

Workshop

13 November 2017

Basel, Switzerland

“Eco-Innovation supporting a Green Economy in the Alpine region”

Workshop for the preparation of the Action Programme for a Green Economy in the Alpine region

WORKSHOP DOCUMENTATION



List of Content

Opening	3
Keynote	4
Working groups.....	4
Working group "Upper Rhine Cluster for Sustainability Research"	5
The practice	5
Discussion	6
Working group "S3-4AlpClusters"	8
The practice	8
Discussion	10
Meta-level example	12
Results	14
Annex	15
Agenda	15
List of participants	16

On 13 September 2017 the workshop "Eco-Innovation supporting a Green Economy in the Alpine region" was held in Basel, Switzerland. The workshop was organised in cooperation with the Interreg VA Upper Rhine project "Upper Rhine Cluster for Sustainability Research". It brought together about 20 participants from German and Swiss Alpine regions, who represented research institutions, NGOs and public authorities working on different approaches for enhancing eco-innovation in different sectors and bringing them into application.

Opening

Prof. Paul Burger from the University of Basel gave a warm welcome to the participants. He summarised the focus of the University in relation to sustainability research and emphasised the need for cooperation across borders in support of eco-innovation.

1.3 RSA6 recommendations

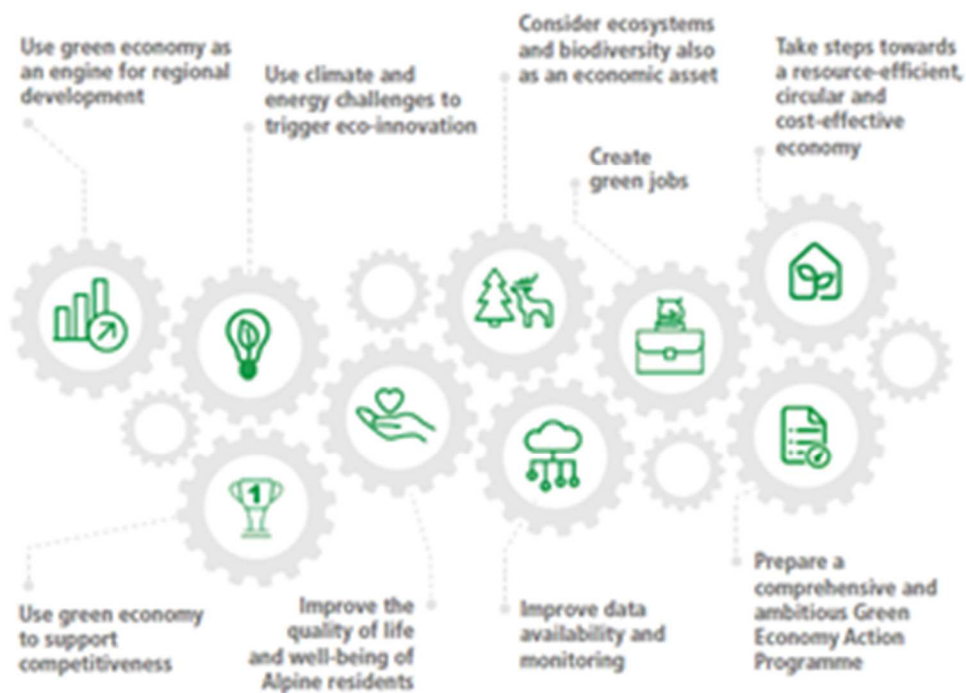


Figure 1: From Mr Landgraf's presentation on the RSA6.

Richard Landgraf, representing the German Environment Agency set the frame of the workshop in relation to the Alpine Convention and the sixth Report on the State of the Alps (RSA6) and the development of the Action Programme. In particular, he highlighted the recommendations of the RSA6, which, inter alia, requested the preparation of an Action Programme enhancing the implementation of the RSA6.

Keynote

The keynote speech "Eco-Innovation supporting a Green Economy in the Alpine region" by **Dr. Joahannes Heeb** from seecon GmbH set the frame for the discussions. Dr. Heeb highlighted how existing resources need to be brought together with local and regional opportunities to create eco-innovations that can become viable. By means of different examples he showed how opportunities based on endogenous resources may be identified. In order to do so, it requires reducing the complexity of processes to small local aspects.



Figure 2: Johannes Heeb giving his keynote.

