and multi-sectoral activities and structures should be developed and maintained in the regions.

It is evident that transition towards sustainable and responsible R&I demand trust among regional stakeholders. Therefore, it is important to facilitate trust and shared vision building by creating platforms as means for communication. In addition to concrete platforms, it is important to generate reasons for multi-stakeholder sustainability and responsibility dialogue. This dialogue should be inclusive, engaging and open to overcome resistance to RRI.

“Operationalization of the Policy Lab helped to highlight the importance of informal forums for collective problem-solving and addressing territorial challenges based on evidence-based needs.”

Something that was commonly stressed by participants at the forum and how Cantabria particularly demands this kind of approaches.” **Cantabria pilot, Spain**

“More important, it was argued that there was a need for continue with this initiative and promoting co-responsibility among the stakeholders in advancing RRI awareness in the region, as well as facilitating continuous learning and adapting RRI practices based on feedback, lessons learned, and evolving societal needs.” **Cantabria pilot, Spain**

To facilitate trust and shared vision building, create platforms and motivate actors to engage into multi-stakeholder sustainability and responsibility dialogue.

Multi-level governance in the context of globally shared sustainability objectives

In the spirit of sustainability transition’s approach, development and implementation of policies has transformed to increasingly diffuse policymaking structures and processes emphasised by multi-level governance models. Meeting sustainability and responsibility goals demand attention across multiple levels of government⁵.

How to regionally govern global sustainability challenges?

To embed RRI into region, tetRRIS cases showed that RRI needs to be stimulated both top-down and bottom-up. The more the different policy levels interact and match regional needs and experience with broader societal goals, the better the policy delivery process will be in the end. This interaction demands multi-level governance in which a key is to try to establish a dialogue with the political parties in the region and beyond to communicate the RRI concept, and operationalise the concept by bringing forward (eco, social, technology, service) innovations and projects related to missions like, circular economy.

Regional RRI dialogues should also engage citizens, and can be facilitated by establishing “hybrid forums” where regional stakeholders can have informal exchanges with citizen associations and citizens about matters of concern in relation to the regional innovation system.

“It is important to set up clear goals around RRI and highlighting how RRI contributes to addressing societal challenges. One way of emphasizing the positive impacts of RRI is to communicate success stories and examples of positive outcomes resulting from RRI practices. Demonstrating tangible benefits to society, as well as stakeholders can help to promote the value of RRI to R&I practitioners and taxpayers.” **Cantabria pilot, Spain**

To institutionalize RRI, emphasize regional multistakeholder policy dialogues to integrate both horizontal and international sustainability perspectives.

One of the key learnings of tetRRIS project relates to international, cross-regional collaboration, and exchange of experience and policy learning. Regions emphasised it to bring new perspectives to the discussion in the local contexts. For regional actors, it is important to learn from other regional and institutional contexts. Topics of mutual

⁵ Poyraz & Szalmáné Csete, 2022.

interest can vary from practical management of RRI instruments and their integration into on-going or new research, development and (R&D&I) projects, to integration of sustainability and responsibility objectives into innovation strategies and regional planning activities.

“Inter-regional policy learning and a continuous exchange with other regions are extremely inspiring for regions starting to implement RRI. Even though RRI elements have already been implicitly implemented, TRK region tremendously benefited from the exchange with the Tampere region. Therefore, regions just starting with RRI should think about possible “reference regions” and initiating a systematic exchange on critical issues like stakeholder involvement, governance structure, funding, etc.” **Karlsruhe pilot, Germany**

“A region just starting with RRI should think about possible “reference regions” and initiating a systematic exchange on critical issues like stakeholder involvement, governance structure, funding, etc. ... Karlsruhe had been selected as knowledge provider to Szeged and Timisoara in cross-border cooperation.” **Szeged-Timisoara pilot, Hungary-Romania**

In addition to orchestrating organization-level collaboration in the region, it is recommended to actively seek functional region-to-region international collaboration agreements and provide necessary resources for creating the frameworks for organization-level collaboration. EU policies can support this by creating EU-wide cross-regional collaboration platforms for regional policymakers and organizations to enhance the learning and implementation of sustainability and responsibility related themes across Europe.

To align with global sustainability and responsibility challenges, strengthen the cross-regional or inter-regional, and international exchange of experience and policy learning in RRI.

Exchange of ideas and learnings in cross-regional cooperation helps to interpret the global perspectives, challenges and drivers in a relevant and meaningful way on regional level. To align with global challenges, transparent and foreseeable regulation environment and policies are needed in the regions. Policies on EU, national and regional levels should be horizontally and vertically coherent in terms of sustainability and responsibility in technology and innovation.

“With a view to support RRI in the region in a sustainable way, the example of TRK region shows that additional regional innovation support programmes can be useful to link the original idea with a concrete funding architecture.” **Karlsruhe pilot, Germany**

“The two pilot projects initiated in the TRK region have shown that a specific group of actors is ready and open for RRI within their project work and R&D&I activities as such. The experience gained are a good basis for a further dialogue and concrete actions.” **Karlsruhe pilot, Germany**

For example, EU level policy programs which aim at seeking new ideas, implementing and advancing sustainability and responsibility in concrete national and regional contexts and organizations with flagship pilots, new initiatives, and engagement should be enhanced.

To ensure continuation to regional RRI, create transparent and foreseeable regulation environment and policies which consider that policies on EU,

national and regional levels should be horizontally and vertically coherent in terms of sustainability and responsibility.

Lastly, regions emphasized that sustainability and responsibility change is a continuous process which inherently involves dialogue to balance interests of multiple parties. Needs and resources for adopting sustainability can vary and raise resistance to overall development in sustainability and responsibility agendas. For instance, it is important to strengthen rural-urban solidarity in the regions. It means fostering cooperation, mutual understanding, and support between rural and urban areas, and development of policies and governance structures that consider the specific needs and challenges of both rural and urban areas. In this respect, it is important to engage citizens but address also intergenerational divides in the regions that can create perceived or real differences, gaps, or conflicts between different age groups in the territory.

Concluding comments

The importance of sustainability and responsibility is bigger than ever, and there is urgency to push the change and transition. Regions are important players in this transition by integrating sustainability and responsibility in R&D&I, therefore regional emphasis in forthcoming national and European innovation and technology programmes and policies is not only essential but necessity.

The value of RRI is that it broadens the discussion from environmental perspectives to social sustainability and responsibility and ensures holistic view on sustainability that is a necessity to meet global challenges.

In the regions, a practical solution is to embed RRI in the on-going activities of smart specialisation (S3) which support innovation in European regions. Making RRI as inherent dimension of smart specialisation helps to keep responsibility and sustainability in the core of regional decision-making, and deepening S3 strategies to embrace sustainable and inclusive growth (S4+). For instance, a new European Commission instrument called Partnerships for Regional Innovation (<https://s3platform.jrc.ec.europa.eu/pri-playbook>) already addresses co-creation of sustainability transformation among the regions.

Even though commonalities were found in tetRRIS project, regional **sustainability decisions-making is always context-specific and political**. To create sustainability and responsibility change in the region demand vision, willingness and collaboration. Although sustainability transformation can be rocky and delicate, it needs to be nurtured in every possible way among regional actors, and the sustainability transition should be inclusive - everyone's journey - in the region.

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