

LARS

Learning Among Regions on Smart Specialisation

GRETA

Green Transformation! A Policy tool for
Regional Smart Specialisation in the Baltic Sea Area

**LARS helps the public sector
lead Smart specialisation
processes in their regions
and connects innovation
networks across regions.**

**The GRETA project develops
policy tools for sustainable
Smart Specialization
innovation strategies in the
Baltic Sea region to support
the transformation of society
and economy in line with the
European Green Deal.**

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 **Interreg**
Baltic Sea Region



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The six steps of LARS

1. Mapping of strategies in order to select the final intervention areas
2. Triple-helix gap analysis with the purpose of finding deficiencies and also good cases of innovation networks functioning
3. Matching partners in functioning transfer networks based on the "good" and "bad" practices
4. Learning on the transfers, essentially an innovation context analysis
5. Piloting new activities in the regions with the purpose of improving the innovation networks
6. Communicating the findings with a view on the wider implications of the project

The six steps of the GRETA project

1. Selections of intervention areas and quadruple-helix stakeholders
2. Mapping of penta-helix informants
3. Classification of stakeholder salience and dynamics with respect to the green transition
4. Regional DPSIR analysis on the consequences
5. Round table discussions on perceived challenges and opportunities
6. Preparation of Policy Briefs

Time to say Goodbye

Jerker Johnson, Regional Council of Ostrobothnia

This is the seventh and last newsletter of the LARS-project and the GRETA extension stage project. In the LARS-project we piloted transnational learning between the regions and value-chains. The idea was to complement the smart specialization strategies with transnational learning, being a source for innovative development.

While the LARS-project was about improving the 4H connectivity, the GRETA extension was on adding the 5th helix or the environment to the consideration. It is a truism that well-working innovation networks promotes innovation but when responding to the European Green Deal there is also a need to consider sustainability, all innovation are not good for SDGs.

The outcome of the LARS-project was that good practices in a sending region, corresponding to an identified gap in the innovation network by the receivers, was piloted in a receiving region. We also tested the SECI systemized model for the transfer of practices. A model is needed for understanding the context of the practice, “good” in good practice means useful. The project also contributed to a lot of dissemination at academic conferences, in different networks among practitioners and in academic writing.

In the GRETA project we addressed the 5th helix that is intrinsically different. The project provided a method for elaborating S4 or sustainable smart specialization strategies, regime change. The Green Transition (GT) may take place with or without the regions. If so, we will in the latter case see a dual development that comes with a high political cost. The pathway for GT provided by the GRETA-project is presented in the next article in this newsletter and the point is that is doable also in small regions, we have tested it.

Organizational culture is key

It has been a great pleasure to coordinate the project but when closing it the question arises, what will be the further impact of the work. The biannual reporting format in the BAMOS-system asks about the “durability of the output” or how the project findings will be carried into to the line-organizations.

Well, ideas fly in every direction, but are seldom attributed to the source. To a certain degree this is troublesome for the reporting or in prolongation the justification of the project. We have observed that changes in mindset takes time. Still the main concern remains, does the ideas lead to any change, in other words can we observe that the 4H actors in the value-chains also increasingly becomes stakeholders of the GT.

Clearly, this is a very huge and complex process and changes in mindset or more widely in organizational cultures evolves gradually. We have observed that GT strongly is a part of large business “sense-making”. Also, that it provides them with a desired public legitimacy given the widespread climate-change concern. The development is driven by the market, and it is likely to also have a mindset “trickle down” effect on the 4H innovation partners. The market-driven development tends to occur in the center as new and innovative companies tend to establish themselves closely to the innovation network already existing.

The policy towards smart sustainable smart specialization strategies is extended to all regions and the policy intervention becomes increasingly important where we cannot trust the market mechanism for the GT. The regional public authorities are the implementing bodies of the cohesion policy in their regions and the duties can be carried out with different mindsets. One of just distributing money and working for securing more resources for the region. Alternatively, the regions are in addition to the administration of development funds also invited to position themselves and work in different European networks. These networks provide a “critical mass” for development, resources, and a sense of a joint ownership of the policies.

In the case of the Region of Ostrobothnia we are currently reviewing our strategy for smart specialization. In the strategy draft we are noting that apart from the financial resources, knowledge-based networks provides both an opportunity to form the European policies and to access new knowledge. The networks are by nature open and informal but to thrive in them you need to be able to contribute at some stage.

Here is where GRETA enters, and I believe that our approach and findings will be further discussed. Still if you accept the conclusion that the transition towards a sustainable future is driven by knowledge networks this also has organizational implications.

Pathways to sustainable regions in multi-level system of governance in the Baltic Sea area

- Findings of project GRETA

Seija Virkkala and Åge Mariussen, University of Vaasa

A deep transition of society and a new relation between humans, energy and nature is needed to achieve a society with zero net greenhouse emission. The European Green Deal is one effort to green transition. However, transition happens in regions, and needs clear bottom up and regional level enabling strategies.

In GRETA project, we have examined green transformation as a configuration of technological regimes, in which three related processes are involved:

1. *The external institutional, political and economic context, referred to as landscapes.*
2. *The configuration of the regional networks of actors and innovation, referred to as regional regime, including energy, food and mobility systems.*
3. *Bottom up innovation processes (niches).*

The transition occurs, when:

- (a) The niche-innovations gradually grow,
- (b) niche-innovations and landscape changes (like European green deal) create pressure on the regime, and
- (c) destabilization of the regime creates windows of opportunity for niche-innovations, which then diffuse and disrupt the existing system.

Unsustainable practices, technologies and solutions need to be phased out and replaced by sustainable ones. (Geels et al. 2019) There can be different processes of transition or trajectories (paths) to sustainable society. If we expect that international level landscape transformation, following up the Paris agreement will include various forms of carbon tax, transforming the rules of competition in favor of green steel and other green products,

some regions are likely to experience green growth, whereas regions with carbon-based industries who are reluctant to change will be losers.