The examples also showed that eco-innovation may require coordination across borders for different reasons. For creating incentives and market viability approaches to purely circular local flows are not sufficient. A certain degree of interregional export orientation is needed as 'flywheel'. Enhancing eco-innovation, furthermore, requires a framework and culture that supports creative people who can develop opportunities based on local resources into eco-innovations and bring them to the market.

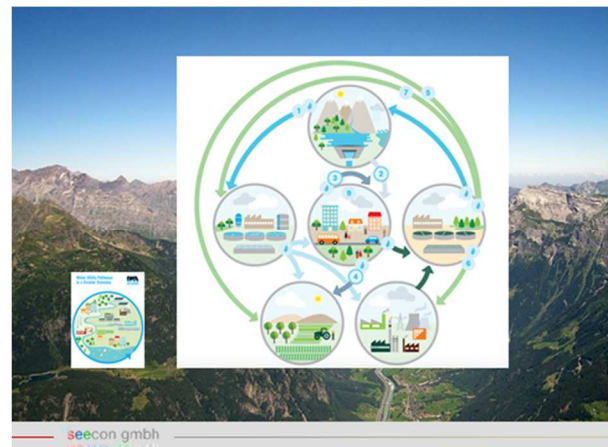
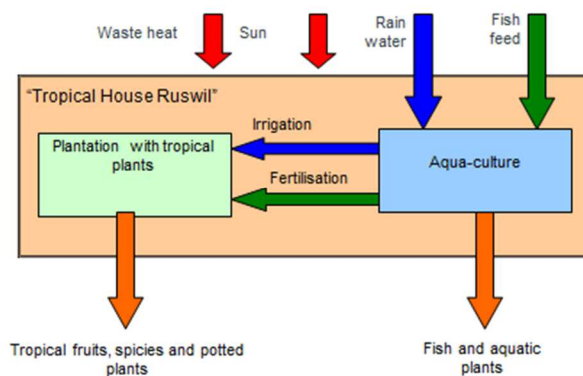


Figure 3: From Dr Heeb's presentation on the rationale of the tropical house in Ruswil (left) and circular water pathways (right).

Working groups

Two parallel working groups were at the centre of the workshop. These working groups discussed different approaches in supporting a Green Economy in the Alps. The starting points for discussion were following examples:

- The **Upper Rhine Cluster for Sustainability Research** - a project of the Interreg VA Upper Rhine Programme that aims at strengthening the collaboration in sustainability research along the Upper Rhine area;

- The **S3-4AlpClusters** project - funded by the Interreg VB Alpine Space Programme that works on bridging the link between strategic innovation goals and enterprises to develop and implement innovations.

Working group "Upper Rhine Cluster for Sustainability Research"

The practice

The Upper Rhine Cluster for Sustainability Research (URCforSR) engages the universities of 'Eucor - The European Campus' in Basel, Freiburg, Karlsruhe, Mulhouse and Strasbourg, the University of Koblenz and Landau with its location Landau as well as various universities of applied sciences and research institutes as associated partners. The project is financed by the Interreg V Upper Rhine programme and Swiss partners to strengthen the research and innovation infrastructure in the region. The project lasts from 2016 to 2018 and the project partners aim to extend the duration of the endeavour.

The URCforSR strives to establish a research association with European significance. The results of joint cross-border and interdisciplinary research activities will be spread to the society through a far-reaching transfer of knowledge.

The research activities are geared to the comprehensive subject matter "Governance of Sustainable Growth", which is subdivided in five fields of investigation:

- Governance,
- Energy, infrastructure and social change,
- Transformation processes and technologies,
- Resource management,
- Multiculturalism and multilingualism.

The representatives of the Upper Rhine Region expect that the research activities in this field contribute to better decisions for the future development of the region. This support was rather weak in the past due to the lack of an institutionalised, interdisciplinary and cross-border oriented research culture and research cooperation. The cluster is foreseen to overcome this weakness and to create innovation, which is applicable within the region.

The topics Eco-Innovation and Green Economy are central for the research agenda of the URCforSR.

In the field of transformation processes and technologies the researchers investigate how transformations will affect the functional principles of human communities as well as the way in which big industry groups bring their technologies in line with the requirements of a Green Economy of the future. To identify shortages and innovative solutions towards a more sustainable society, interdisciplinary efforts are essential.

