

STINT WORKING TO SUSTAINABLE CONTACTS

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Promoting research cooperation between scientists in this region and scientists from the rest of the world is one of the aims of this conference. It is also one of or even the very important aim of the STINT Foundation.

Let me present STINT and some of its programmes very briefly and point at some interesting projects that we have seen during the years.

A number of most interesting projects with partners around the world concerning or within Ecological botany, limnology, plant physiology and environmental stress, zoology-boreal ecosystems, toxicology, animal health, potatoes, can be mentioned at the same time. What do they have in common? They all form a topic of one of all the projects, with finance for long-term cooperation from the STINT Foundation, in these areas between researchers in Sweden and abroad, somewhere in the world, Australia, Brazil, Colombia, Mexico just to mention a few. Many of these projects have continued after the four years of funding, many projects are still running after six or seven years.

Some projects create a link from the academic sector to industry and business, others remain pure academic. Just to mention a few:

A cooperation program between Luleå University of Technology and the University of South Australia in Adelaide, which has focussed on mineral processing and the mining industry is a nice example of interaction between the academy and industry. And here an environmental perspective is most important on eg water minimisation.

Another project for cooperation has been on "welfare in cattle raised under tropical and highland conditions" between Sweden and Mexico with links to industry (Alfa Laval separators). Also here the environmental aspect is of high importance, for the welfare of cattle.

The transformation of the industrial society is one of the major problems facing the industrial world today. The transition poses a long list of questions. Professors at the Royal Institute of Technology, KTH posed a number of questions some years ago and tried to practise theories and methods and discussed them with knowledge from several different areas in field work and seminars with experts, students, doctoral students around the Baltic Sea. During four years participants were from Finland, Estonia, Latvia in the STINT-supported project. The purpose of the project has also been to create networks for the future between researchers from the different countries in order to try to gain deeper insights not only about the change in the Nordic-Baltic area but also in a wider, global perspective. The industrial change in the

Baltic area has had a tremendous impact on industry, work and housing, on daily life, on the whole environment.

“Rio Tinto red as blood, acid, sour as vinegar.” This project lead by a Professor at Göteborg University, on “Intraterrestrial microbial geochemistry” brought together two internationally recognized laboratories in Sweden and in Canada that are on the leading edge of research in their respective fields of geobiology. Much field work has been done in southern Spain on the river Rio Tinto, near the beautiful city of Sevilla, on bacteria and heavy metals. The Rio Tinto river system in southwest Spain drains the world’s oldest mine area where sulphide ore has been mined for at least 5000 years according to the project leader. More than 1600 million metric tons of material has been mined, and this has generated approximately the same amount of mine waste.

To describe and understand the uptake pattern of DDT in indigenous children in Mexico, via analysis of soil, sediment, ambient and indoor air, human milk and dietary fish has been another project between partners at Stockholm University and the University of San Luis Potosi.

We have learned that the Guatemalan potato moth is the most serious pest of potato in Central American and adjacent South American countries, and that it has also been introduced to Europe. The larvae feed on potato tubers in the soil and are thus largely protected from sprays. Stored potatoes must be protected with further insecticide treatments. But the goal of a professor at the Swedish University of Agricultural Sciences in Alnarp, Sweden has been to integrate pheromones and insect pathogens for efficient control of the potato moth. The knowledge obtained during the project has been applicable to other insects.

Two institutes devoted to hydrological research, the department of water resources engineering at Lund university in Sweden and the Institute de Pesquisas Hidraulicas at Universidade Federal do Rio Grande do Sul in Brazil are in the middle of their cooperation which integrates efforts in the area of climatology and water resources engineering, and as such, characterizes a multidisciplinary cooperation. The group of scientists involved is composed of hydrologists, climatologists and engineers with a common interest in hydrological modelling. Such a diverse research group allows research to be developed that can focus on one of the most difficult subjects in natural sciences; the interaction of time and space scales in water transport.

So wherever we work, there are many important things to focus on. This part of the world represent enormous amount of knowledge, but it is when sharing that we go ahead and meet and solve new challenges.