In GRETA project, we applied the four trajectories of transition of socio-technical systems presented by Geels and Schot (2010) on green transformation in Baltic Sea Region. In addition, we defined a fifth trajectory: institutional exhaustion. The trajectories towards sustainable society:

I. Technological substitution means that competing niche-innovation replaces regime, after landscape pressure destabilizes regime. The existing industries will be closed down, but they will leave behind factors of production (nature, clever people, empty buildings, infrastructure etc.) which can be used in new ways in new, green industries. The region will replace them with new ways of making a living through new economic activities, new sectors and clusters.

II. Transformation of existing regime refers to adjustments of existing industries, skills, regulations and institutions. Incumbent actors reorient in response to gradually increasing landscape pressure. The existing networks, value chains and companies will overcome difficulties in adjustments, adapt to new regulations, and discover green growth opportunities.

III. Regime reconfiguration means that the existing industries, value chains and networks will be radically reorganized, and new actors will take core positions. Loss of some of the existing companies will leave behind factors of production, which can be used by small, green companies who can start to grow and replace them within the modified existing networks. In regime reconfiguration, symbiotic niche-innovation is incorporated.

ed in regime, followed by knock-on effects and innovation cascades that gradually alter system architecture (Geels and Schot 2010).

IV. De-alignment and re-alignment means that the existing value chains and networks will disappear. Economic activity will be based on surviving companies and technologies, combined with new industries and organized in new value chains and networks. What are today small niches will become dominant actors. In this process, rapid landscape pressure destabilizes regime, which creates space for multiple emerging niche-innovations, followed by re-alignment of a regime around one of them.

V. Institutional exhaustion means that the transformation will be blocked due to deep conflicts. Existing actors and networks will react to macro level pressure through protests and slow down-scaling.

We studied six regional cases, which were selected by the project partners since they were important in the smart specialisation strategies. The transition in the selected sectors, value chains or cluster could have the highest impact in the regions. The studied industrial cases were:

- Ostrobothnia: energy technology and circular economy (Finland)
- Päijät-Häme: grain cluster (Finland)
- Västerbotten: Hydrogen (Sweden)
- Latgale region: metal industry (Latvia)
- Klaipeda: food and beverage industry (Lithuania)
- Lithuania: national biogas.

In project LARS, the structure and dynamics of quadruple helix arrangement of selected value chains, clusters or sectors were measured and analysed. In project GRETA, nature and environment was added to quadruple helix arrangement as a fifth helix, which was presented by experts and relevant stakeholders for environmental issues.

In order to find out the role of different stakeholders in green transformation and on paths to sustainable society, project partners interviewed environmental experts in spring 2021. The chosen experts had an overview and knowledge of the current situation of green transformation in the respective intervention areas, as well as a view of the potential pathway of the area to

green transformation. They were also central persons for achieving green transformation. Altogether 47 experts have been interviewed, of which 17 represented public organisations, 11 companies, 11 universities, and 9 NGOs.

Most of the respondents selected transformation of existing regime as a pathway to green transformation. Regime transformation was either major trajectory chosen by the respondents in every region or a combination of the chosen paths. In Ostrobothnia and Päijät-Häme, transformation of existing regime belonged to the main combination of trajectories. In Ostrobothnia, transformation was combined with technological substitution, in Päijät-Häme with regime reconfiguration. In Latgale, Lithuania-BIO and Västerbotten, respondents supported many pathways or combination of pathways. For instance, in Latgale, some experts noted suggested a path with elements of regime reconfiguration, de-alignment and re-alignment.

There was broad consensus among our experts on the relevance of the Geels and Schot model. In all cases, we can find interaction between macro level landscape impacts and actor-based microeconomic development (niches). Even if the respondents selected the gradual regime transformation as the main path towards sustainable society, they also in various degrees saw possibilities for major changes in the future, driven by new actors and activities, and even technological substitution. Many respondents saw also dealignment and realignment as well as regime reconfigurations as possible long-term paths towards transition. Landscapes evolve and change fast due to regulation and legislation. They refer to national and EU governments and value chain configurations. Respondents emphasized both top-down and bottom up (niche) development as crucial to transformations of the regional regimes.

There were differences in terms of expectations of speed of transition, but generally, our informants anticipate a slow initial phase of transformation based on existing stakeholders. If so, we are facing an extended process, which goes through three phases. It starts with incremental transformation of the existing regimes and moves from there into a broader process of reconfiguration, a state where the old regime can still be recognized, with substantial changes, and then into a radical transformation, referred to as de-alignment and re-alignment, where a new regime is formed, based on related components of the old regime. A characteristic feature of this extended process is that stakeholders are transforming themselves and adapting to change in a way which opens up to new roles, including conversion of

Transformation of existing regime

Existing networks, value chains and companies will overcome difficulties in adjustments, adapt to new regulations, and discover green growth opportunities

Regime reconfiguration

Some existing companies will be supplemented with small, green companies who can start to grow within modified networks.

De-alignment and re-alignment

The region will attract investors and enable growth from below of niche companies. They will re-shape the region and create new networks and value chains, partly based on existing strengths and some existing companies.

their old skills and technologies into the new regime. Fast regions identified core existing stakeholders who are able to bridge the gap, by connecting to macro level changes and “take green growth home” into the region, through regime reconfiguration, de-alignment and re-alignment. In regions which expects slow and incremental transitions, these key drivers were missing. (See picture above.)

Regions are important in the multi-level- governance in transition. They are more drivers of green transformation in the Nordic cases, in Baltic countries regional actors seem to be interested, but mostly some large companies and public organisations act as drivers. The coordination is more vertical than in Nordic cases. Our findings indicates that in the future, the role of the regional level will be important in order to take home green growth.

A regional and local approach to transitions also allows for policy innovation and experimentation. Regions and cities are important for implementing innovative governance approaches and serving as sites of experimentation. While governance systems influencing rules of competition are largely set out by EU and national legislation and policy, there is significant scope for

creative approaches. The regional and local level is also important for innovation, especially in the creation of protected niches necessary for transformational innovation. The regional level allows for experimentation through the creation of experimental conditions at a small-scale local markets, such as local support schemes, networking of local actors, building on local innovation potential, local niche consumer segments, etc.

