



Russian scientists from St. Petersburg came to help in making a marine inventory of Trelleborg's coastal zone

TRELLEBORG – a beginner becomes expert in Baltic Sea Region cooperation

Five years ago the Municipality of Trelleborg had little, if any, contact with its Baltic neighbours. But a threatened eco-system, a passionate commitment to environmental issues and funding from the European Union fuelled a busy programme of international collaboration. Trelleborg's environmental initiatives are now being exported to the countries surrounding the Baltic Sea and further projects are planned.



The beaches around Trelleborg are full of rotting algae. The extensive shallows along the coast provide a greenhouse for the algae, leading to water bloom that is rich in nutrients and that kills off all other living organisms. The sea lacks oxygen and the seafloor becomes a dead environment. Forests of seaweed teeming with life are now just a memory. One could make a long list of the problems caused by eutrophication along the shores of Trelleborg.

The Baltic Master project, funded by the European Union, provided the turning point for environmental initiatives in Trelleborg. Some 40 different organizations from seven countries round the Baltic Sea took part in the project. Trelleborg ran a case study that researched the factors affecting the sea in Trelleborg's coastal zone. Work under the auspices of the Baltic Master project led to scientific knowledge, contacts and increased understanding of the environmental issues within the municipality.

“We identified the problems”, Sten Björk main-



“Algae can be seen as a resource rather than a problem” says Sten Björk, member of the municipal environmental committee and a leading force in international cooperation.

tains. He is a member of the municipal environmental committee and a leading force in international cooperation. “Now it is time to generate solutions. Algae can be seen as a resource rather than a problem.”

To this end, the municipality initiated an environmental project entitled Kretsloppet (Cycle). This was funded by the Swedish Environmental Agency and the Ministry of the Environment. The project is concerned with both reducing the leakage of nutrients into the sea and removing algae and other materials rich in nutrients, partially transforming them into biogas. Landowners in the municipality are cooperating in the cultivation of freshwater algae, in restoring rivers and in creating wetlands. Specially engineered marine harvesters are being built to pick up the red algae in the sea close to the shore. A biogas plant, planned as the largest in Europe, is under construction in Jordberga.

Exporting knowledge

The next step is to export an environmental approach to other Baltic countries. Several areas of Poland have a similar, physical makeup to the Trelleborg region with agricultural flatlands that leak nutrients into the sea and with their beaches covered with seaweed and algae. With support from the European Union’s Southern Baltic Programme, five Swedish and five Polish organizations will collaborate in transmitting technology and expertise from Trelleborg’s Kretsloppet environmental initiative to Poland. The new project is known as WAB which stands for Wetlands, Algae, Biogas.

“We can solve the problem with excessive ferti-

lization ourselves”, Sten Björk maintains. “International exchanges are instructive in themselves and collaboration leads us into a positive circle. We spread expertise and we gain the financial support that makes the project possible. This means that we learn more and acquire more scientific knowledge that we can share with others.”

Marine inventory by Russians

During the summer of 2009 a group of ten scientists from St. Petersburg in Russia came to help in making a marine inventory of Trelleborg’s coastal zone. The scientists want to establish where harvesting algae would be most appropriate and to produce statistical material for future comparison.

“The Russian scientists were highly qualified and incredibly professional”, Fredrik Gröndahl explains. He is a researcher at the KTH Royal Institute of Technology in Stockholm and is in charge of the inventory. “It would have been expensive and difficult to find the same level of competence from our own resources. In turn, the Russians had the opportunity of investigating an entirely new marine region and of learning about our ideas on environmental cycles.”

Project for cleaner shipping

Waste products from shipping are also included in the municipality’s environmental strategy. A large proportion of goods entering Sweden from the Continent do so through Trelleborg where the harbour and ferry terminal are in the centre of the city. Together with shipping companies the municipality has initiated a project for cleaner shipping



Test driving a marine harvester for algae outside Trelleborg.



known as CLEANSHIP. Trelleborg has applied to the European Union's Southern Baltic Programme for support and it is hoped that the major ports, ship owners and marine authorities in the countries round the Baltic Sea will work together to reduce emissions in the sea and the atmosphere. The bodies concerned will produce a joint standard governing how ports deal with refuse in a sustainable manner. Standardized technical systems are needed to achieve this and the idea is that Trelleborg should be a pilot port. In the future the port is to be adapted so that it can fuel vessels that run on biogas.

