

YOUTH AND NEW DIMENTION IN ENVIRONMENTAL SAFETY RESEARCH COOPERATION IN BALTIC REGION: KALMAR-SAINT-PETERSBURG

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ABSTRACT

The cooperation between the University of Kalmar and Saint-Petersburg State Polytechnic University started in 1999. The main goal during the years has been to promote the development of skills among young researchers, mostly post-graduation students and straight the cooperation within the Baltic region.

KEYWORDS

Co-operation; University of Kalmar; Saint-Petersburg State Polytechnic University, Defense-related technologies; Youth; Young researchers.; ECO-TECH, ECOBALTICA.

1. INTRODUCTION

In 1999, the Pro-rector of the Saint-Petersburg State Polytechnic University visited Kalmar in Sweden and signed together with the Rector of the University of Kalmar, a Memorandum of Understanding-MU between both universities (*Figure 1*).

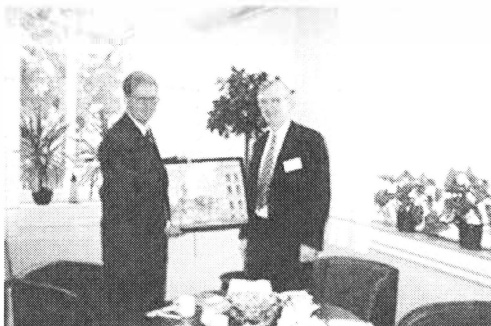


Figure 1. Memorandum of Understanding between University of Kalmar and Saint-Petersburg State Polytechnic University: Prof. Orn Taube (Rector of HiK) and Prof. Albert Bashkarev (pro-rector of SPbSPU) Kalmar, 1999.

The MU had the following main points:

1. To initiate and develop co-operation for mutual benefit and prosperity;
2. To develop academic relationships on the basis of reciprocity;
3. Based on suitability and availability, to define specific forms of exchange and research collaboration.

Both parties are jointly responsible for carrying out fundraising efforts in order to achieve the common goals. This MU was later on complemented by an Agreement between the Department of Technology (DT), University of Kalmar (UK) and the Laboratory of Ecology of Baltic Sea region (LEBR) of Saint-Petersburg State Polytechnic University (SPbSPU). The overall objective was to foster Russian-Swedish co-operation in teaching, research and business development.

Co-operation in teaching includes: offering courses and/or seminars on the management of environmental research and business development in a social, political and economic context in Russia. Co-operation in research includes: projects on commercialization of defense-related technologies in the field of ecology, environmental protection and environmental applications. Co-operation in business development includes: exploring the opportunities of technology transfer between Russian and Swedish companies.

Implementation procedures: In order to guarantee positive results out of the cooperation, less complex initiatives were undertaken before more complex ones, since the late ones might require more time to develop proposals for financial support from the governmental agencies and foundations.

1. Transfer of course materials.
2. Faculty members of SPbSPU will participate in ECO-TECH Conference.
3. A SPbSPU professor will reside in Kalmar for a limited period of time as a visiting scholar.
4. Faculty members of DT will participate in ECOBALTICA conference.
5. Development of ECO-TECH and ECOBALTICA web pages.
6. DT and LEBR will jointly prepare ECO-TECH and ECOBALTICA conferences.

7. Co-operation in order to find young professionals for short training visits in Russian and Swedish companies.
8. Finding Swedish marketing partners for Russian companies with a technological and commercial potential.
9. Establish a Baltic region network of science, education and production centers in the field of ecology and environmental technology.

Funding:

Both parties are jointly responsible for carrying out fund raising efforts in order to achieve intentions.

Administrations:

Professor Hogland and Associated Professor Rud' will jointly plan and review the initiatives on a regular basis.

All activity of agreed parts direct on traditional international conference ECO-TECH and Youth Forum "ECOBALTICA". Activity of Kalmar University and St-Petersburg state polytechnic university supported from city governments of both city and also from the side of governments of their countries.

Prof. William Hogland and Prof. Vasilii Rud' have great support from the side of new rector Prof. Agnetha Bladh and former rector Prof. Orn Taube (Kalmar University) and Correspondence member of Russian Academy of sciences Michael Fiodorov (Rector of St-Petersburg State Polytechnic university).

This activity have support from the number of foundations: The Russian Foundation for Basic Researches, The Swedish Royal Engineering Academy, The Swedish Institute, KK-foundation , Graninge, Foundation Kalmar Research and Development Foundation (Sweden).

From Russian side this activity have support from The Committee for Youth politics and cooperation with nongovernmental organizations of the St. Petersburg City Administration, The Committee for Nature Use, Environment Protection and Ecological Safety of the St. Petersburg City Administration.

Personal thanks for supporting for Professor Dmitry. Golubev (The Chairman of The Committee for Nature Use, Environment Protection and Ecological Safety of the St. Petersburg City Administration, Russia), Mr. Sergey Grishin (The Chair The Committee for Youth politics and cooperation with nongovernmental organizations of the St. Petersburg City Administration), Professor Andrey Rudskoy (the first vice-rector of Saint-Petersburg State Polytechnic University, Russia), Professor Agneta Bladh (Vice-Chancellor of Kalmar University, Sweden).