References

Geels, F. and Schot, J. (2010). *The Dynamics of Transitions: A Socio-Technical Perspective*. In John Grin, Jan Rotmans and Johan Schot: *Transitions to Sustainable Development. New Directions in the Study of Long Term Transformative Change*. Abingdon: Routledge, pp. 11-101

Geels, F., Turnheim, B., Asquith, M. Kern, F. and Kivimaa, P. (2019). *Sustainability transitions: policy and practice*. EEA Report 9/2019. European Environment Agency. Luxembourg: Publications Office of the European Union.

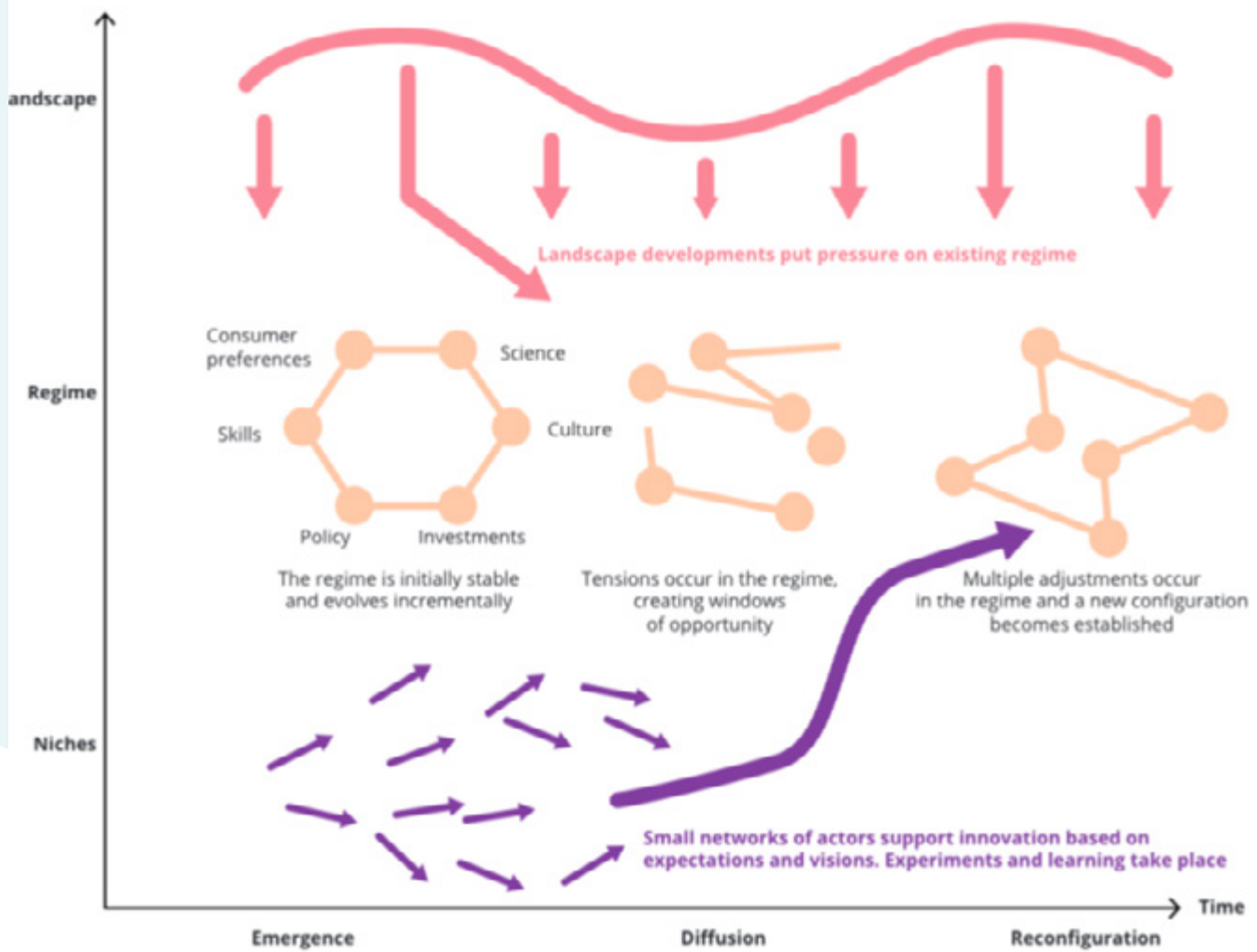


Figure 1. The multilevel perspective on sustainable transitions (Geels et al. 2019: 27)

Challenges and opportunities in promoting green transformation in the Latgale region

Alise Vecozola, Ministry of Environmental Protection and Regional Development of the Republic of Latvia

The GRETA-project partner Ministry of Environmental Protection and Regional Development of Latvia (hereafter MoEPRD) organized their round table discussion with the stakeholders which are involved in green transformation in the Latgale region, on August 18, 2021.

The stakeholders discussed the main challenges and opportunities that companies face in the process of the green transformation. There was an agreement on that companies face pressures to reduce resource consumption and to increase their economic competitiveness. It was noted that when support from available financial instruments is available that it also will help to increase the competitiveness, the companies will be more open to participate in the green transformation.

Since the financial opportunities for the companies in Latgale region are limited, the process of green transformation will not happen automatically. It will require an additional support component/activity for the companies. Therefore, the experts agreed on the need to develop “carrots” for companies to ensure that green transformation is going as fast as possible.

We can see that in case of the Latgale region two important aspects must be considered when moving towards green transformation – networking and innovations. In every EU member state, funds are assigned for activities to reach climate neutrality by 2050. Learning from the GRETA-project partners and discussing process of green transformation with Latvian stakeholders, we see that there will not be enough of finances. No doubt, it



is a critical condition for every objective, but to ensure that the process is handled in effective way networking is a key for successful transformation.

