

# TRIS

## Interreg Europe



European Union  
European Regional  
Development Fund



## Action plan TRIS Energy Agency of Southeast Sweden

Produced by each region, the **action plan** is a document providing details on **how** the lessons learnt from the Cooperation within the TRIS-project will be exploited to improve the policy instrument tackled within our region.

It specifies the nature of the actions to be implemented, their timeframe, the players involved, the costs and funding sources.

In Sweden and in the region of Kronoberg (the focus area for TRIS) there is an increasing interest for circular economy. Industrial Symbiosis which we focus on here was at the start of TRIS project not a well-known concept. Waste and byproducts has always been used as Raw material for other processes but in a linear economy the potential has not been utilized.

The TRIS project has increased the knowledge on Industrial Symbiosis and circular economy in the region and initiated many processes.

This action plan highlights some of these initiatives and the forecasted output in the next coming years.

### Part I General Information

<b>Project</b>	<b>Transition Regions Towards Industrial Symbiosis (TRIS)</b>
<b>Partner Organisation</b>	Energikontor Sydost (ESS)
<b>Other Partner Involved</b> (if relevant)	
<b>Country</b>	Sweden
<b>NUTS2 region</b>	Smaland and the Islands
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### Part II Policy Context

<b>The Action plan aims to impact</b>	<b>Please tick fields that are relevant</b>
Investment for growth and jobs programme	<input checked="" type="checkbox"/>
European Territorial Cooperation programme	<input type="checkbox"/>
Other Regional development policy instruments	<input type="checkbox"/>
<b>Name of the policy instrument addressed</b>	ERDF Smaland and the Islands

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## Part III Details of the action envisaged

### **Action 1 Establishing a thematic group on Circular Economy**

<p><b>The background</b> (please describe the lessons learnt from the project that constitutes the basis for the development of the present action)</p>	<p>GreenAct Kronoberg (GAK) is a cooperation forum for regional actors established in June 2016 to harmonize policies, actions and funding. Purpose is to increase the speed to reach the regional environmental goals. GAK is meant to be a continuous platform and will continue after the TRIS project has ended.</p> <p>In GAK thematic groups on prioritised areas for the region is formed to identify needs and develop new projects. Influenced by TRIS regional event in Birmingham in June 2016 circular economy was chosen as one thematic group at GAK steering committee meeting in September 2016. The group was led by Energikontor Sydost (ESS).</p> <p>Among the participating organisations in GAK the Regional Council and the County Administrative Board has a direct influence in forming the ERDF-programme for the region. During the Peer to Peers and Inter regional visits in TRIS we have seen and discussed similar regional platforms, for example; Valencia in Spain, where a Strategic Innovation Committee are being created</p> <p>In November 2018 the Hungarian Circular Economy Platform was founded (a bottom-up cooperation for circular economy).</p> <p>Also, at the visits in Bologna it was shown how regional cooperation had influenced the policies leading to a regional law promoting circular economy.</p>
<p><b>Action</b> (please list and describe the actions to be implemented)</p>	<p>ESS has during 2017-18 been leading the thematic group on circular economy, initiating meetings with regional SMEs, discussing new project applications etc. ESS has with this initiative been able to influence ERDF on the importance of circular economy through the participants in GAK. Circular economy will continue to be a main thematic group in GAK work, and the Regional Council will lead the thematic group on CE 2019 and on (after TRIS phase 1).</p> <p>The thematic group will follow existing initiatives/projects in the region and initiate new.</p>
<p><b>Players involved</b> (please indicate the organizations in the region who are involved in the development and implementation of the action plan and their roles)</p>	<ul style="list-style-type: none"><li>- GAK steering committee: ESS, County administrative board (chair), Regional Council, Linnaeus University, Sustainable Småland (business network) and RefarmLinné</li><li>- GAK working party: ESS, Regional Council, County administrative board (chair)</li></ul>
<p><b>Timeframes</b></p>	<p>2016-</p>
<p><b>Cost</b> (if relevant)</p>	<p>Approximately 10k€ for GAK meetings/year and 10k€ for administration of GAK (The county administrative board)</p>
<p><b>Funding source</b> (if relevant)</p>	<p>CRKKL (ERDF-project) and national funding</p>