As an example a group of researchers deals with the topics of sustainable innovations and entrepreneurship. It brings together researchers who consider drivers and barriers of a sustainable development and a sustainable entrepreneurship, especially in the field of promotion of a Green Economy. Among the topics are chemical and biological principles for a development and an implementation of green chemical and biotechnological products, the promotion of a transition towards a more sustainable economy or an analysis of existing risks as well as political and economic incentives for a promotion of new

innovative businesses in the tri-border region. Further possible topics are issues of knowledge transfer, the implementation of dynamic adaption processes within firms as well as various aspects which are often summarized using the umbrella term Corporate Sustainability.

Another field of research is represented by the provision of energy - including distribution and consumption - which belongs to the basic requirements of a sustainable development. The transition from the predominant energy system constructed in the 70s and 80s to a more decentralised system that comprises more renewable energy already is in progress.

However, there are still lots of unanswered questions, especially with regard to the interactions between the transformation of energy systems, the required infrastructure and the interactions with other resources. These questions do not only refer to technologies but also to their management, the connected institutions and social perception and acceptance, which, on the one hand, are subject to a permanent change and, on the other, depend on different cultural frame conditions in different countries.

FURTHER PROJECT INFORMATION

www.sustainability-upperrhine.info/de/home/

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Discussion

The discussion revealed a set of **success factors**, which need to be considered for further activities at cross-border or transnational level in the Alpine region.

A first group of factors refers to the **general framework conditions**. A network that enables and facilitates cross-border cooperation of researchers needs well-developed infrastructures, e.g. a management team that coordinates and integrates the various activities strategically as well as contact points, which support the process on project level. Setting up, maintaining and further developing such a network infrastructure requires resources. Besides the general infrastructure, a research cluster also depends on institutional and political backing on different levels. Finally, if the research network focuses on its role as enabling player, internal and external funding sources need to be identified. Eligibility criteria should not hamper cooperation, for instance, by excluding players from certain countries.

A second group of key success factors refers to the **multi-dimensional and integrative character** of cross-border research cooperation. For making a difference as compared to national research networks, it is crucial that the players consider the different languages, cultural and institutional backgrounds of added value for their activities and make actively use of them. Furthermore, cross-disciplinary approaches are important. If a joint challenge is addressed from various angles, new perspectives are taken on board and new approaches to tackle certain issues can become visible.



Figure 4: "URCforSR" working group.

In this context, however, shared reference points for research activities need to be identified, such as a joint challenge or need. For the Upper Rhine Valley the most obvious reference point would be the river Rhine.

Thirdly, **time and timing matter**. Setting up a research network or cluster takes time, especially in the beginning. Hence, it is important to show the added value of such cooperation at an early stage. It can therefore be useful to start with existing cooperation, consider their experience, learn from them and increase their visibility. Especially in the long-run, it is important to develop flexible yet stable structures and this way create an environment that allows new players to join the process and supports established and experienced players to further develop and stabilise their cooperation.

The fourth group of success factors refers to **activities for knowledge transfer** that are paramount for strengthening the Green Economy to allow research results to actually create an impact. Transfer can take place on different levels and be related to different target groups, forerunners and multipliers in the business sector (chambers, enterprises) and the public sector (municipalities, regions), but also within the research sector.

Besides key success factors for research networks and clusters, potentials to territorially expand the URCforSR approach from the Upper Rhine to the Alpine region was discussed regarding the necessary processes, possibly relevant topics and what needs to be done to initiate such a process.

The first element refers to the abovementioned point of joint reference points. It needs to be clarified first, which research questions are of actual **relevance for the Alpine region**. From the background of the URCforSR project, it would therefore be important to assess whether and in how far the addressed research questions and topics can be transferred to the Alpine context and which adjustments are necessary (e.g. based on 55 research

questions for the Alps). Interesting starting points are, inter alia, sustainable regional and local development, mobility, climate change, tourism and agriculture.

Before starting such an extension process, a few key questions on the design of the process need to be answered:

- What does already exist?
- Which territorial focus fits best?
- Broad participation vs. focus on key players?
- What is the right instrument?