Networking can be seen as cooperation activities, joint projects, creation of clusters, or knowledge platforms to exchange and share information and new ideas. Targeted information and examples of good practice is important to know for every stakeholder who are involved in green transformation. There are still existing challenges in the Latgale region regarding networking aspect. Universities and research institutions work with individual companies in the framework of contract work, universities are involved in international projects, but it is difficult to persuade companies to become involved. The Latgale planning region is providing seminars and consultations on different topics for companies, but sometimes it is not the most effective way to involve the companies. The same applies to the municipalities which involve companies in infrastructure development projects and provide consultations for companies whenever needed. Still the networks which could bring together key stakeholders of Latgale region are missing. If there are available funds for hard activities, there should be also some support for soft ones for joint networking activities in Latgale region.

In the Latgale region during focus group meeting a need for a pilot to involve companies of special economic zones of Latgale region in joint network which could involve research institutions, associations which represent companies and public institutions which responsible for green transformation. This could be more effective way to reach companies since they already are using several benefic and tax reliefs. This could be considered as a next step to closer cooperation between all sides with aim to move towards green transformation.

Secondly an aspect which is also important for green transformation is innovations. We could say that green transformation by itself is a process where are involved environmental, econom-

ic, and social dimensions. If the aspect, previously mentioned, of networking is more linked to social dimension, then innovations is more linked to economic dimension, anyway they all are connected.

In the project analysis we concluded that mechanical engineering and metal industry in Latgale has a high energy consumption and is a low value-added production (including low productivity). Moreover, to make changes in this proportion and do it in a fast manner, there is a consensus between stakeholders that innovations will be one of the most effective solutions. In the Latgale region can see also challenges for an innovative development – they are expensive and there is not enough experience in the companies to innovate or introduce innovative solutions.

In the EU funding period for 2021–2022 for innovations, there are several activities planned and they are targeted towards the helices – private, public, academic sector. In addition to already implemented activities in previous planning period, new approach will be implemented for innovation promotion. The MoEPRD is developing new support activity for local municipalities and planning regions to introduce innovations in service provision and in performance of their functions. Local municipalities will develop projects of regional scale where they will make cooperation with academia or realize innovation procurement to introduce innovations. With this new activity it is desired that local municipalities will be innovation users and costumers and it will promote innovation development.

Therefore, above mentioned intention for new pilot activity for networking is also important for innovation promotion for all stakeholders. The need for a mindset change was discussed among the GRETA-project partners as a prerequisite to implement these activities with high intensity. Such networking with many possibilities for cooperation activities would be a good exercise for all stakeholders to learn to innovate and understand the importance of cooperation.

GRETA ends with a promising policy pathway for green transformation - Policy Briefs

**Rita Lankauskiene and Zivile Raudone,
Lithuanian Institute of Agricultural Economics**

The beginning of the year 2022 brought a promising policy pathway for green transformation in the Baltic Sea Region, based on very final project GRETA results, generated by the project partners from the different regions in Latvia, Lithuania, Finland, and Sweden at the end of 2021.

The final GRETA Work Package 3 (WP3) was dedicated to identifying how policymakers can generate synergistic effects and new activities to add green transformation for RIS3 implementation using a multi-stakeholder and multi governance approach. The activities of WP3 were based on strategic analysis methods and focused on:

- (1) facilitating the emergence and growth of new activities with potential in innovation focusing on green transformation;
- (2) supporting entrepreneurial discovery which brings environmental and social benefits into existing innovation activities;
- (3) generating critical networks of stakeholders with potential to develop RIS3 strategies based on the green transformation.

All partners implemented several steps to elaborate the policy briefs in their regions, which further served as a basis for overall GRETA Policy Briefs for green transformation. Firstly, all partners prepared a DPSIR-analysis, which was based on the gap analysis, as the biggest gaps had been seen as drivers for change.

The DPSIR model consists of several parts: drivers (the reason of change), pressures (the challenges which derive from this change), state (environmental situation), impact (what are the possible ill effects), and response (how to address the issues in pressure, state, and impact). The model has been developed by the European Environmental Agency (EEA) and is specially designed to show the relation between societal changes and their

impact on the environment, as well as actions to help the situation, which makes it the ideal tool for addressing the regional environmental challenges.

After formulating the DPSIR, all partners presented the discoveries of the gap analysis as well as the DPSIR to the regional stakeholders at the round table discussion to

- (1) verify the discoveries,
- (2) discuss the challenges and opportunities, and
- (3) conclude on some concrete actions, which could be useful to be presented in the policy recommendation from their region.

The final concluding Policy Brief presents policy tools developed and tested during the overall GRETA project. Based on the results of the DPSIR model and round table discussions, each project partner prepared summarized recommendations for green transformation principles for policymakers at the regional and the EU level. Finally, the concluding GRETA Policy Briefs for the green transformation had been elaborated for RIS3 policymakers, based on the lessons of transnational learning covering both regional and EU levels focusing on the specifics of the Baltic Sea Region.

The GRETA project in its final stage developed policy tools for sustainable Smart Specialization innovation strategies in the Baltic Sea Region, supporting green transformation (GT) in ways that are aligned with the European Green Deal, issued by the European Commission. The European Green Deal is an attempt to build on the emerging Green Growth strategy aiming at NZE (net-zero emissions) at the global level in 2050. However, GT can be seen as a complex, multi-level, cross-sector, and long-term process of transformation, guided by scenarios produced by different stakeholders, with a 30-year perspective, that is why the new and innovative approaches have to be proposed.

GRETA results with policy recommendations on how to acceler-

ate the GT in BSR, outlining the specific objectives to be implemented at different levels in long-term and short-term perspectives. At the heart of the GRETA Policy Briefs are three “how?” - guiding questions for green transformation policy:

1. How the EU, national and regional policy formation bodies may accelerate the GT?
2. How to deal with GT from a long-term perspective?
3. How to accelerate GT today, in a short-term perspective?

