

GLOBOLAKES

Global Observatory of Lake Responses to Environmental Change

ADVISORY BOARD MEETING

Biological and Environmental Sciences, University of Stirling

15 January 2014



Advisory Board Meeting

Global Observatory of Lake Responses to Environmental Change



09.00	Chair: Steve Greb Introduction - Andrew Tyler
09.10	Project Progress Overview – Andrew Tyler LIMNADES – Evangelos Spyrakos
09.30	WP 1 RS of lake geophysical and biochemical properties Peter Hunter, Evangelos Spyrakos, Andrew Tyler – University of Stirling Steve Groom, Victor Vicente- Plymouth Marine Laboratory Stuart MacCallum, Christopher Merchant – University of Reading
10.00	Discussion
10.20	WP 2 Operationalisation of RS data processing and future sensors Steve Groom - Plymouth Marine Laboratory Stuart MacCallum, Christopher Merchant – University of Reading
10.40	Discussion
10.50	Coffee/Tea
11.10	WP 3 Spatial-temporal climate and catchment Mark Cutler, John Rowan, Terry Dawson, Eirini Politi – University of Dundee
11.30	Discussion
11.50	WP 4 Data integration and construction of uncertainty budgets Claire Miller, Marian Scott, Ruth Haggarty – University of Glasgow
12.10	Discussion
12.30	Lunch



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Global Observatory of Lake Responses to Environmental Change



13.30	WP5 Spatial and Temporal Trends Ruth Haggarty, Claire Miller, Marian Scott – University of Glasgow
13.50	Discussion
14.10	WP6 Attributing Cause Stephen Maberly, Laurence Carvalho, Stephen Thackeray – NERC Centre for Ecology & Hydrology Claire Miller, Marian Scott – University of Glasgow
14.20	Discussion
14.30	WP7 Modelling Alex Elliot, Stephen Maberly, Laurence Carvalho – NERC Centre for Ecology & Hydrology, UK
14.50	Coffee/Tea
15.10	WP8 Lake Management Andrew Tyler – University of Stirling
15.25	Discussion
15.40	Open Discussion
17.00	CLOSE
19.00	DINNER



- Role of the Advisory Board
- Overview
- Links & New funding
- Lake Sampling Campaigns
- Workshops/Conferences
- Funding (pending)
 - LIMNADES





Role of the Advisory Board

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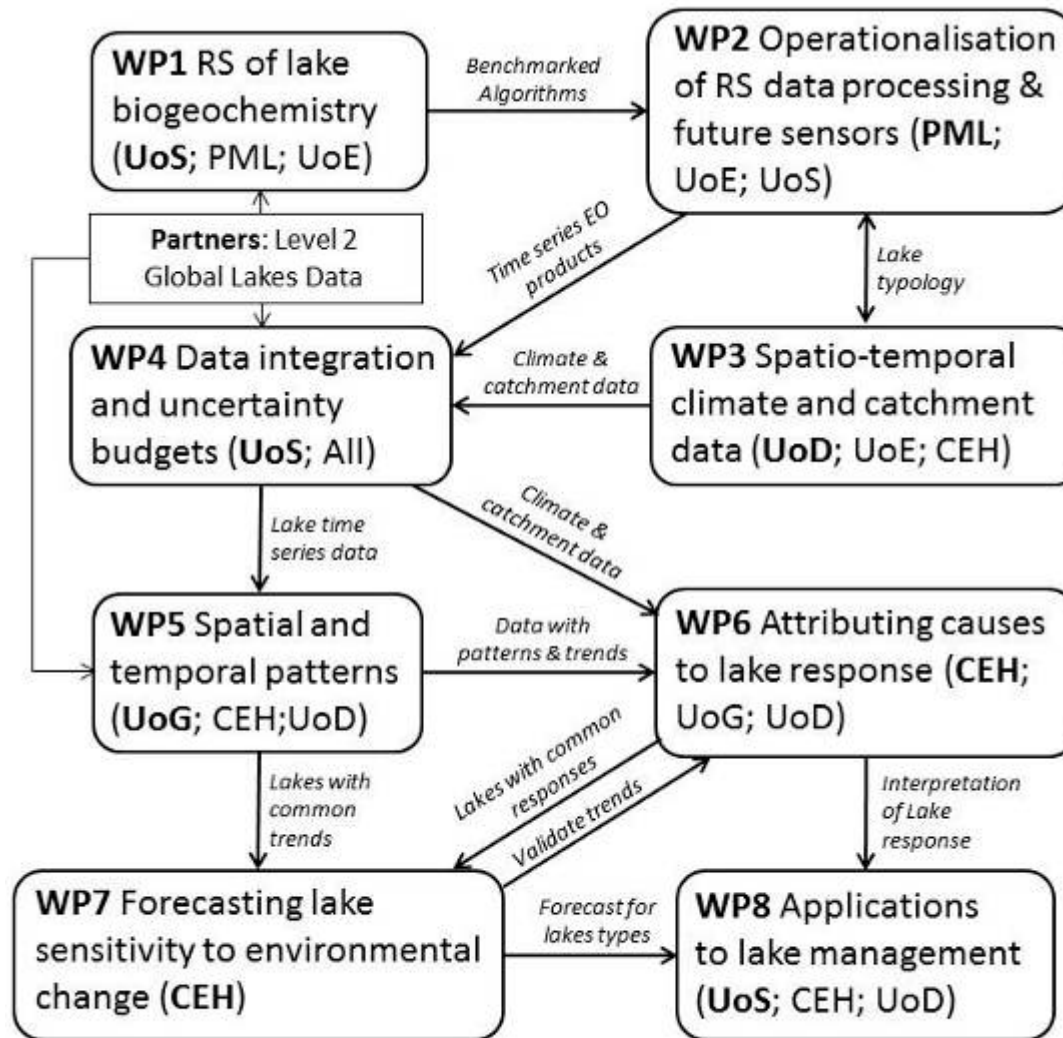
The advisory panel will:

- review the output from this project
- advise the direction and make sure of mutual understanding of end users needs
- give an international dimension to the project with inputs from around the world
- help/advise with data issues
- ensure the wider engagement of other stakeholders and end users and evaluate the data value to the latter
- help to establish synergies with other projects around the world, which have similar objectives (e.g. DIVERSITY II, GLASS and SAFER)
- help publicize GloboLakes and establish links and relationships with other groups



Project structure

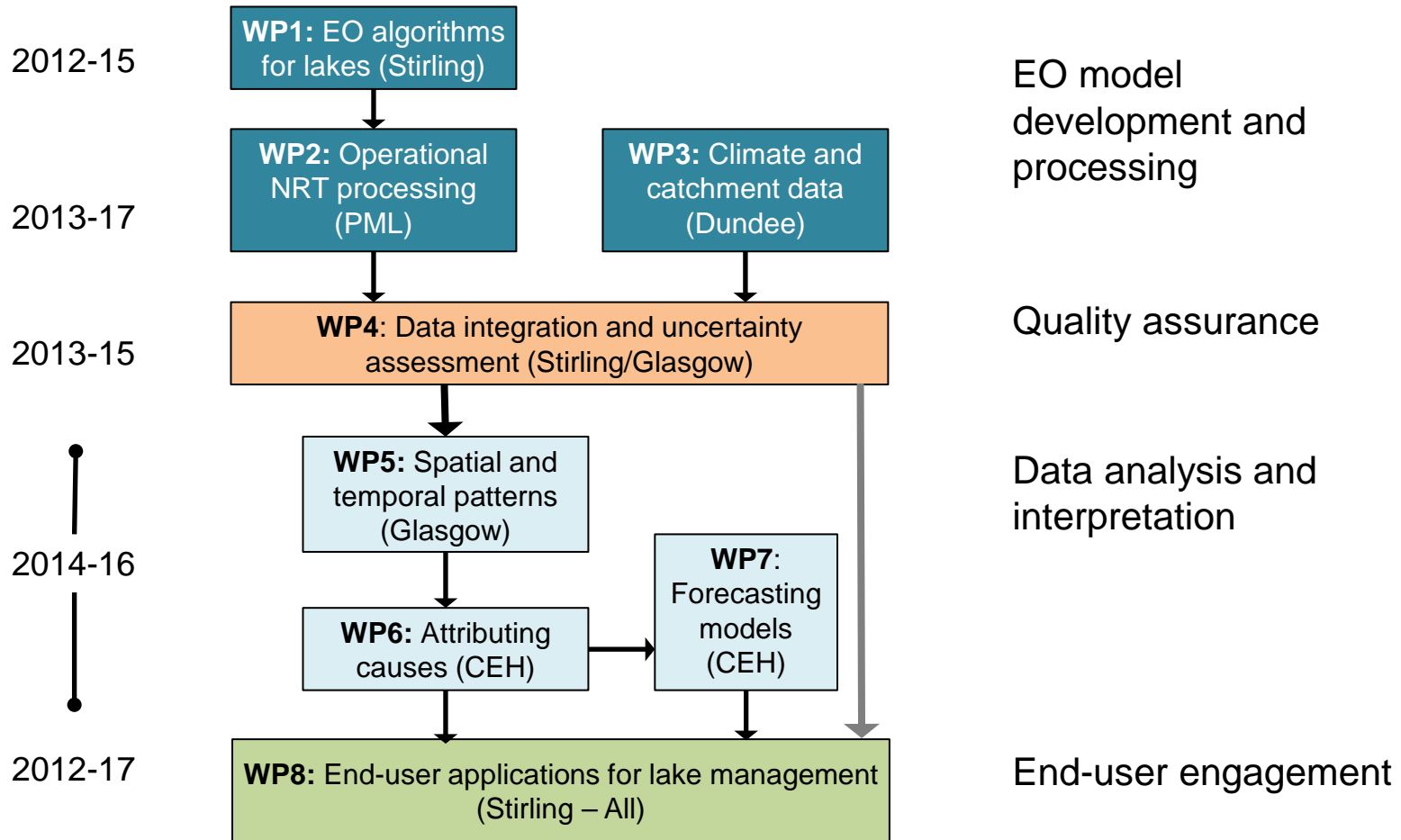
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Work Package Structure