"There is real interest in the project among the bodies concerned", Sten Björk claims.

A flagship project

There is an excellent possibility that CLEANSHIP will become one of the Baltic Sea's flagship projects and this is important for future initiatives.

"They generate interest among the countries surrounding the Baltic Sea as well as in other EU countries. This makes it easier to promote such issues", Sten explains.

The Municipality of Trelleborg was working in the spirit of the Baltic strategy before this was even established. But Sten Björk claims that the strategy is an important marker as well as clarifying what should be given priority. Work on environmental issues has changed substantially within the municipality in recent years. Prior to taking part in the Baltic Master project a few years ago Trelleborg had, in principle, not participated in any interna-

tional cooperative ventures nor had it submitted any applications to the European Union for funding.

"Like so many other municipalities we were vaguely interested but nothing actually happened", Ulf Bingsgård maintains. He is the elected local-government commissioner. "Current collaboration with our neighbours has turned out to provide important influences and opportunities."

Positive effects of cooperation

Trelleborg is a small municipality with a limited financial base. EU funding has given the municipality opportunities for running much larger projects than would normally have been possible. These projects have proved themselves very valuable to the municipality. Projects have already created employment opportunities, while interest in environmental issues within the municipality has also increased. And further projects are in the pipeline. Ulf Bingsgård hopes that the new international contacts, their own experiences and their proximity to the universities in Lund and Malmö will put Trelleborg on the map and help it to develop into a recognized knowledge centre.

"Above all it is a matter of making use of expertise in practical applications. We are showing that it is possible to do something positive. It is not just a lot of talk – something real and important actually happens."

Nodularia, en av de cyanobakterier som orsakar algblomningarna i Östersjön.



Facts about Trelleborg's environmental initiatives



Trelleborg has advanced from being a municipality with few contacts in other countries around the Baltic Sea to becoming a leading force in international cooperation. Funding from the European Union has enabled Trelleborg to undertake projects which would otherwise have been impossible for a small local authority. As Trelleborg has organized or taken part in more and more collaborative ventures, it has increased its knowledge of the environmental sector and established numerous contacts with neighbouring countries. Contacts lead to further projects and Trelleborg's expertise is now sought by other participating bodies in the countries around the Baltic Sea.

The starting point for Trelleborg's international collaboration was the Baltic Master interregional project which was funded by the European Union's major Baltic Sea programme for 2005–2007. Eutrophication is a serious problem in Trelleborg's coastal

regions and the municipality acted as a pilot region for Integrated Coastal Zone Management (ICZM). All the factors influencing the coastal waters were mapped.

Following the success of its first environmental project, Trelleborg initiated a new environmental project entitled Kretsloppet which was funded by the Swedish Environmental Protection Agency and the Ministry of the Environment. Under the auspices of this project the municipality aims to reduce leakage of nutrients into the sea and begin to regard the algae that flourish in the shallow water and that cover many of the beaches as a resource. Landowners are cooperating in restoring rivers and in creating wetlands. Tests are also being conducted using suitable machines to harvest the algae. The algae will then be used to generate gas in a biogas plant. The next stage of the project is to export environmental expertise to other Baltic Sea countries. With financial support from the

European Union's southern Baltic Sea programme, Swedish and Polish bodies will collaborate in a transfer of expert knowledge on environmental issues to Poland. This project is known as WAB – Wetlands, Algae, Biogas.

Trelleborg has also initiated a project for cleaner shipping, CLEANSHIP. The municipality has submitted an application for funding to the European Union's Baltic Sea Regional Programme and the project looks like becoming a flagship project designed to implement the EU's Baltic Sea strategy. The idea of the project is that the major ports and other relevant bodies around the Baltic Sea should collaborate to reduce emissions into the sea and in the atmosphere. Further projects are in hand and the municipality hopes, in due course, that Trelleborg will develop into a centre of expert information on the issues that they are working on.

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