Based on overall project findings, GRETA team identified how to accelerate the GT at different policy levels, starting from the supranational (EU) level, and moving further – to national and regional levels.

Finally, there is an estimated statement on what are the expected GT impacts that might be reached through suggested policy interventions.

All in all, GRETA Policy Recommendations are fulfilled with a set of methods and policy tools for GT: Stakeholder analysis method and Guidance for stakeholder analysis, Gap analysis, good practices from GRETA partner regions and Report on Smart multi-level coordination towards green transformation; DPSIR method and Guidelines for regional DPSIR model, Report on Ev-

idence-Based Pathway towards Green Transformation in the Baltic Sea Region, and the Extended version of GRETA Policy Recommendations.

The Region-Specific Policy Recommendations on concrete policy actions are elaborated in a form of Policy Briefs on GT for RIS3 Strategies from 6 GRETA partners from different Baltic Sea regions: Klaipeda region (Lithuania), Latgale region (Latvia), Ostrobothnia region (Finland), Päijät-Häme region (Finland), Västerbotten region (Sweden) and national Biogas sector (Lithuania). The project implementers put a lot of effort to make the elaborated Policy Briefs accessible to relevant policy-making bodies. Numbers of institutions responsible for innovation policy and green transformation in the Baltic Sea region countries received an official letter concerning GRETA Policy Briefs for GT in the EU. Hopefully, the next stage of green transformation programming will use the rich input in the field done during the implementation of GRETA project.

All information concerning elaborated project results in the final stage is made public and might be found on the project website: GRETA project results » LARS (lars-project.eu).

Early discoveries from the GRETA process: New sustainable EDP and role of public organisations in the Green Transition

Antti Mäenpää, University of Vaasa

The GRETA-project aims at looking on how regional stakeholders align themselves towards green transformation and the implication of this on a wider European basis. The project has focused on understanding the viewpoints from two important sectors: energy technologies and circular economy.

The GRETA-project had two main goals:

- a) To develop a policy tool to aid in green transformation and
- b) To provide understanding on how new smart specialisation will look like in the next programming period, alongside Green Deal policy framework

The partner regions first identified the potential green transformation drivers and evaluated their power (resources), legitimacy (ability to act) and urgency (willingness to act) based on stakeholder typologies provided by Mitchell et al (1997). This analysis revealed that public organisations are the most advanced drivers of GT in the selected fields.

To some extent the answer is understandable, since many environmental agencies and officials are comprising of public actors. These actors often have a legitimacy and an urgency, but may lack power to implement changes. However, the source for legitimacy may differ between different regions and for example universities are following public organisations in the development in some of our cases. Potential drivers for innovation are increasing among companies, universities and NGOS, but especially public organisations seem to act in an important role in the future.

While studying the companies within the regions, it became more and more clear that companies saw the role of public or-

ganisations as important partners in battling against climate change. Public organisations were seen more as strategic partners, which are enabling new, sustainable markets. For example, in Ostrobothnia some large companies described public support for pilots important for the public impact. Money was not the main goal in this cooperation, but the ability to show that companies are able and willing to help society in making green transition. However, the companies also highlighted that there is a need to be more open for experimentation in general and mutual projects are important to gather more trust for climate actions. Companies see mutual projects as sources for legitimacy; as capability to work successfully on environmental matters.

These mutual projects and pilots also enable companies to learn more from this rapidly increasing market where their new customers are more often public actors than private entities. Especially energy technology was seen as developing into more of a system-level solution provider, instead of selling individual products and services. This has also led to collaboration between businesses as well, as they wish to offer complete ready-made regional solutions. Collaboration between public and private sector was seen as one enabler for green transformation.

In order to understand this, one may look at the concept of sustainable value and what it entails. Sustainable value often consists of two public values, those representing social and environmental values. In addition to this there is an economic value, which can be considered to be more of a private value than the others. Since the sustainable value is a combination of public and private values, this might indicate that there is a need to enable public and private partnerships, as this helps in combining different types of values in a more sustainable way. This may also explain why many larger companies now see value in teaming up with public organisations.

¹ Mitchell, R.K., Agle, B.R. & Wood, D.J. (1997). Toward a theory of stakeholder identification and salience: defining the principle of who and what really counts. The Academy of Management Review 22:4, 853–886.

However, the challenge lies on how to discover where one can find such value from a region. This has led us to look on the role of especially legitimacy, since that is the main attribute in Mitchell et al. (1997) framework which creates trust and adds credibility to collaboration ventures. Power and urgency are important attributes as well, but based on our empirical studies the ability to add trust, or capabilities for climate actions was seen as important attribute in order to reach sustainable markets. Based on the tested methodologies we were able to draw a new way for looking at EDP (entrepreneurial discovery process), where the tested methodologies in GRETA help in managing stakeholder interaction (see Figure 1). The EDP is the main instrument of regional implementation of smart specialisation and has already been used for stakeholder inclusion in the previous programming period. It relies on looking for new niche markets together with regional companies, public organisations, universities and NGOs. We now suggest that it can also be used as a forum for creating sustainable value.

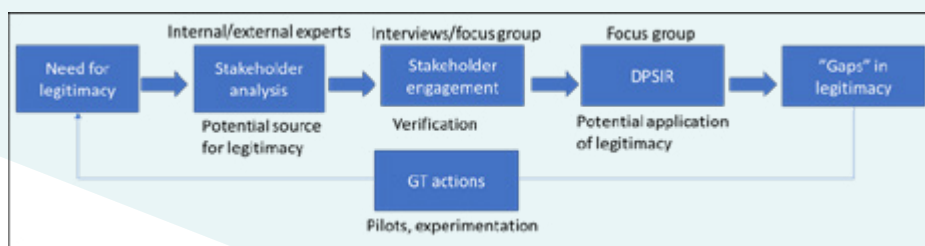


Figure 1. New sustainable EDP based on the methods of GRETA.