International Youth Scientific Environmental Forums of ECOBALTICA has been provided successfully on the basise of St.-Petersburg polytechnic University activity from 1996 to 2006. The St.-Petersburg and Kalmar Administrations, the different firms and universities of Scandinavian countries (for example, ITT Flight, SIDA, Polstop Oy, Kalmar University, Lund University, Helsinki University of Technology, etc.) have taken part in organization of these Forums. Not only the scientific problems but and the questions of cooperation of the Baltic countries have been discussed on the Forums. Not only the scientific problems but and the questions of cooperation of the Baltic countries have been discussed on the Forums. It is a special line of these measures.

As the result of the activities, the Ecology Laboratory of Baltic Sea region has been founded in 1998. The main task of action is the coordination of activities of the ecology scientists in SPbSPU and development of cooperation between the SPbSPU and another educational and industrial organizations.

The directions of activities of the laboratory are:

1. The scientific researches (participation in different projects by environmental protection; organization of the scientific conferences and symposiums; the independent ecological consultant's investigations of the young scientists, etc.);
2. The educational (organization of the educational) seminars by the different problem of environmental protection).
3. The informational (informational ensuring of the young scientists about the conferences, seminars, competitions of grants; informational ensuring of the leaders of industrial companies about modern elaborations of the scientists);
4. The consultation direction (consultations of the young scientists during preparation of the applications for different grants);
5. The cultural activity.

The Ecology Laboratory of Baltic Sea region together with the Center of Ecological Safety of the Russian Academy of Sciences develop the project of "Restoration of support system of scientific activities of the young ecological scientists". The main task of this project is stimulation of scientific activities of the young scientists on the basis long-term cooperation between universities, research institutes and administrations of St.-Petersburg and Northwestern region of Russia.

A lot of actions have been foreseen for achievement of the task. It is educational seminars, scientific conferences, meeting with the leaders of the research institutes and industrial companies.

The editorial board has been created and four numbers of "Bulletin of the young scientists of ecologists" has been published. According to decision of the editorial board, "Bulletin of the young scientists of ecologists" is informational edition, which reflect the state of work by the grant. The information about the different interest scientific actions for the youth is also in the bulletins.

One of the most important actions by the project is each of the Forum "ECOBALTICA" which has been carried out on the basis of St.-Petersburg State Polytechnic University. Approximately 150 young scientists from 8 countries have taken part in this Forum. The main directions of the reports are: 1) the waste management; 2) the equipment for the ecological monitoring; 3) the renewable energy sources and the environment; 4) the economic-legal aspects of the environmental protection and ensuring of the ecological safety; 5) the fundamental and applied investigations of the pollution processes in the different components of the Earth.

Moreover, the "ECOBALTICA" Forum has created the foundation for the cooperation between the universities, research institutes and industrial companies in the Baltic region by next directions:

1. The elaboration of joint educational programs for the young scientists of ecologists;
2. The organization of the active process of the environmental technologies transfer;
3. The development of system of the training, retraining and arrangement on a work of the specialists in the Baltic region.

Conducting of the Forum has also supported the governmental enterprise "Vodocanal of the St-Petersburg" (our general sponsor); Russian Fund of Fundamental Investigations, SPbSPU, Kalmar University, FORA COMMUNICATIONS company, Northwestern Tea Company. The great volume of information about elaborations in the environmental protection field has been accumulated, as a result of regular conducting of the scientific actions for the young scientists.

The information is the basis for the data base creation by next direction:

1. The waste management;
2. The equipment for the ecological monitoring;
3. The energetic and energy economy;
4. The waste minimization technologies;
5. The investigations and modeling of pollution of the surface and underground water, atmosphere, soil and vegetable cover, etc.

In present time the data base consists from more than 150 perspective projects. We plan to spread the database by the enterprises of the corresponding profile. It gives the possibility for realization of the best elaborations of the young scientists in practice.

Obviously, that the final results of the project taught not only the young scientists of ecologists, but also promote for the penetration on market more quality and ecological safety goods and services; the normalization of ecological situation in the Northwestern region of the Russia.

Moreover, the Ecology Laboratory of Baltic Sea region is taking active part in investigations by the waste utilization; by the development of renewable energy sources; by the elaboration of the ecological setting of the anthropogenic influences, etc.

Therefore, the Ecology Laboratory of Baltic Sea region is young, perspective organization, which works in the environmental protection field together with St.-Petersburg City Administration.

During in number of years, the active support of the young people has been conducting in the Saint-Petersburg State Technical University (SPbSTU) by the All of Russian public organization of "The Russian Union of Young Scientists". Since 1997, this organization has organizing the symposium for the young scientists, The different project by environmental protection is traditionally presenting there (<http://www.spb.rosmu.ru>).

Development of co-operation between Kalmaar and St.-Petersburg could support next directions:

1. To give an opportunity to finish of scientific labour with the greatest degree of finishing before use of their results in industrial;
2. To give an opportunity of university youth (students and young researchers) to participate in realization of scientific idea during all its stages;
3. To establish the wide spectrum of small busines system as the great number of firms, production of which will be in new technology or device invented in of the both our universities;
4. To attract technological, business and financial resources for increase of training and research SPbSTU divisions opportunities;
5. To reveal competitive capable industrial technologies and to organize the appropriate new educational programs;
6. To establish new training mechanisms in both universities for preparation of the necessary experts in the field of innovation activity;

7. Preservation and development of fundamental scientific directions of the both our universities, that will be the potential suppliers of a scientific innovation product;
8. To create an opportunity for graduate students of the of the both our universities to find a work place at the industrial enterprises - the of the both our universities partners.

Co-operation between Kalmar University and Saint-Petersburg State Polytechnic university which start in 1999 help for development understanding between Saint-Petersburg and Kalmar and also between Sweden and Russian.

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