The discussion concluded with two immediate needs, which are crucial for the next steps: First, it would be important to foster more **exchange of experience** (quantitatively and qualitatively) between existing activities and projects in the Alpine region and, where possible and necessary, in neighbouring regions. This also implies a selection process: The enormous amounts of information need to be filtered and priorities need to be identified. Then, key information need to be made available and communicated. Against the background of all existing initiatives and approaches, it is furthermore important to look for **non-success factors**, to identify problems that previous activities were facing and that hampered their success.

Working group "S3-4AlpClusters"

The practice

How to foster innovation processes within clusters? How to increase the impact of Smart Specialization Strategies (S3) implemented by regional authorities? These are the two central questions addressed in our project entitled S3-4AlpClusters. The School of Engineering and Architecture of Fribourg (HES-SO HEIA-FR) manages this project as part of the INTERREG VB Alpine Space programme. The project brings together 15 partners from 11 Alpine Space Regions (Piedmont, Lombardy, Autonomous Province of Trento, Venetia, Slovenia, Upper Austria, Salzburg, Bavaria, Baden-Württemberg, Franche-Comté, and the canton of Fribourg), their clusters and 9 observers. It aims at strengthening the impact of the regional economy's policies on its enterprises by selecting and prioritizing, through an entrepreneurial discovery process, new innovative value chains with a strong focus on interregional collaboration.

First Results: Synergy Diamonds for Need-Based Interregional Collaboration

The first period of the S3-4AlpClusters has been completed this summer with the publication of first results. Led by VDI/VDE GmbH, Berlin, Anteja ECG, Ljubljana and HES-SO HEIA-FR, Fribourg, a strong focus has been put on the identification of synergies and complementarities between the strategies of the regions of the Alpine Space. The S3 documents of all participating regions have been studied in detail. We specifically identified strategic priorities, which are mentioned in the strategies of multiple regions, which represent a substantial potential for interregional collaboration, and which offer, when combined, opportunities for transformative activities (new innovative value chains). The results from this analysis have been summarized in a new analytical tool we called "Synergy Diamonds". These Synergy Diamonds represent, on their edges, the global

strategic priorities shared by several regions of the Alpine Space and, on the axes, a field of opportunities for transformative activities in new value chains.

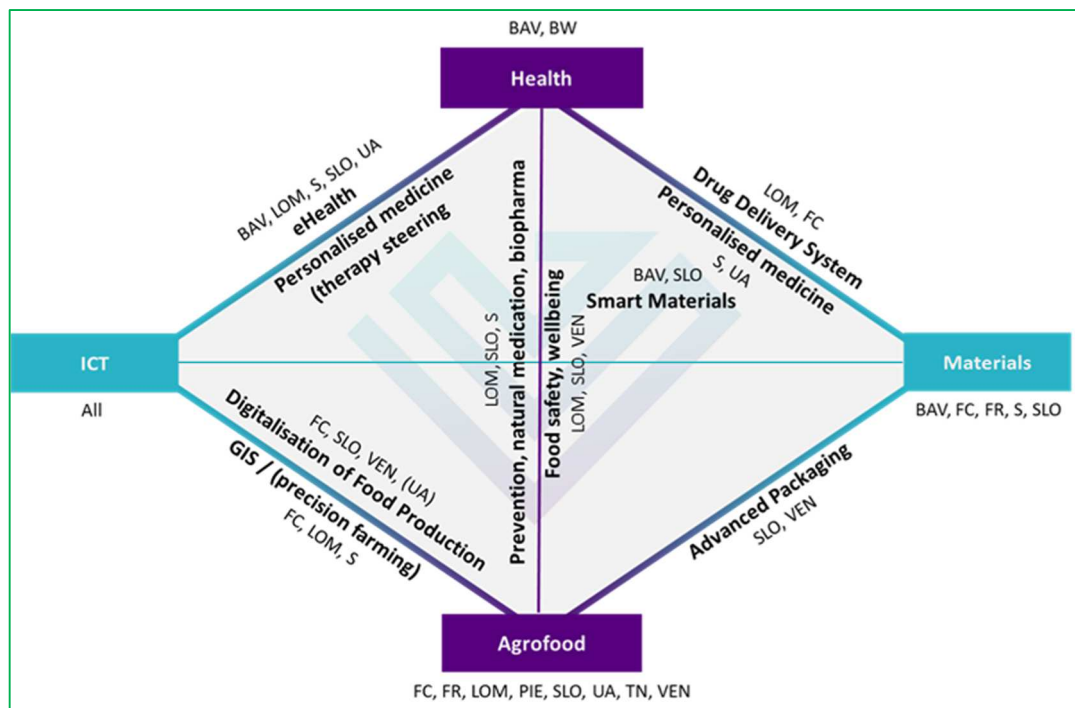


Figure 5: Synergy Diamond, Example. (Source: Meier zu Köcker, G., Dermastia, M. and Keller, M. (2017). Strategic Alpine Space Areas for Cross-regional Cooperation)

