SEAMOCS-Workshop on

Implications of climate change for marine and coastal safety

Palmse, Estonia (70 km east of Tallinn)
October 11&12, 2007

Thursday, 11 October

Background: Climate Change and its impact

Chair: Tarmo Soomere
09.00 – 09.10 Welcome & Introduction (*Organizing committee)*
09.10 – 09.40 Climate change – physical background (*Andreas Sterl, KNMI, De Bilt*)
the climate system – greenhouse gases (GHG) – radiative forcing – future GHG emissions
09.40 – 10.10 Scenarios for future climate (*Albert Klein Tank, KNMI, De Bilt*)
climate models – uncertainties – scenarios for 2050 and 2100
10.10 – 10.40 Methodology for statistical detection of climate change (A*urélien Ribes, Univ. Toulouse*)

10.40 – 11.00 *coffee break*

Chair: Georg Lindgren
11.00 – 11.30 Climate change and shifts in the Baltic Sea (*Tarmo Soomere, IoC, Tallinn)*
11.30 – 12.00 Changes of wind structure during the latter half-century (*Sirje Keevallik, IoC, Tallinn*)
12.00 – 12.30 Use of statistics of extremes to detect trends in hurricane statistics (*Richard Katz, NCAR, Boulder)*

12.30 – 13.45 *Lunch*

Determination of extreme wave heights

Chair: Jaak Monbaliu
13.45 – 14.15 Numerical simulation of long (ship) waves (*Tomas Torsvik, Bergen/Tallinn*)
14.15 – 14.45 Waves, wave climate, extreme waves – knowledge from direct observations, space-born retrievals, and modeling (*Elzbieta Bitner-Gregersen, DNV, Hövik*)
14.45 – 15.15 Extreme wave crests in space and time (*Anastassia Baxevani, Chalmers Univ., Göteborg*)
15.15 – 15.45 Estimating extremes (*Clive Anderson, Univ. Sheffield)*
Techniques – applicability – uncertainties – sparse data (gaps)

15.45 – 16.05 *coffee break*

Thursday, 11 October (cont'd)

Chair: Andreas Sterl

16.05 – 16.35 Extreme wave heights from models (*Luigi Cavaleri, ISMAR, Venice)*

16.35 – 17.05 Extreme wave heights from satellites *(Peter Challenor, NOC, Southampton)*

17.05 – 17.35 New generation of wind and wave climate handbooks (Approaches and some results) (*Leonid Lopatoukhin and Alexander Boukhanovsky, St.Petersburg*)

18.15 *Evening Program + Workshop Dinner*

Friday, 12 October

Coastal processes

Chair: Jean-Marc Azaïs

09.00 – 09.30 Coastal defence: How to deal with climate change? *(Jaak Monbaliu, Univ. Leuven)*

09.30 – 10.00 Implications for marine and coastal safety (*Elzbieta Bitner-Gregersen, DNV, Hovik*) winds – waves – sea level – others

10.00 – 10.30 Large effects of small structures on coastal evolution (case studies at Estonian coasts) (*Andres Kask, IoC, Tallinn)*

10.30 - 10.50 *coffee break*

Chair: Elzbieta Bitner-Gregersen

10.50 – 11.10 Runup of long asymmetric waves (*Irina Didenkulova, IoC, Tallinn)*

11.10 – 11.30 Statistics of extreme dynamic behaviour of marine structures (*Marc Prevosto, IFREMER, Brest)*

11.30 – 12.30 Needs for future research (*all participants*)
Identify gaps in our knowledge & understanding – suggest research to fill them

12.30 – 13.30 *Lunch - workshop ends*

13.30 *Transport to the airport*

Afternoon: CENS-CMA (http://cens.ioc.ee/cens/research-teams/nonlinear-waves/cens-cma) event *Applied Wave Mathematics*. All attendees of the SEAMOCS workshop are invited to attend. More information from Tarmo Soonere (tarmo.soomere@cs.ioc.ee).

Saturday, 13 October

The possibility of a joint (SEAMOCS and CENS-CMA) sightseeing tour is explored. If your are interested, please contact Tarmo Soonere (tarmo.soomere@cs.ioc.ee).