

Project title: WaterS

Funding Scheme: IAPP

Event name: Meeting of the Nordic Network of Aquatic Remote Sensing: Remote sensing of lakes & BEAM training course

Event No 4. WP6, MS7.1, D6.3

Due Date according to Annex 1: Month 9, Report at Month 12

Event Date: 16-17 February 2011, Oslo, Norway

Responsible partner and person: TO (Anu Reinart), SU (Susanne Kratzer)

Participants and names:

Name	Institute	country
Are Folkestad	NIVA	Norway
*Susanne Kratzer	Stockholm University	Sweden
*Annelies Hommersom	Stockholm University	Sweden
*Therese Harvey	Stockholm University	Sweden
*Jose Beltran	Stockholm University	Sweden
*Petra Philipson	Vattenfall Power Consultant	Sweden
Claudia Giardino	National Research Counsel	Italy
*Sampsa Koponen	SYKE	Finland
*Anu Reinart	Tartu Observatory	Estonia
*Martin Ligi	Tartu Observatory	Estonia
Tiit Kutser	Tartu University	Estonia
Birgot Paavel	Tartu University	Estonia
Tuuli Kauer	Tartu University	Germany
*Kerstin Stelzer	Brockmann Consult	Germany
*Jasmin Geissler	Brockmann Consult	Germany
Anton Korosov	NERSC	Norway
Kai Sørensen	NIVA	Norway
Erlend Kjeldsberg	NTNU	Oslo
Øyvind Kleiv	University of Oslo	Norway
Jakob Stamnes	Universtiy of Bergen	USA
Knut Stamnes	Stevens Insitute of Technology	Norway
Anna Birgitta	NIVA	Norway
Helene Erlandsen	Norwegian Space Center	Norway
Diana Vaiciute	CORPI	Norway

***WaterS members**

Event description

This event was a combination of a workshop on lake remote sensing and a training course on the software BEAM. Participants included both researchers giving the scientific highlight to the application of remote sensing techniques and users from water monitoring authorities. Invited speakers enlarged the geographical range of the study area from consortium countries

to other European, American and Russian waters but also the range of application fields from bio-optics to carbon studies.

- a) Research programme contribution (WP6/Task6.1/D6.3, WP7/Task 7.1, 7.3)

During the workshop the latest research on remote sensing of lakes in the Nordic and Baltic regions were discussed. The main focus was lake remote sensing methodology and extending the application fields that helps to define new related research directions and establish contacts with end users.

- b) Knowledge transfer programme contribution (WP6/Task6.1/D6.3)

The training course on the BEAM software was aimed at Bsc, Msc and Phd students who need to use this software in their project. BEAM is one of the main satellite data processing tools and was developed by Brockmann Consult, Germany. During the workshop the new plug-ins were presented. Participants had the opportunity to practise with several exercises and ask questions to the experts.

Agenda

16 February 2011

1130 – 1230 Registration and Lunch

1230 – 1800 Session 1 (coffee breaks when needed)

Numbers indicate length of presentations incl. questions/discussion

- 10 Norwegian Space Centre representative: Welcome
- 15 Susanne Kratzer: Presentation of the NordAquaRemS and related activities in 2011
- 45 Claudia Giardino: Remote sensing of lakes - Towards management relevant applications
- 45 Petra Philipson: An operational system for monitoring of Swedish lakes
- 45 Sampsa Koponen: Current topics of lake remote sensing in Finland
- 30 Are Folkestad: Satellite monitoring of Norwegian lakes
- 20 Anu Reinart: WaterS project: strategic partnership for water quality parameter retrieval

1800 Transport from Norwegian Space Centre to NIVA

1845 Presentation of NIVA laboratory and premises

1930 Dinner

17 February 2011

- 0900 – 1200 Session 2 (coffee break when needed)
- 20 Jakob Stamnes: Remote sensing of turbid waters
- 30 Anton Korosov: Remote sensing of Great Russian and American lakes
- 30 Tiit Kutser: The role of lakes in global carbon cycle
- 20 Therese Harvey: Bio-optical measurements and MERIS validation in Lake Vänern
- 20 Annelies Hommersom: WISP water quality instrument
- 20 Tuuli Kauer: Underwater light field in Estonian lakes
- 20 Diana Vaiciute: Remote sensing of Lithuanian waters

Discussion and conclusions

1200-1300 Lunch

1300-1700 **BEAM training course**

Kerstin Stelzer & Jasmin Geissler, Brockmann Consult

- Exercise I: How to find a good match-up pixel
Basics on displaying bands, importing pins and looking at spectra
- Exercise II: Build your own land/water mask
Understanding the new mask concept
- Exercise III: Compare the influence of ICOL processing
Transects, band maths
FUB processing