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Linkages

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- Brockmann Associates: Diversity II project
- Colour of Water: Climate induced changes in water colour in Nordic Lakes. Estonia/Sweden
- GLaSS: Global Lakes Sentinel Services: *Water Insight, Wageningen*
- CSIRO – inland and coastal water group.
- CYANOCOST: Training and networking for EO
- NETLAKE: COST Action for in-situ sensors
- And visiting scientists...

Stephanie Palmer

Jose Antonio Dominguez





New Projects

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- Lake Algal Bloom Pilot Project: Environment Agency
- KTAMOP: Ecological Status and Function of Lakes (Hungarian Academy of Sciences)
 - *HICO (Hyperspectral Imager of the Coastal Ocean)*
- Validation team for ESA Sentinel 3
- INFORM: Improved monitoring and forecasting of ecological status of European Inland waters by combining Future earth ObseRvation data and Models (FP7 project): *VITO, Belgium*
- DANCERS: DANube macroregion: Capacity building and Excellence in River Systems (basin, delta and sea) (FP7 project): *GeoEcoMar, Romania*



Lake Sampling Campaigns

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Characterise the spatial and temporal heterogeneity in IOP and AOP

- Loch Leven/Loch Lomond (GlaSS: Water Insight)
- Windermere, Derwent Water & Bassenthwaite (PML)
- Lake Balaton (Hungarian Academy of Sciences)





Workshops & Conferences

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GloboLakes Meetings:

- (1) Kick-off Meeting December 2012 (Stirling)
- (2) Uncertainties & WP 1 Workshops January 2013 (Glasgow)

International Meetings:

- (1) GEO European Projects Workshop April 2013 (Barcelona): 1 Presentation
- (2) International Conference on RS and Geoinformation April 2013 (Pafos): 1 Presentation
- (3) GEO Webinar April 2013: 1 Presentation
- (4) Colour of Water Meeting June 2013 (Uppsala): 2 Presentations
- (5) SIS 2013 Stats Conference, June 2013 (Brescia): 1 Presentation
- (6) SIL XXXII Congress August 2013 (Budapest): 3 Presentations
- (7) ESA Living Planet September 2013 (Edinburgh): 2 Presentations
- (8) IOCCG January 2013 (Cape Town): 1 Presentation





Funding (Pending)

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NERC IOF:

- (1) **International cooperation in the context of Sentinel-3 Ocean and Land Colour Imager (OLCI) validation studies over lake ecosystems (INCIS-3IVE)** With Dr Susanne Kratzer (Stockholm), Dr Steef Peters (Water Insight) and Dr Anu Reinart (Tartu).
- (2) **Lake bio-optical measurements and matchup data for remote sensing (LIMNADES)** With Computing Science and CEH.

Global Innovation Initiative:

- (1) **Sentinel Species for Monitoring Toxins from Harmful Algal Blooms:** Iowa State, University of Illinois, Institute of Hydrobiology of Chinese Academy of Sciences, and China Agricultural University in Beijing
- (2) **International cooperation and innovation on global freshwater monitoring from Earth-observing satellites (freshEarth)** Nanjing Institute of Geography and Limnology, Chinese Academy of Sciences; **NIGLAS**) National Institute for Space Research, **INPE**)

TEP (ESA)

- (1) **Water Thematic Exploitation Platform.** PML led. Based at Harwell.



Future Directions

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Funding:

COST ACTION: EU Funding for training – as a framework for standardisation in Sentinel 3 (&2) validation for Inland Waters

Opportunity:

INTERCOMPARISON: of radiometers /calibration for reflectance and deployment/sampling methodologies. GLaSS/INFORM/GloboLakes

Meetings:

END USER WORKSHOP: JRC Italy. 1st Week in May

Conferences:

- JOINT AQUATIC SCIENCES MEETING 2014 (<http://sgmeet.com/jasm2014/>)
Portland Oregon (18-23 May 2014) (7th Feb Submission Deadline)
 - Working towards interoperability standards for networks and observatories
 - Lakes and streams as engines in global processes: Insights from technical advances in limnology
- 15th World Lake Conference (Perugia, Italy, Sep 14) - Lakes remote sensing special session & GEO



GloboLakes

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Questions?