

Minutes KIMO Baltic Sea Seminar “How to deal with coastal erosion” in Jurmala, Latvia 3-4th December 2008.

Wednesday 3rd December

1. The seminar was opened by the chairman of KIMO Baltic Sea, Monica Jägholt Gripp.

Monica welcomed all the participants and informed the seminar that this was not only a organization for lobbying, but also for different kinds of projects like Fishing for Litter and maybe even coastal erosion.

Monica stressed the importance of cooperation between the member countries and mentioned some of the key issues that KIMO Baltic Sea are working with. All the different projects that are undertaken by KIMO Baltic Sea will be financed by the EU.

Another main issue that Monica mentioned is the importance to sign-up more members.

Monica also told the seminar about a film about container ships and containers lost at sea that was shown at the Annual General Meeting. After the AGM, Monica brought the film to some newspapers in Sweden and they decided to put it on their website.

2. Next speaker for the day was Juris Grikis, vice Mayor and deputy chief executive director of Jurmala City.

Juris started by welcoming KIMO Baltic Sea to Jurmala. He also provided us with a few short facts about the city:

- o 57 000 Inhabitants
- o 100 km²
- o The beach is 32 km long and that includes a national park
- o Jurmala is implementing ICZM and environmental control
- o The Development plan for the city was revised in 2007 and the Preservation plan is from 2001.
- o Jurmala city is experiencing more and more environmental issues. Coastal planning and erosion is a high priority.

3. Oral Presentations

3.1 Climate Change Impact on Coastal Processes

Professor Hans Hanson, Faculty of engineering (LTH), Lund University

What do we know?

- o Erosion is a long term process; inundation is a short term process.
- o Case study – Falsterbo, Sweden
- o Flat and sandy – sensitive to erosion and flooding
- o The area is heavily populated
- o What will happen in 50 years due to sea level rise?
- o Look at available data to understand the history.
- o The water level has varied greatly over geological time.
- o It's important to start monitoring the shores to collect data for the future. Everything is changing all the time.
- o First, looking at the average water level trend
- o Then looking at the trend of the fluctuation – 8 times bigger than the average water level...
- o What is the effect of an increasing sea level?
- o Large flat areas will be flooded.
- o When the sea level rises, the sea bed wants to follow. Hence, the material above water level (eroded material) will be used as filling material underneath the water level.
- o Soft beach + sea level rise = coastal erosion
- o In coastal areas with mixed materials there will be coarser material at the bottom of the beach because finer material will be washed away by the waves.

What do we think?

- o How will the trend continue?
- o IPCC says 30 cm increase in mean sea level
- o Worst case – our 60 year data will occur once every two years.
- o You have to know the likelihood and the trends to balance the results.

Possible strategies

- o Do nothing, planned retreat, accommodation, stabilization / nourishment
- o In the 1960, -70 and -80 hard constructions were very popular.
- o Unfortunately the problem is not solved, just moved down stream. Hard constructions might be a good solution if the neighbouring land isn't valuable.
- o Nourishment means that you compensate sea level rise so that the sea bed will follow the sea level.
- o Nourishment can be put on different sites on the beach and is the only sustainable beach protection.

What is a beach worth?

- o There is a great value in having a clean, sandy beach supposed to no beach at all or a dirty beach. However it's really difficult to put a value on a beach.
- o From a tourism point of view, the climate change can be positive for the Baltic area.
- o Today, the beach is a minus in the municipality budget, but in fact every penny spent will be returned several times.
- o 7 m^3 of sand = 1 m^3 beach
 1 m^3 sand = 12 € = 84 €/ m^3 beach

- o Beach nourishment is really economical!
- o What would it cost to build swimming pools instead?
- o It's actually a lot cheaper to maintain the beaches.

3.2 Coastal erosion in Latvia

Professor Guntis Eberhards, Environmental Sciences Department, Latvia University

- o Areas with coastal erosion: in the south, north and east part of Riga Bay
- o Different areas in the Riga Bay have very different conditions.
- o The Latvian coast is 497 km long
- o There are areas with accumulation featuring spits, dunes, lagoons, and mires.
- o Winds from south-west and west dominate.
- o More than 62 % of the Latvian coast is very sensitive to erosion during storms.
- o Nine harbours with protective constructions interrupt the currents.
- o 4 km of the beach is artificial.
- o The frequency of storms and following erosion have increased in the last 15 years
- o Some areas aren't being monitored.
- o 77 % of the coast will be affected by coastal erosion in the next 50 years.

3.3 Protection and life support for the sea

Sverre Meisingset, Reef Systems, Norway

Sverre started by showing a film about Reef systems and how they work.

- o The environmental issues are spreading
- o Beach erosion and land erosion – Offshore work leads to the destruction of the sea bed.
- o Reef System shows good results just after 3 months.
- o Reef systems are used in several places in Dubai and in Norway.
- o The construction consists of concrete and plastic.
- o The construction lowers the force of the waves like the wind through a tree.
- o The Reef system can be used as a break water. At the same time a habitat for fishes and plants are created.
- o Reef System can also be used as a protection an cover of pipelines and cables.
- o The construction is easy to transport, move and relocate.
- o The construction has a lifetime of about 40-50 years
- o For more information visit www.seacult.com

3.4 Kent Härstedt, member of the Swedish parliament and former Baltic Sea Emissary

- o As the former Baltic Sea Emissary, Mr Härstedt has worked close to the prime minister of Sweden and travelled all around the Baltic Sea.
- o Now Härstedt works mainly with cooperation issues, SIDA m.m.