From Theory to Practice: Thematic Entrepreneurial Discovery Workshops

Drawing on the identified synergy potentials in regional S3, a series of Entrepreneurial Discovery Workshops (EDW) was launched under the lead of Dominique Foray (EPFL), Gerd Meier zu Köcker (VDI/VDE GmbH) and Michael Keller (HES-SO//FR HEIA-FR), where new ideas for smart specialisation in new value chains were discussed in the participating regions in a bottom-up approach involving participants from regional firms, clusters, policymakers and representatives of the regional research and innovation-system. The workshops aimed at defining transformative activities in new innovative value chains based on the entrepreneurial resources and capacities already existing in the regions and the opportunities represented by developments in technology, R&D and innovation and relevant technological, economical and societal trends.

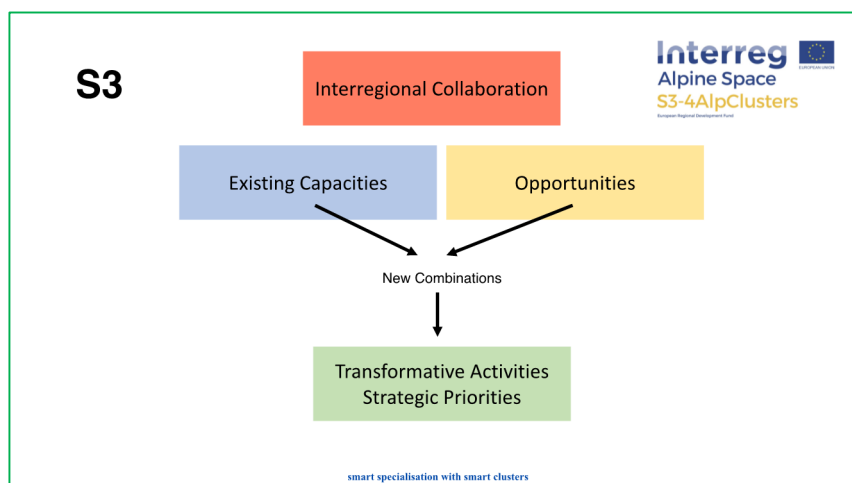


Figure 6: S3 Concept for Entrepreneurial Discovery Workshops. (Source: Foray, D. and Keller, M. Ongoing work within the S3-4AlpClusters project)

In each region (Salzburg, Trento, Munich, Linz, Milan, Besançon, Venice, Fribourg, Ljubljana, North Black Forest), specific transformative activities have been identified in this process and been analysed with a focus on need-based interregional collaboration. The only workshop of the series in Switzerland took place in Fribourg on July 13, 2017 and focused on circular bioeconomy.

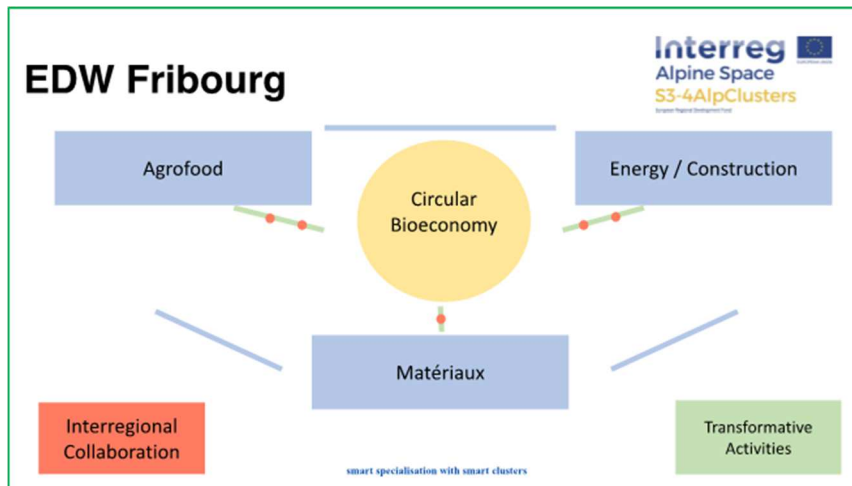


Figure 7: EDW, Example Fribourg. (Source: Foray, D. and Keller, M. Ongoing work within the S3-4AlpClusters project)