The new EDP assumes that public-private partnerships and especially legitimacy is a key in enabling new markets for sustainable solutions. This is based on the theories of sustainable value, as well as practical discoveries done via stakeholder interaction on the 6 case study regions. Stakeholder analysis, which measures power, legitimacy and urgency is then used to look for potential sources for legitimacy. In some regions this legitimacy comes from public organisations and in some it derives from universities or even companies. This analysis may be done by internal and/or external experts which are familiar of the intervention areas and regional actors.

This is then verified via stakeholder engagement, as each region interviews at the minimum 7 regional actors which represent experts regarding green transformation. This consists of company personnel working on green innovations, public environmental

experts, NGOs looking for climate issues or regional development agencies and university experts working on the intervention area. This is also an opportunity to engage with regional actors and ask for actions that would help in GT. One can also ask for the challenges and opportunities which help in making the DPSIR-analysis.

The DPSIR-analysis is then prepared based on the answers from the regional experts. This method offers extra-regional view on GT and thus complements the more intra-regional stakeholder analysis. It also offers potential application for legitimacy, as it may spur ideas on how what level (landscape, regime or niche) needs more actions in order to enable GT. This tool is also useful in drawing a regional vision for GT, especially if it discussed with wider audience.

This discussion helps in discovering “gaps” where legitimacy may be lacking. For example, the region may have lots of SMEs, which lack legitimacy since there is no vision on the direction for GT. In this case regional vision as well as related roadmaps could be developed. If there are missing industries or experts, public organisations may look for ways to add legitimacy, for example via public procurements or new collaboration on education. These then lead to actions, which are based on regional dialogue

and mutual vision for GT.

This leads to one of the most profound discoveries of GRETA-project regarding the difference between S3 and new S4+; Need for public proactivity. When S3 was more based on the idea that public sectors ask from regional companies, what they’ll need in order to reach new niche markets now the public organisations are the enablers of these new markets. Only via collaboration and experimentation one is able to attract legitimacy and this is the task for public organisations in many regions. This also means that EDP turns more into a model, where public organisations in charge of S4+ also inform to the companies on what GT requires them to do, to make their innovation processes more responsible. Public organisations turn from passive innovation supporters into enablers of GT. EDP seems as one excellent forum for this new type of interaction and a suitable platform for creating more regional sustainable value. However, this also requires that public organisations have public value to share and can act as credible, legitimate partners for companies.

Drawing on GRETA in International Networking

Jerker Johnson, Regional Council of Ostrobothnia

The European policies and the Green Deal are also a part of the global dialogue on a sustainable future. One platform for this is the IURC-program (Inter Urban and Regional Cooperation) that held its annual event on 23-24 November. The topic of the event was the Green Deal, the New Leipzig Charter, and how smart specialization strategies are forming European policies.

The Region of Ostrobothnia was together with the City of Mannheim invited to present the thoughts in one of the parallel sessions on the first day of the event, and I was able to draw on the findings of the GRETA-project. The multi-level perspective to the transformation applied by the project, was well-received and the conflicts lines observed in the Baltic Sea Region drew an interest from the audience. The foreseen transformation paths provide insights for the future but like in any transformation policies, they should support regions in the transition. We are likely to see a division where some regions reaping the benefits of the transition while others are blocked by deep internal conflicts.

The new Leipzig Charter provides a key policy framework for sustainable urban strategies aligned with the Cohesion Policy. With an increasing urbanization globally policies towards a sustainability of the cities becomes ever more important. On the other hand, does the green transition also imply large-scale investment in renewable energies and decentralized energy systems, for instance wind-power sets peripheral regions in the focus. Decentralized energy systems support a decentralized society, but this can also be a mixed blessing.

The case of Magallanes in Chile

Within the IURC-program Ostrobothnia has been paired with the Magallanes region in Chile. The region is far from the markets, but at the center of the solution against climate change and today it is consolidated as a green hydrogen development pole. Thanks to its excellent land-based winds and wind-potential the Region has attracted an FDI by multinational companies amounting to 15 billion USD in projects that will be implemented between 2021-27. This in a region large-in-size, but with a pop-

ulation of less than 200 000 inhabitants.

The green transition brings huge opportunities to a remote region, but at the same time it is also a considerable threat. With a change taking place at this pace there is an obvious risk that the wind-power combined with the green hydrogen development industry will function as an enclave in the economy. Thus, the FDI will bring in economic resources but there will also be, using the economic jargon, external unwanted effects following the development.

The challenge is huge but like “eating an elephant” it starts by cutting it into small pieces. Also in Europe, it is not uncommon that we have a dominating industry and there would be a need to diversify the economic base, but I do not know on any case where such a massive establishment are made with such a speed. Still, this should come with no surprise as the green transition is driven by global policies and MNEs applying technological land wins, in this case green hydrogen.

The smart specialization provides a concept of related variety or how the value-chain can be successively extended to provide larger down-stream effects in the regional economy. This takes time and represents quite a capacity leap, but it provides a vision for the work.