**Action 2 CRKKL project (Cirkulär Ekonomi i Kronoberg och Kalmar Län)**

<b>The background</b> (please describe the lessons learnt from the project that constitutes the basis for the development of the present action)	Knowledge on CE and IS are lacking among both authorities and companies (especially SMEs) in Kronoberg. In the Regional development plan (owned by the Regional council) CE is highlighted as a success factor to reach a sustainable growth. The learnings from other regions visited through TRIS are that ERDF is funding many projects with connection to circular economy. Stakeholders from the Regional Council did participate in Interregional workshops in Birmingham, Bologna and Peer Review in Bologna. At those visits they learned from projects such as ARLI and BASIS in Birmingham and got inspiration to form a regional project in Kronoberg. The discussions continued at the Interregional workshop in Växjö in January 2017 where representatives from Birmingham were present. Also, adjacent Kalmar region (also included in ERDF-region Smaland and the Islands) face similar challenges and were interested to take part in a project.
<b>Action</b> (please list and describe the actions to be implemented)	A proposal is developed targeting the ERDF and regional funding for the area "Smaland and the Islands. The project "CRKKL" will increase knowledge and detect opportunities within Circular Economy, innovation and business models. It will give hands-on coaching to SMEs in the region. Additionally, research on gender equality in connection with circular economy will be made by Linnaeus University as a part of CRKKL. It will be based on learnings made in the TRIS project both by ESS and the project stakeholders. The application was approved in June 2018. Also, the Regional Council in Kalmar County was invited to the project since they belong to the same project area of ERDF. They are now a partner securing that the project will reach a larger area.
<b>Players involved</b> (please indicate the organizations in the region who are involved in the development and implementation of the action plan and their roles)	ESS: advising when developing the CRKKL project and will play a role as expert when implementing the project. Regional Council of Kronoberg: responsible for project development and writing, will be leading CRKKL. Regional Council in Kalmar County: will take an active part in the project Linnaeus University: will be active part in the project (the University is located both in Kronoberg and Kalmar county) Sustainable Småland: involved in developing the project, its member companies will be involved in project activities.
<b>Timeframes</b>	2018-2021
<b>Cost</b> (if relevant)	900 000 Euro
<b>Funding source</b> (if relevant)	ERDF 50% National funding 50%

### Action 3 Fish farming plant

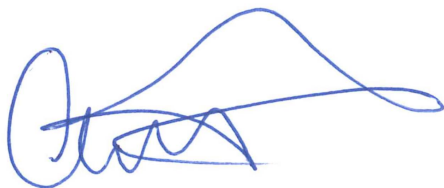
<p><b>The background</b> (please describe the lessons learnt from the project that constitutes the basis for the development of the present action)</p>	<p>Waste heat can be used when farming vegetables and tropical fish. This is shown in a study made by ESS in 2014. Many industries in the region have waste water with temperatures suitable for fish farming of tropical species. Growing vegetables in symbiosis with fish farming gives a potential to create sustainable circular production with little or no waste.</p> <p>Further, increased production of food is a target in regional strategies, both for regional development and creation of new jobs as for increasing the sufficiency of food. The topic has been discussed during TRIS interregional events for example in Budapest. In Bologna much focus for industrial symbiosis is on using waste from food production in a new and innovative way.</p> <p>Fish farming in Hungary and UK has been reviewed, but good practices with industrial symbiosis using waste heat for fish farming are hard to find. The potential is however great in all regions.</p> <p>In Kronoberg "ReformLinné" (TRIS stakeholder) an NGO focusing on sustainable food production are trying to initiate regional fish farming plants.</p> <ul style="list-style-type: none"> <li>- A seminar to increase knowledge and investigate interest to actively take part in developing fish farming was held in September 2016 initiated by the TRIS-project.</li> <li>- The seminar resulted in a pre-study financed by Vinnova lead by ReformLinné. The study was discussed during the TRIS Peer Review in Kronoberg 2017, and the Budapest interregional workshop were the project manager for the Vinnova study participated.</li> </ul>
<p><b>Action</b> (please list and describe the actions to be implemented)</p>	<ul style="list-style-type: none"> <li>- Reform Linné will continue their work to initiate and support new regional fish farms, with the goal to have a fish farm established in Kronoberg before end of 2020.</li> <li>- ESS will monitor regional initiatives, including having contact with ReformLinné.</li> </ul>
<p><b>Players involved</b> (please indicate the organizations in the region who are involved in the development and implementation of the action plan and their roles)</p>	<p>ESS: active in the reference group for the pre-study and initiating regional initiatives.</p> <p>County administrative board: responsible for the regional food strategy, advisor in the pre-study</p> <p>ReformLinné: responsible for the Vinnova pre-study and active in increasing circular food production in Sweden.</p>
<p><b>Timeframes</b></p>	<p>2016-2017 Pre-study, 2018-</p>
<p><b>Cost</b> (if relevant)</p>	<p>90 000 Euro (pre-study)</p>
<p><b>Funding source</b> (if relevant)</p>	<p>Vinnova, Sweden's innovation agency ReformLinné is funded by various national projects</p>