In a nutshell

- S3-4AlpClusters: Innovative approach considering the **interplay between S3 and clusters** within the Alpine Space;
- First results: **Synergy Diamonds** as a new analytical tool for interregional collaboration;
- Put into practice in a series of thematic **Entrepreneurial Discovery Workshops (EDW)**;
- Example Canton of Fribourg: **Circular Bioeconomy**.

FURTHER PROJECT INFORMATION

www.alpine-space.eu/projects/s3-4alpclusters

Discussion

By basing the approach of the R3-4AlpClusters on two existing elements, namely regional innovation strategies (RIS3) and clusters it builds on regional resources and identifying opportunities that shall support transformation as displayed in the synergy diamonds. Therefore, to bring people together is at the centre of the project. This is realised through the second tool developed by the project, i.e. the Entrepreneurial Discovery Workshops. Critical to the project was the finding that RIS3 build on regional clusters whereas **cluster manager have little to no knowledge** about the expected link and contribution their clusters shall provide for achieving RIS3 objectives. This indicates a lack in transfer of strategies into practical activities, which shows that RIS3 usually do not really think along the lines of transformation.

Successful Entrepreneurial Discovery Workshops are central to achieving the project's objectives. The workshops require a balanced participation by policy and entrepreneurs. This can be achieved typically under certain preconditions:

- A clear thematic focus is defined to allow for targeted invitation and discussion.
- The cluster manager is able to obtain the enterprises' support and engagement as a result of existing dialogues within the cluster and the ability to show the benefit for participating enterprises. In other words, enterprises need to have trust in the assessment and promises of the cluster manager. Systematic personal contacts between the cluster manager and the cluster's companies have proven useful for this.
- The precise organization of the workshops needs to take into consideration cultural specifics.

Particular **potentials for eco-innovation** may be existing in the **Alpine region** due to specific resources. These are, inter alia, related to a certain policy understanding in which, independently from the country's predominating institutional and policy model, bottom-up approaches dominate. In addition multilingualism, as observed in some parts of the Alps can also be beneficial due to the differences in wording details that initiate new perspectives on a known subject.



Figure 8: "R3-4AlpClusters" group discussion.

Challenges are related to mainly two aspects, firstly, in **differentiating eco-innovation from any other innovation** and secondly, a **lack of interregional and cross-border funding** mechanisms. Discussions showed that it is not simple to specify whether an innovation aiming at more resource efficiency actually represents an eco-innovation, since rebound effects and delays in achieving the anticipated resource efficiency increase may matter for such an assessment. Innovation requires usually long-lasting efforts for which funding instruments such as Interreg are not sufficient. Other instruments more directly aiming at bringing innovation into practical application are, however, often bound to a certain region and do not allow funding of partners in other regions or even countries.

Thus, for overcoming the latter challenge new interregional funding instruments are required, especially if eco-innovation activities shall be promoted at a larger scale in the Alpine region. However, cooperation should always be well justified. Several sectors appear to be useful for application of eco-innovation in the Alpine region. These include in particular the food sector, biomass, energy, tourism, life sciences and ICT.

Meta-level example

The two examples discussed in the working groups were complemented by the presentation of the Swiss "GO-FOR-IMPACT" model for further discussion. **Ms. Véronique Ruppert Schmitt** from the Swiss Federal Office of the Environment (FOEN) introduced the reasons for developing GO-FOR-IMPACT and highlighted the model's main features and current undertakings to achieving real impact.

By means of several indicators and measurements she illustrated how consumption is beyond planetary boundaries. After Swiss approaches to introducing legal obligations aiming at a more green economy failed, the FOEN discussed how the government can support further action for sustainable development.



As a result a dialogue was initiated discussing the central question "How can Switzerland move more effectively and efficiently to resource-conserving production and sustainable consumption patterns?" The initiated process indicated the areas of consumption of food, living and mobility as being the most relevant ones. The process concluded that

Figure 9: Ms. Ruppert Schmitt giving her presentation.

