

Event name: Workshop on Marine Environmental Monitoring Methods, Helsinki, Finland 29-30 August 2012 carried out SYKE,

Event No 10, (WP2, 3, 4; Milestone 2.4 Deliverable 6.3)
Due Date according to Annex 1: 31.05.2013
Actual Delivery Date: 01.09.2012 (
Responsible partner and person: SYKE (Stefan Simis ER4)

WaterS participants:

Annelies Hommersom, Steef Peters WI
John Olsson, Stefan Simis SYKE

Event summary:

The Workshop on Marine Environmental Monitoring Methods was organized to review recent developments in the field of marine biological process monitoring. The meeting was financed through EU projects PROTOOL and WaterS. Participation was open to all interested individuals and free of charge. The NordBaltRems network sponsored the attendance of PhD students, a prominent speaker, and a trainer, through travel grants. Students were requested to present their own work in a dedicated poster session. The meeting was held at the premises of the Finnish Environment Institute (SYKE), Helsinki, Finland. The meeting was organized by Dr. Stefan Simis and the local project teams of projects PROTOOL and WaterS. The meeting consisted of one day of demonstration and training of instrumentation on R/V Aranda, a social mixer/dinner, and a one-day seminar for users, stakeholders, and researchers.

Programme:

demonstrations / training 29 August 2012

Location: R/V *Aranda*, Finnish Environment Institute SYKE

Water Insight (NL):

Annelies Hommersom and Steef Peters
The WISP-3 Reflectance spectrometer

Finnish Environment Institute SYKE (FI):

John Olsson and Stefan Simis
RFlex automated shipborne reflectance platform

TriOS (DE):

Karin Munderloh and Rüdiger Heuermann
OSCAR, Point-source integrating cavity absorption meter

Photon Systems Instruments (CZ):

Michal Sicner (PSI) with Ondrej Prasil (Lab. Photosynthesis)
Flow-through Fast Repetition Rate fluorometer
Algal Online Monitor

Seminar Programme, 30 August 2012

9:15	Registration, coffee	
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9:30	Heikki Pitkänen, SYKE (FIN) <i>Head of Unit - State of the Marine Environment</i>	Welcome Overview of marine monitoring efforts at SYKE
10:00	Jacco Kromkamp, NIOZ (NL) <i>PROTOOL project coordinator</i>	Automated measurements of primary production in European seas
10:30	Ondřej Prášil, LPIM (CZ)	The coming of age of phytoplankton productivity measurements based on fluorescence
11:00	Coffee	
11:20	Dave Suggett, UESSEX (UK)	On carbon, electrons, and phytoplankton diversity
11:45	Geir Johnsen, NTNU (Norway)	In situ and remote sensing of phytoplankton pigment signatures
12:15	Stefan Simis, SYKE (FIN)	Adding <i>in situ</i> measurements to the remote sensing of optically complex waters
12:30	Lunch	
13:40	Steeff Peters, VU-IVM (NL)	Towards predicting the fate of phytoplankton blooms: linking remote sensing and ecosystem models.
14:00	Rodney Forster, CEFAS (UK)	Primary production in the EU and national (UK) environmental policy framework
14:20	Juha-Markku Leppänen, SYKE (FIN)	Meeting the MSFD monitoring requirement using novel sensor networks
14:40	Denise Smythe-Wright, NOC (UK)	The risks and rewards of making measurements from ships of opportunity
15:00	Coffee and Posters	
17:00	End	

Posters:

Inga Aamot: Temperature dependence of photosynthesis in *L. digitata* and *S. latissima*

Selima Ben Mustapha: Ocean color algorithms in the southeastern Beaufort Sea, Canadian Arctic, a reappraisal.

Therese Harvey: Using MERIS full resolution data for improved monitoring of coastal areas in the Baltic Sea - from research to applications.