#### Action 4 Renewable jet fuel from forest waste

<p><b>The background</b> (please describe the lessons learnt from the project that constitutes the basis for the development of the present action)</p>	<p>At the TRIS kick-off meeting in Birmingham stakeholders from the regional county council saw examples of production of fuels from waste in the Tyseley Environmental Enterprise District. One focus for the area is low carbon fuels and technologies. This was further discussed during a TRIS Peer-review when Peter Braithwaite from Birmingham University visited Kronoberg in September 2017.</p> <p>There is a market for production of renewable jet fuel (RJF) from forest waste. Smaland Airport (the regional airport) is today not using renewable jet fuel since it cost four times fossil fuel. Today almost all RJF is made in California and shipped to users globally.</p> <p>One of the Regional environmental goals (specified by the County Administrative Board) is that there will not be used any fossil fuels in Kronoberg in 2030. This is also reflected in many municipal policies. Also, industries such as Södra Skogsägarna (Södra) have goals to be fossil free in the near future. Fuel for flying is included in these goals.</p>
<p><b>Action</b> (please list and describe the actions to be implemented)</p>	<ul style="list-style-type: none"> <li>- ESS have initiated discussions with the owners of the regional airport (owned by TRIS stakeholders) on producing regional jet fuel from forest waste.</li> <li>- This has led to that a Pre-study will be made to investigate the potential, barriers and possible locations for Regional production of bio jet fuel. Main regional players have agreed to finance and support this study. Additional financing has been granted from the Swedish Energy Agency.</li> <li>- If the Pre-Study shows high potential for regional production of Jet fuel the following steps are foreseen:             <ul style="list-style-type: none"> <li>• Actors with capacity for building a production site will evaluate the business case and if positive net value -&gt;</li> <li>• A small-scale production site will be built and evaluated on technology, quality, cost etc. If evaluated positively -&gt;</li> <li>• A full-scale site will be built</li> </ul> </li> </ul>
<p><b>Players involved</b> (please indicate the organizations in the region who are involved in the development and implementation of the action plan and their roles)</p>	<p>Smaland Airport, a Regional Airport owned by The County Council and municipalities in Kronoberg (TRIS-stakeholders)</p> <p>ESS, involved in finding funding for the pre-study.</p> <p>Växjö and Alvesta municipalities, owners of Smaland Airport</p> <p>KLM, flight operator using RJF</p> <p>Södra, enterprise owned by 50 000 forest owners, is coordinating the pre-study</p> <p>RISE (Swedish research institute), will lead the pre-study</p>
<p><b>Timeframes</b></p>	<p>2018-19</p>
<p><b>Cost</b> (if relevant)</p>	<p>Pre-study:260 000€ .</p> <p>Cost for production sites are unknown</p>
<p><b>Funding source</b> (if relevant)</p>	<p>Swedish Energy Agency and Södra, KLM et al</p>

**Signatures:**

The partner responsible for drafting the TRIS regional action plan of Kronoberg county



Christel Liljegren  
CEO Energikontor Sydost

Date: 2019-08-23

Responsible for the Regional Operational program of Småland & the Islands 2014 – 2020 confirming acknowledgement of the current action plan



Mr Henrik Blomberg  
The Swedish Agency for Economic and Regional Growth

Date: 2019-08-23

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