The IURC-dialogue, ideas matter

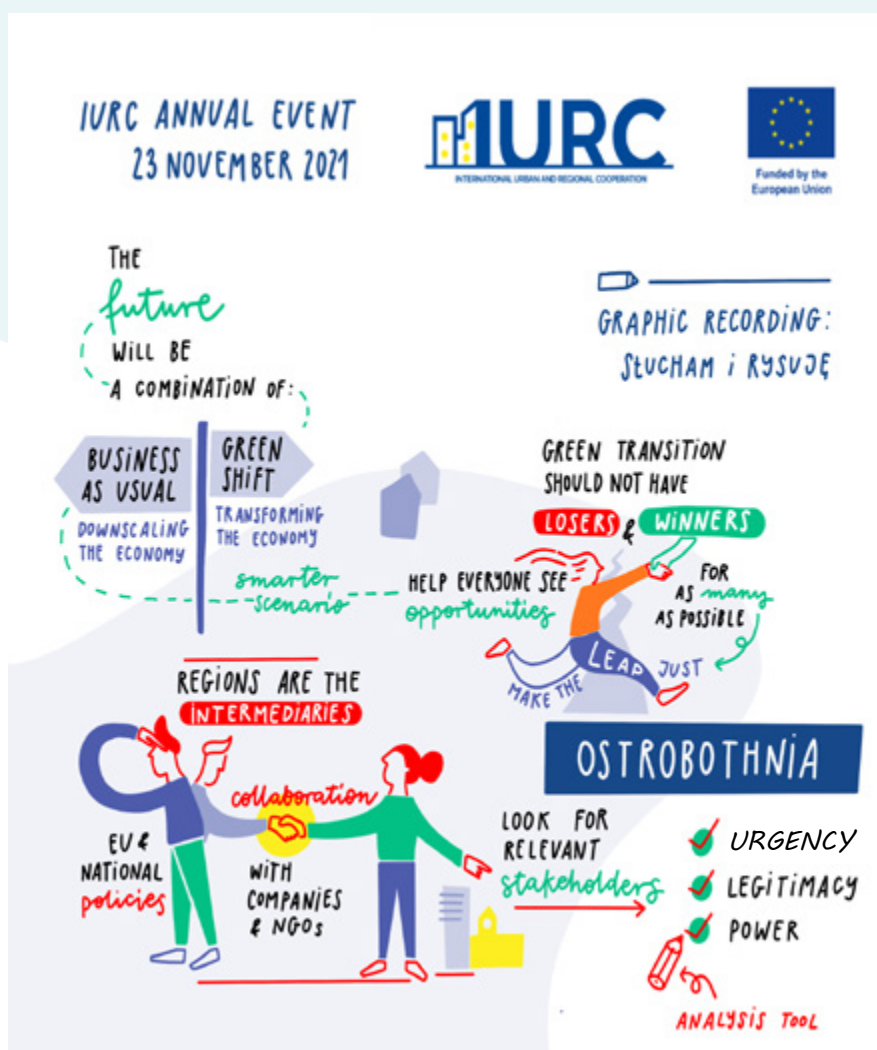
Back in the late 70ies we had the “Dependency School in Economics” that emphasized the unevenness of trade and how it exploited peripheral regions. Today these thoughts would be rejected by most Economists, and they would point towards global value-chains as a source of innovation diffusion.

The GRETA-project is applying a Multi-Level Perspective to the transformation, that should be applied also when developing the regional innovation system. Managing the transition implies being able to work on different levels and understanding the regional implications of what happens elsewhere. The European policies provides both an encouragement and financial back-

ing for engaging on different levels. Still encouragement is not enough, the motivation to engage in the dialogue stems from understanding our regional context and the implication of global drivers. By creating a greater connectivity among the regional quadruple-helix-actors, new insights are obtained.

Until now we have had three virtual meetings with our colleagues in Punta Arenas and we have discussed how to proceed. Ostrobothnia shares the challenge of responding to global sourcing by multinationals but in our case, we have had a much longer timeframe to adopt to similar challenges. In comparison

with Chile the universities in Finland have worked closer to business-life. For instance, we do in Finland have a long tradition of Universities of Applied Science created very much for this purpose. The establishment of the Vaasa University Platforms for external cooperation a few years ago represents a change in the structure and in the thinking of the university. We can also draw on our experience implementing the cohesion policy and experience of our European friends. Finally, but not least we hope that we can contribute and inspire to new ways of working but also learn something ourselves in return.



Green Transformation in Ostrobothnia: Inspecting Multi-Level Perspective and Pathways in Greta-Project

Juuso Jääskeläinen, University of Vaasa

The European Union has a target to be carbon neutral by the year 2050, and The European Green Deal is the strategy which is used to achieve it. Finland's target is 2035 and the City of Vaasa (located in Ostrobothnia) has set a target to be carbon neutral before the year 2030.

When focusing only on one area only, in this case Ostrobothnia, we can dive deeper into the roots of transformation towards sustainability and to the role of the region in the process itself. The study "Green Transformation in Ostrobothnia: Inspecting Multi-Level Perspective and Pathways in Greta-Project", uses the data gathered from stakeholders in Ostrobothnia, and inspects it through the multilevel-perspective (MLP) and socio-technological pathways.

When green transformation in Ostrobothnia is inspected via multi-level perspective, two research questions were asked: What is the role of different levels and pathways in green transformation? How is the region of Ostrobothnia managing green transformation process in multi-level perspective? These questions will be answered with some pondering about following deliberations; does green transformation rise from niches or does it come from pressure of landscape? And what is the relationship between these levels in the green transformation? What is the role of the region regarding green transformation? Which pathway is the way that green transformation will go through? These kinds of considerations are interesting and give a great outlook on problem that is at hand.

The interviewed experts shared their views on that landscape level has a big role in green transformation, but it can not be done alone by it. The biggest weaknesses come from the cooperation between different levels. In Finland and in Ostrobothnia the ambitions and reachability of the goals landscape-level is setting are seen as quite difficult to reach, but they are also

seen as a good pressure to work towards those targets. Landscape-level does not only create pressure, it also gives possibilities for regime-level actors.

Regime-level is seen to be in a crucial role for green transformation. It is molded by the pressure from landscape, which is setting the framework they have work in. Regime turns the pressure coming from upper level into a knowledge and actions, which turns into information for the niche-level actors and innovations. Regime has the implementor role in green deal, but it also gives feedback to niche level.

For the green transformation to keep going forward, green innovations are crucial. Niche actors have great possibilities to rise up to global success, as Green Deal is creating many changes for them. Innovations are born in cooperation between actors, that's why smart specialization strategies are important when going towards sustainable society. Cooperation is the key for success, as many companies have the technology ready, but it needs little adjustments and help from decision makers so they can be experimental with the innovations.

