

OPENING SPEECH

William Hogland
University of Kalmar, Sweden

Distinguished Guests, Ladies and Gentlemen and Dear Friends,

10 years have passed since the first Kalmar Eco-tech was held in 1997 and probably around 5000 km³ water has passed through the catchment since then. The Baltic Sea drainage area encompasses 14 Countries of which 9 have direct boarder to the Baltic Sea.

We have earlier concluded that the nitrogen and phosphorous loads discharged in the Baltic Sea have increased four and eight times respectively during the 20th century the importance of the toxic substances as DDT and PCBs have been highlighted. How is the situation today? Can we see any improvement?

The answer is that the pollution discussion is still focused on nitrogen and phosphorous although the countries around the Baltic Sea have agreed over reducing the discharge of this pollutants and an upper limit have been established. However, there is no agreement regarding when to fulfill these limits, hopefully in 2012. By this action, the discharge should decrease with 135 000 tones of nitrogen and 15 000 tones of phosphorous annually. The limit values are said to be based on ecological aspects.

Dissolved oxygen situation is worse than ever around Gotland on the depth of 80-120 m although a lot of research has been done on effects and monitoring of the water quality around the Baltic Sea. Being a little bit critical, I have a feeling that I have heard about this action plan since I was a kid. However, to be fair as an observer I can say that the white tailed eagle and the seals are seen more frequently now, probably as a reflection of the fast reduction of the most toxic substances in the area since ban were put on their use. Still, there are high levels of cadmium and dioxins discharged in particular in the northern part of the Baltic Sea, the Gulf of Bothnia and Southern part of the Gulf Bothnia. The situation in the Finnish Bay with the inflow from the River Neva and the Region close to Poland is still considerable. However, the dissolved oxygen conditions in Kattegat are better than during 1980 and 1990-ties. Climate changes effects on the Baltic Sea region and its effects on the biotopes are questions for the future and it is also included among the topics of Kalmar ECO-TECH conference.

Increased Industrialization of agriculture, forestry and production based on traditional technology is a threat for the future of the region that might increase the discharges instead of decreasing them. It is obvious that the living status has increased in the region for many people and even health aspects have improved. The standard of life has increased as well as the health in the Baltic Region. Wastewater treatment plants have been installed and solid waste management in many of the countries is now regulated by the EU-directives that affect national regulations EU members and non-member states in the Baltic Region.

The EU directive on landfilling now prevents direct disposal of reactive waste in landfills. During the new millennium it has been more obvious that emissions of pollutions are more transboundary than we earlier believed. That is one reason why Kalmar ECO-TECH'05 was announced worldwide for the first time, moving beyond the Baltic region. Scientist and practitioners must communicate globally as well environmental authorities, politicians and economists. Therefore, many Asian researchers participating in the Swedish International

Development Cooperation Agency (Sida) Research Programme on Sustainable Solid Waste Landfill in Asia are here today. The Sida Programme involves 20 National Research Institutes in 8 Asian Countries and has been running for 7 years. The researchers from this programme are here with us during this conference to share with us their experience in dealing with waste problems in Asia. We welcome them.

CO₂ emissions increase much faster than expected in earlier prognoses and the question is if we can help to reduce it. We use too ineffective plants, we consume too much energy and too much material thus more plants has to be built. However, more research and development is necessary to make the most environmentally friendly methods as effective, attractive and available as possible for all people. The development of better pollution abatement technologies that does not increase gaseous emissions that interfere with the climate is urgent. It is also important that not all research resources go to study the environmental effects only. We need to attack the pollution at the source and develop methods to minimize generation.

The risk with the climate change in the Baltic Sea is an increasing runoff that might give higher temperature to the water and lower salinity. Wastewater treatment plants must be redesigned for high water flow and the stormwater discharge will also be higher and must also be considered as a source of pollution. Drinking water might decrease in quality due to increased runoff which needs treatment. More and more modern cities even in the developed countries must today upgrade the quality level of wastewater and stormwater to drinking water level. Erosion and landslide/avalanche and particular coastal erosion might be a problem. Infection disease might increase.

Already the UN Conference in Stockholm 1972 gave an early warning about the pollution situation in the world; later on in Rio 1992 and Kyoto 1997 the warning was renovated but their goals have not been fulfilled. We have identified problems for more than 50 years that have not been solved and we must now try to solve the problems at the source. Political and economic agreement must be taken by all countries.

How can we through Kalmar ECO-TECH contribute to these issues? Our networks must be stronger first of all around the Baltic Region. Unfortunately not all Baltic countries are here represented as they should be after ten years. Improved education in natural sciences and technology area is important for future cooperation work in the region and it should be developed in connection with social sciences. In order to get some outcome from Kalmar ECO-TECH'07, I ask the Reporters of each session of the conference to make notes from the most important conclusions and recommendations given by the audiences that we later handover to the environmental authorities and the environmental ministers in different countries here represented, so they can consider these recommendations in the targets for 2012.

I want to welcome you all to Kalmar ECO-TECH'07 and I wish you good luck with the conference.