- it is more important to bring active players together rather than initiating new activities;
- complete value chains need to be considered;
- efficiency increases can be considerable when tackling consumption;
- new business models using the idea of a circular economy are necessary and
- open collaboration between different players is beneficial for transformation.

This resulted in initiating the Swiss Green Economy dialogue GO-FOR-IMPACT that builds on the relationships between innovating, integrating and creating impact. This dialogue is under implementation by initiating dialogue between key players of selected industries, including e.g. the textile industry. Among others, it seeks to develop voluntary agreements and collaborations among players of the relevant industries.



Swiss green economy dialogue: www.go-for-impact.ch

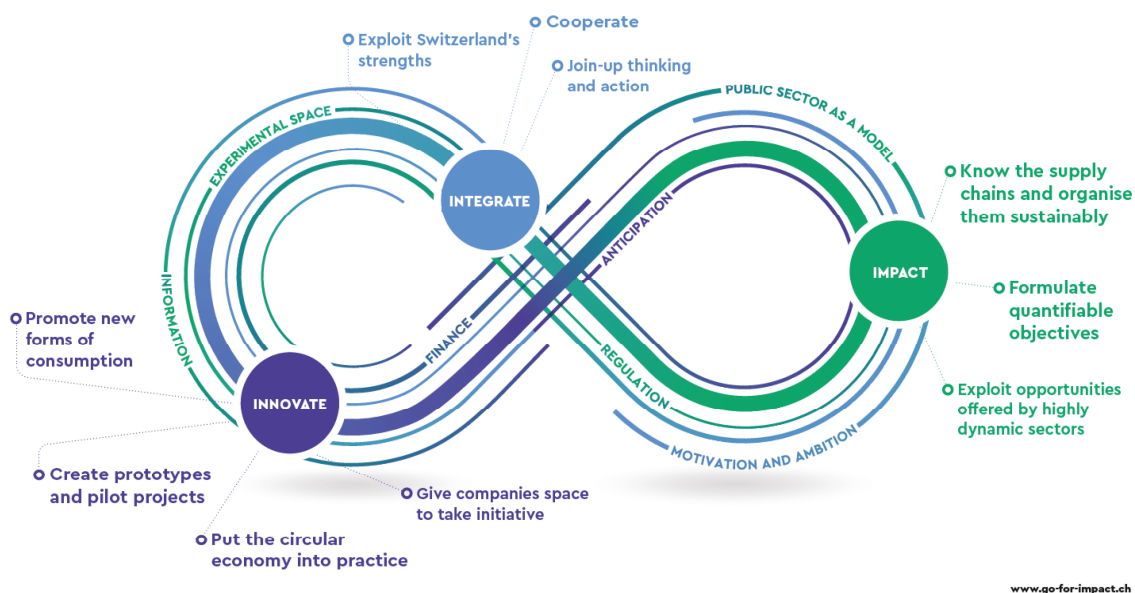


Figure 10: From Ms Ruppert Schmitt's presentation on the logic of the GO-FOR-IMPACT model.



2018: Taking the model into operation

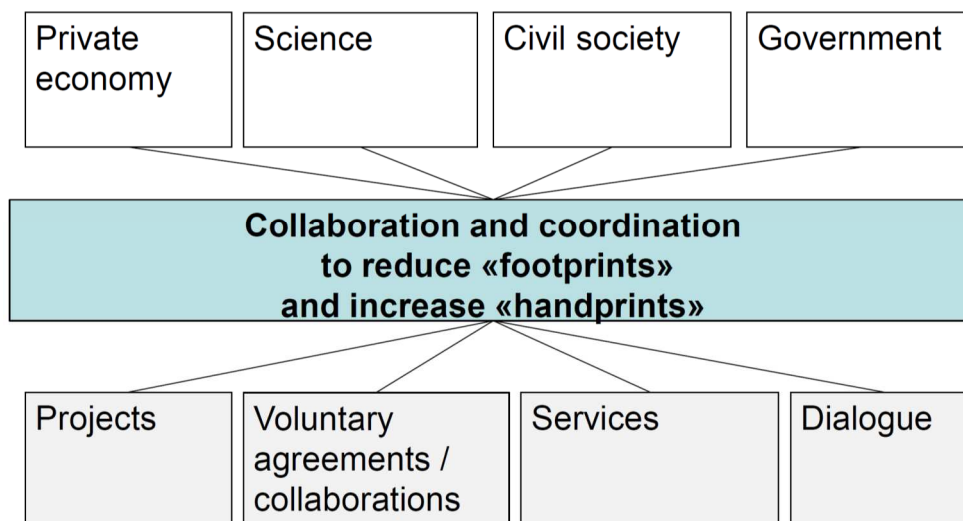


Figure 11: From Ms Ruppert Schmitt's presentation on the approach to bring the approach into action.