The experts from Ostrobothnia see that every level of multilevel-perspective as very important regarding green transformation. They all have a big, but very different role. European Union and national policy makers are giving a lot of pressure for the actors in the regime and niche levels, but they can't solve the problems by themselves alone. Green innovations are crucial and they will probably make a difference, but niche can't directly change the landscape level, so it cannot be said that green transformation will rise straight up from the niches.

The pathways are seen as useful way of to look through green transformation. The expert's view is that it is almost impossible to choose only one single pathway which green transforma-

tion uses. However, re-configuration of regime and technological substitution are the ones that are most important. The nature of different sectors is making it difficult to choose one specific pathway, one pathway does not work for everyone.

The role of the region in green transformation is seen as crucial part of development. Regions can create great forums for collaboration and working platforms for different people and interactions between niche and regime levels. Regions are also establishing the innovation network which are especially important for circular economy, in which the bigger the network is, the opportunities it offers for new businesses and solutions. Also, regional solutions are now more important than individual products in order to diminish carbon and pollution. Key aspect for going through the process of green transformation is to work together in the region. Green transformation might be a big possibility and a change to develop the industry of energy production and the entire region of Ostrobothnia.

Read more about the results here:

<https://osuva.uwasa.fi/handle/10024/13346>

For more information about LARS and GRETA, please visit

www.lars-project.eu

**or contact the project manager, Mr Jerker Johnson
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The Green Deal will be delivered in the regions and cities

Francesco Catte, Policy Analyst CPMR

The Conference of Peripheral Maritime Regions (CPMR), led by Richard Sjölund (CPMR Vice-President for Climate and Energy and II Vice-Chair of the Ostrobothnia Regional Board), participated to COP26 in Glasgow, hosting two side-events and meeting with different stakeholders.

During one of the COP26 side-events co-organised by the CPMR, Richard Sjölund stressed the key role of regional authorities in the delivery of the European Green Deal by presenting the CPMR Regions Act! initiative and using as prime examples the Ostrobothnia Smart Specialisation Strategy and the GRETA project.

The CPMR, representing 150 regions from 24 countries from the EU and beyond, has among its priorities climate and energy policy. Hence its work to ensure a transition that is just and has at its core a place-based approach recognising the key role of regions. Regional authorities, as shown by the CPMR Regions Act! initiative comprising examples of CPMR Members, are actively contributing to the European Green Deal and to the Paris Agreement through their mitigation and adaptation measures.

Moreover, Regions Act! does also show the key role that regions have to play as coordinators at the local level to ensure the uptake of measures in all their territories – from urban to rural – and to bring together different stakeholders from the private sectors, scientific community to the youth

During the COP26 side event “Facta, non verba: How cities & regions can deliver the EU Green Deal for a climate neutral future”, Richard Sjölund shared some of the key results of Regions Act! showing the contribution of CPMR Members to the European Green Deal.

Richard Sjölund also stressed the key role regions have as a level of governance,

given that they can act as coordinators of the actors at the local level. In this respect, he mentioned as concrete examples the Ostrobothnia Smart Specialisation Strategy and the work of the GRETA project. The former as a fundamental tool that regions have to deliver the European Green Deal, as it is evidence-based and place-based, ensuring that solutions are found in and with the territories.

For instance, he gave the example of the successful experience of the Vaasa Energy Cluster relying on the approach fostered by Smart Specialisation. That is, by bringing together companies, public authorities, and universities, in order to identify bottlenecks and gaps, but also to find solutions. Solutions that are anchored to the strengths and know-how of the local actors and that ensure skills’ matching.

The results of the LARS and GRETA projects were also discussed in meetings held during COP26. For instance, they were discussed in a meeting with the Catalonia Region delegation at COP26 and within the framework of the Glasgow Declaration on Climate Action in Tourism.

CPMR and Catalan representatives in discussions during the COP-26 conference. Photo: CPMR



Takeaways from the COP26

Richard Sjölund, Vice-chair CPMR

In the media COP26 in Glasgow was often seen as the last chance to reach agreements that would lead to stopping the global warming. Speaking of 'the last chance' has been something of a recurrent theme in the discussion on climate change for years. This is in many ways counterproductive.

Defeatism will not inspire and activate decision makers, stake holders and people around the world to engage themselves in the fight against climate change. Fortunately we can say that COP26 meant several steps forward, even if there were drawbacks and disappointments. The Glasgow Climate Pact is definitely a step forward. It strongly affirms that 1.5 degrees C above the pre-industrial levels is the appropriate temperature goal for global climate action. Other achievements were agreements on doubling adaptation finance, the settlement of Article 6 on carbon markets, side deals on forests, methane, coal and transport. Ongoing work is demanded – countries will come back to COP27 in Egypt with stronger Nationally Determined Contributions (NDCs). It is ongoing work for everybody involved – it does not serve our great cause to speak of 'the last chance'.

The conference offered many arenas for interesting discussions, seminars and presentations.

It was highly interesting to learn how the world's major cities cooperate to be on track to help keep global heating below 1.5 degrees C and to tackle the climate crisis per C40 analysis. Research reveals that the joint efforts of these 54 leading cities with more than 200 million residents will prevent at least 1.9 gigatonnes of GHG emissions from being released into the atmosphere between 2020 and 2030, which is equivalent to half the combined annual emissions of the EU's member states.

Sustainable smart specialization strategies as enabler of green transformation: GRETA

The Green Transition is a necessity, which the great majority of Europeans have realized. Nevertheless the challenges are numerous. When the Green Deal was launched the message was that the implementation was to be just and fair, and that no one



Richard Sjölund is the II vice chair of the Board of the Regional Council of Ostrobothnia and since 2020 also one of the vice presidents of the CPMR with the responsibility for Climate and Energy issues.

should be left behind. We all agree to this, but we also know that it is more easily said than done. 'We are not all in the same boat' is one of the findings of the GRETA-project. At present social unrest can be seen in many countries due to higher energy prices. The effect is strengthened by the Covid pandemic and the crisis of European security. The problems must be dealt with and the multilevel perspective will be needed to make it successfully – and the regional processes must be supported.