- o There are a lot of links between the countries around the Baltic Sea – friend cities.
- o The Baltic area is one of the biggest growth areas in Europe
- o The last 15 years, the Baltic area has been one of the world’s fastest growing economic zones
- o But there are still a lot of things to do – the Baltic Sea divides us.
- o We usually don’t know what’s going on in our neighbouring countries.
- o The Baltic States and Russia have had an impressive economical growth in the last 10 years.
- o Economy is the foundation for everything, even environmental issues.
- o What will happen in the Baltic Sea if we do nothing?
 - o Blooming algae with devastating results
- o We need more and better sewage treatment plants
- o There are a lot of possibilities for eco-friendly technology when we’re “saving” the Baltic Sea
- o There are a lot of different unions around the Baltic Sea
 - o CBSS
 - o HELCOM
 - o KIMO Baltic Sea
- o It’s not going in the right direction
- o The municipality’s are affected first, whether it’s good or bad
- o We need to work towards a plan of action
- o We need to increase the awareness in our countries and in the world.
- o We need to fight for the environmental issues in the financial crisis.
- o We need to make environmental issues an equal responsibility and an individual responsibility.
- o The attitudes need to be changed. You are never too young or too old to learn about the environment.
- o Mr Härstedt has been asked to help KIMO Baltic Sea to find alternative financial solutions and to establish contacts that might be helpful.
- o We need more research and more action!
- o A lot of different issues unite us, far beyond the issues that concern our environment.

3.5 Soft sediment coasts and how to mitigate erosional effects

Bert van der Valk, Deltares, Netherlands

- o Deltares is a fusion of a number of companies and the government.
- o Deltares is an independent, non-profit institute that works all over the world.
- o Coastal erosion is a common phenomenon in Europe, but it’s not always a problem.
- o Soft sediment coasts dominate and the degree of erosion varies.
- o Everything depends on how the sediment is managed.
- o A strategically placed reservoir of sand is very important.
- o The reservoir has to be stable
- o In the Netherlands there is a multifunctional coastal zone

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- o Coastal management is vital for the Netherlands wellbeing.
- o 12 000 000 m³ sand/year are nourished and it should be 4 times that amount.
- o The cost for coastal defences are 60 000 000 EUR/year which means 200 000 EUR/km
- o A state-organized coastal defence is 100 % vital for our economy
- o In the Netherlands the beaches are nourished below the break level.
- o Hence, there is no loss, only a gain because you have to look at the whole system.
- o In the future this will be a growing environmental concern
- o All the beach nourishment affects the marine life.
- o Mega nourishments > 5Mm³ at the same time.
- o Know thy coastal system
- o Monitor the coastal areas
- o It's important that there is a law that ensures areas with coastal erosion
- o The natural system is complex. If you have any uncertainties – use models!
- o Proper communications must occur
- o Think global, act local

3.6 Financing of projects through Interreg IVB Baltic Sea Programme

Sture Hermansson, EU Advisor

- o The European Union has too many programs and it's not easy to untangle the conditions if you're a beginner.
- o Baltic Sea Region Programme
- o Priority 3 – Management of the Baltic Sea as a common resource.
- o The applications to BSRP must be ready March 31
- o 75-85% of the project cost is financed by EU
- o It's important not to do the projects too small (at least 5M EUR) because then you will lose a lot of money just on administration of the project.
- o Report budget 2 times a year.
- o LOI - Letter of Intent
- o You can also apply for money for preparation costs which is work that has been done up to three months before the application.
- o This is not for everyone because the money from EU won't come until after the project.
- o 10-15 % of the costs are administration.
- o For more information. contact Mr Hermansson at sture.hermansson@s.lst.se

Thursday 4 December

3. Continuation oral presentation

3.7 Fishing for litter

John Mouat, Secretary KIMO International

- o Most of the litter in the sea are plastics
- o The traditional view is that the litter is a visual problem, now we know better. It's a huge ecological problem.
- o Animals use different materials to build their nests
- o It's common that birds in some form consume plastics and in the long run dies because of the effects.
- o It takes a long, long time for plastics to break down – micro-plastics.
- o Are the micro-plastics concentrating chemical substances? Are they having an effect on the biology?
- o A lot of different sectors are affected economically
- o The project is not about taking care of the waste that is produced on the boats, that's their own responsibility.
- o The amounts of waste in the Baltic Sea neither increases nor decreases.
- o To find out more, visit www.fishingforlitter.org

3.8 Continuation Fishing for litter

Elin Svensson, Keep Sweden Tidy

- o The litter issue is the main issue for Keep Sweden Tidy (KST)
- o KST are and has been involved in several international projects
- o Baltic Sea Breeze – a successful project in the Baltic Sea
- o It's really difficult to get information about litter in the Baltic Sea, there are no statistics.
- o The marine litter problem is not publicly known.
- o The overall goal is to get the Baltic countries to understand that there is a problem with marine litter and ghost nets and to get them working in the same direction to solve the problem.
- o Try to get EU funding
- o Establish a network
- o Everybody needs to work for the cause

4. Shorter presentations

4.1 The Baltic Experience

Peter Johnsson, Faculty of engineering (LTH), Lund University

- o We easily forget that we have a submarine Baltic.
- o The Baltic Sea is a culture with great value
- o Sometimes we are talking to much about the sea as a problem.
- o Things you don't value, you don't appreciate
- o We need to focus on the values – Havsresan (Journey of the sea)
- o The goal with the project is to create awareness.

4.2 Sea-U

Mikael Palmgren, CEO Sea-U



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- o Sea-U is a educational program in Malmö.
- o Sea-U is a business association that provides educational and exiting activities for all ages. The focuses are nature, environment, culture and the sea.

4.3 Continuation Sea-U

Martin Karlsson, Marine Biologist Sea-U

- o A total of 85 000 visitors since the start 2004
- o There are lots to sea in the Baltic Sea
- o Hopefully this will result in a big science centre in Malmö
- o To find out more, visit www.sea-u.se