Results

Active discussions frequently came back to the main findings highlighted in the keynote speech. There are many similarities between activities that aim at enhancing eco-innovation and bringing them into application - no matter what the sector is or whether it is a private good or a common one. A suitable policy framework is as important as the participation by enterprises. The people involved in the processes matter.

The various approaches furthermore showed that eco-innovation should be thought from different perspectives not only regarding the relevant sectors but regarding production and consumption. Often improving resource efficiency in production is considered, especially in the field of energy. When aiming at reducing the footprint of consumption, however, different sectors may represent the most relevant access points as compared to increasing resource efficiency in production. Eco-innovation is thus not only about more resource efficient production processes but also needs to consider a change in consumption pattern.

For many areas analysis on externalities, footprints and other relevant indicators is existing. Thus, it is largely known what sectors may be relevant in certain regions for achieving strong impacts in terms of resource efficiency. Often, however, the dialogue is lacking to bring ideas to the market, to develop new business models from opportunities etc. Enhancing dialogue and making use of soft instruments, such as providing a platform for the development of voluntary agreements, may be a useful tool for the Alpine Convention to contribute to a Green Economy in the Alpine region. Dialogue in this context can take place in very different formats.



Figure 12: Workshop participants.

ANNEX

Agenda

List of participants

CONTACT

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AGENDA

- 10:00 Opening with greetings
Prof. Paul Burger (University of Basel) & Richard Landgraf (German Environment Agency)
- 10:10 Background and objectives of the workshop
Dr Sabine Zillmer
- 10:20 Short introduction of the participants
- 10:40 Keynote - Living Innovations
Dr Johannes Heeb, seecon gmbh (CH)
- 11:25 Introduction to group work
- | | |
|--|--|
| Cross-border research for strong regions - Experience from the 'Upper Rhine Cluster for Sustainability Research' project
Prof. Paul Burger and Dr Stephan Schmidt, University of Basel (CH) | From theory to practice through Entrepreneurial Discovery Workshops (EDW) - Experience from the INTERREG Alpine Space project 'S3-4AlpClusters'
Michael Keller, University of Applied Sciences and Arts West Switzerland (CH) |
|--|--|
- 11:35 1st session - Good practice examples, their success factors and challenges
- 12:30 Lunch
- 13:30 2nd session - Ideas for expanding successful experiences in the Alps
- 14:30 Coffee break
- 14:45 A model for further discussion: GO-FOR-IMPACT
Véronique Ruppert Schmitt, Federal Office for the Environment (CH)
- 15:30 Joint discussion and synthesis of the results of group work in the plenary
- 16:15 Outlook
Dr Sabine Zillmer (Spatial Foresight)
- 16:30 End

List of participants

Name	Institution
Marianne Badura	blue! advancing european projects
Olena Bolger	Hubbasel
Sebastian Brackhahne	Albert-Ludwigs-Universität Freiburg
Paul Burger	University of Basel
Ines Gavrilut	Albert-Ludwigs-Universität Freiburg
Tina Haisch	University of Applied Sciences and Arts Northwestern Switzerland
Johannes Heeb	seecon / cewas
Amelie Herzog	ITAS Karlsruhe
Klaus Markus Hofmann	Europäische Hochschule der Humanökologie Emmendingen
Michael Kaspar Keller	Hochschule für Technik und Architektur, Freiburg i.Ü.
Richard Landgraf	Umweltbundesamt
Christian Lür	Spatial Foresight
Arne Menn	Universität Basel
Véronique Ruppert Schmitt	Federal Office for the Environment
Stephan Schmidt	University of Basel
Hans-Jörg Schwander	Innovation Academy e.V.
Annika Sohre	Universität Basel
Sabine Zillmer	Spatial Foresight