Programme

International workshop on seabed mapping methods and technology, Trondheim 17th-18th October 2012

WEDNESDAY 17TH OCTOBER

Introductory talks – seabed mapping for ocean management – international experiences

9:00 Welcome to NGU, with short introduction about MAREANO. Terje Thorsnes, Børge Holte and Hanne Hodnesdal

9:15 From seafloor geomorphology to predictive habitat mapping: progress in applications of biophysical data to ocean management. Peter Harris, UNEP Arendal/Geoscience Australia

Session 1 - Maximising the output from acoustic investigations. Chair: Peter Harris, Hanne Hodnesdal

9:45 Acoustic data acquisition in MAREANO – an overview. Hanne Hodnesdal from Norwegian Hydrographic Service, Norway

10:05 Coffee

10:25 An overview of the use of acoustic data for geology and habitat mapping in MAREANO. Margaret Dolan, Valerie Bellec, Sigrid Elvenes, Reidulv Bøe, Terje Thorsnes, Shyam Chand, Leif Rise, Monica Winsborrow, NGU, Norway

10:45 Multiple methods, maps, and management applications: Purpose made seafloor maps in support of ocean management. Craig Brown, McGregor Geoscience, Canada

11:15 AUV's equipped with Synthetic Aperture Sonar and other tools – a new tool for detailed seabed mapping. Terje Thorsnes, Harald Brunstad, Petter Lågstad, Shyam Chand and Aivo Lepland, NGU/Lundin Petroleum/Norwegian Defence Research Institute, Norway

11:35 Maximising Information from Seabed Acoustic Data using New Inversion and Classification Techniques. Garret Duffy, Klaus Leurer, Maja Fabeta and Colin Brown, National University of Ireland, Ireland

12:05 Lunch

13:00 Advancing quantitative techniques for the generation of acoustic variables to characterise seabed habitats. Vanessa Lucieer, University of Tasmania, Australia

13:30 INFOMAR, meeting the survey challenges in Ireland's inshore. Sean Cullen and Ronan O'Toole, Geological Survey of Ireland, Ireland

14:00 Plenary discussion

14:30 Coffee

Session 2 - Visual tools for non-destructive sampling. Chair: Craig Brown, Lene Buhl-Mortensen

15:00 Looking at the seabed - Visual description of sediment and fauna in Mareano. Pål Buhl Mortensen, Institute of Marine Research (IMR), Norway

15:20 UHI based mapping of habitats and organisms on the seabed. Geir Johnsen, Norwegian University of Science and Technology (NTNU), Norway

15:50 Using video and still imagery - current status and emerging methods including 3D reconstructions and AUV photo mosaicking. Jens Greinert, Royal Netherlands Institute for Sea Research, Netherland

16:20 End to end workflow for bentho-pelagic habitat characterization using image and oceanographic informatics. Massimo Distefano, Woods Hole Oceanographic Institution, USA

16:50 Plenary discussion

17:20 Drinks

18:00 Workshop dinner

THURSDAY 18TH OCTOBER

Session 3 - Benthic biological sampling and data management. Chair: Mark Finkbeiner, Pål Buhl-Mortensen

9:00 The biological MAREANO sampling – methods and their relevance. Lene Buhl-Mortensen, Institute for Marine Research.

9:20 Ecological mapping and monitoring of the offshore benthic environment. Brian Bett, National Oceanography Centre, UK.

9:50 Completion of and lessons from the 6000 km^2 California Seafloor Mapping Project: Why it was done, how it was done, what we learned, and how the data are being used. Rick Kvitek, Seafloor Mapping Lab, California State University, US.

10:20 Coffee

10:40 Web-based benthic databases: availability for science and quality issues. Sabine Cochrane, Akvaplan-niva.

11:00 Plenary discussion

11.30 Lunch

Session 4 - Integration, modeling and dissemination of complex data. Chair: Rick Kvitek

12:30 Habitat and biotope modeling in MAREANO. Margaret Dolan, Pål Buhl-Mortensen, Sigrid Elvenes, NGU/IMR, Norway.

12:50 Statistical tools for modelling the spatial distribution of biotopes. Genoveva Gonzalez-Mirelis, IMR, Norway.

13:10 Predicting patterns of beta diversity. Vanessa Lucieer, University of Tasmania

13:40 Predictive species distribution modeling in GIS based on high resolution multibeam habitat data and georeferenced biological monitoring data. Mary Young, Seafloor Mapping Lab, California State University, US.

14:10 Spatial predictive modelling of soft sediment reference conditions in Skagerrak. Hege Gundersen, Norwegian Institute for Water Research, Norway

14:30 Coffee

15:00 Coastal and Marine Ecological Classification Standard (CMECS). Mark Finkbeiner, National Oceanographic and Atmospheric Administration, USA.

15:30 “Nature types in Norway” – a system for typification and description of variation on different scales. Arild Lindgaard, Artsdatabanken.

15:50 Plenary discussion and wrap&up. Chair Terje Thorsnes, Børge Holte