Therese Harvey: Application of the SPICOSA System Approach Framework on Himmerfjärden, Sweden: focus on nitrogen management

Pasi Ylöstalo: Variability of the relationship between electron transfer rates and ¹⁴C-based production in the Baltic Sea

Pasi Ylöstalo: Spatial and seasonal variation of the absorption and biogeochemical composition of dissolved organic matter in the Baltic Sea

John Olsson: Flowthrough measurements of coloured dissolved organic matter

Anniina Le Tortorec: Bioluminescence in highly attenuating waters

Kari Kallio: Continuous measurement of water quality on navigation buoys - a pilot study in Finnish coastal waters

a) Research programme contribution (WP2, T2.1, T2.2, T2.4;)

The PROTOOL project is short for "PROductivity TOOLS: Automated Tools to Measure Primary Productivity in European Seas". PROTOOL has facilitated the development of instrumentation that allows us to measure primary production of phytoplankton using automated optical techniques, rather than the established, trustworthy, but laborious and expensive (and therefore scarcely applied) use of carbon isotopes. The instruments are now (commercially) available and can be placed on ships of opportunity (ferries, container ships). The PROTOOL modules provide fluorescence induction, light absorption, and reflectance (water colour) measurements. During the project, major efforts have been made to validate the methods in the field resulting in a number of publications in high-ranking journals. The next step is implementation in (inter)national monitoring networks.

PROTOOL (<http://www.protool-project.eu>, @protoolproject), WaterS (<http://www.mywaters.eu>)

NordBaltRemS (<http://www.nordbaltrems.org/>)

b) Knowledge transfer programme contribution (link to WP2 T.2.2; M.2.4, WP3, M3.1, D.6.3, WP7, M7.1)

Event gave very good link with remote sensing and biological applications community, as can be seen from the participant list. It was one of the main WaterS outreach events that demonstrated usefulness of optical methods for many other linked topics but also for the possible further business models.

Participant information

First name	Last name	Affiliation	Country	29.8	30.8
Inga	Aamot	NTNU	Norway	x	x
Selima	Ben Mustapha	Stockholm University	Sweden	x	x
Vivi	Fleming-Lehtinen	SYKE	Finland		x
Rodney	Forster	CEFAS	United Kingdom	x	x
Manuel	Frias	HELCOM	Finland	x	x
Therese	Harvey	Stockholm University	Sweden	x	x
Anna-Stiina	Heiskanen	SYKE	Finland		x
Ruediger	Heuermann	TriOS	Germany	x	x
Annelies	Hommersom	Water Insight	The Netherlands	x	x
Chris	Hulatt	SYKE	Finland		x
Geir	Johnsen	NTNU	Norway	x	x
Hermann	Kaartokallio	SYKE	Finland		x
Seppo	Kaitala	SYKE	Finland	x	x
Kari	Kallio	SYKE	Finland		x
Harri	Kankaanpää	SYKE	Finland		x
Pirkko	Kauppila	SYKE	Finland	x	x
Ondřej	Komárek	Inst. Microbiology	Czech Republic	x	x
Jacco	Kromkamp	NIOZ	The Netherlands	x	x
Evelyn	Lawrenz	University of Essex	United Kingdom	x	x
Anniina	Le Tortorec	SYKE	Finland	x	x

Juha-Markku	Leppänen	SYKE	Finland		x
Risto	Lignell	SYKE	Finland		x
Evgeny	Morozov	NIERSC	Russia	x	x
Karin	Munderloh	TriOS	Germany	x	x
Susanna	Nenonen	SYKE	Finland	x	x
Henrik	Nygård	SYKE	Finland		x
Riitta	Olsonen	SYKE	Finland		x
John	Olsson	SYKE	Finland	x	x
Steeff	Peters	IVM & Water Insight	The Netherlands	x	x
Heikki	Pitkänen	SYKE	Finland		x
Ondřej	Prášil	Inst. Microbiology	Czech Republic	x	x
Timo	Pyhalhti	SYKE	Finland	x	x
Eija	Rantajarvi	SYKE	Finland	x	x
Ruediger	Roettgers	HZG	Germany	x	x
Jukka	Seppälä	SYKE	Finland	x	x
Michal	Sicner	PSI	Czech Republic	x	x
Greg	Silsbe	NIOZ	The Netherlands	x	x
Stefan	Simis	SYKE	Finland	x	x
Denise	Smythe-Wright	NOC	United Kingdom	x	x
Kristian	Spilling	SYKE	Finland	x	x
David	Suggett	University of Essex	United Kingdom	x	x
Timo	Tamminen	SYKE	Finland	x	x
Jethro	Waanders	NIOZ	The Netherlands	x	x
Pasi	Ylöstalo	SYKE	Finland	x	x