

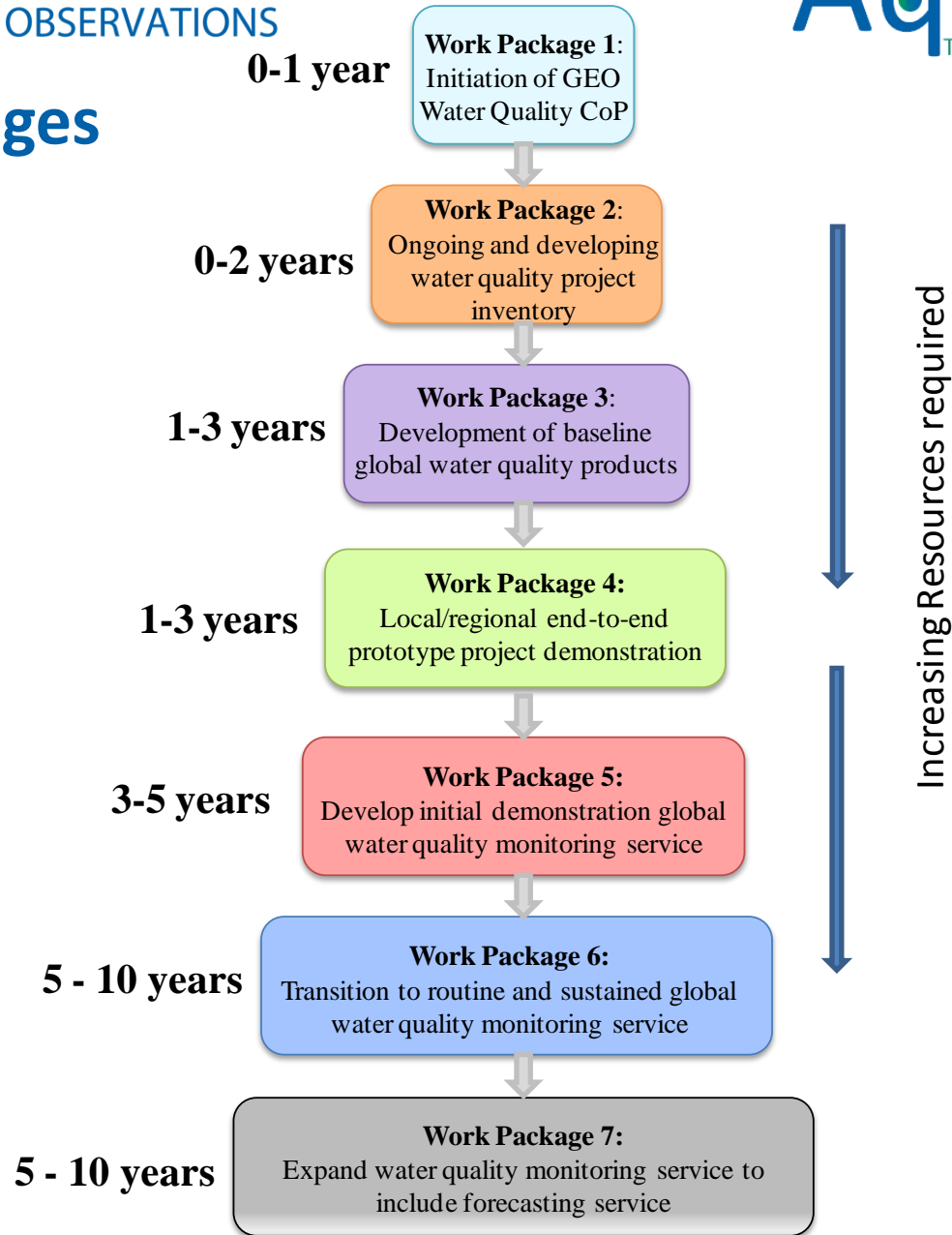
AquaWatch

The  Water Quality Community of Practice

June 8, 2016

AquaWatch Meeting
Koblenz, Germany

Work Packages



Work Package 2

GEO Water Quality Community of Practice

WQ Inventory_v1

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	A	B	C	D	E	F	G	H	I	J	K	L
	Project Name	Organization	Project Summary	Funding Entity;Other	Point of Contact	Region's of Interest	Status	Obs/measurements collected & generated	Platforms/Sensors/Equipment used (Field, Remote, Lab)	Algorithm/Validation/Sampling Protocols	Frequency of Observations	Applications/Man/s/Users Support
1												
2	CyAN (Cyanobacteria EONEMP (The Earth Observation National Entrophication Monitoring Programme) GeoWaterQuality	EPA, NASA, NOAA, USGS Cyanolakes (pty) Ltd.	Several states have adopted WHO thresholds for human health exposure to microcystins (a class of toxins). EONEMP is a three year project (2015-2018) funded by the South African Water Research Commission.	EPA, NASA, NOAA, USGS	Blake Schaeffer (EPA): schaeffer.blake@epa.gov or Jeremy Werdell (NASA): mark@cyanolakes.com	U.S. lakes and estuaries	R&D mode to move towards operational status	(1) model output from in situ radiometry vs. in situ metrics for cyanobacteria; (2) satellite radiometry vs. Biogeochemistry, phytoplankton enumeration and identification radiometry, absorption	field/lab: cyanobacteria counts, abundance, or phycocyanin pigment concentration, latitude, longitude, depth, date	Algorithm: propose to adopt second derivative spectral shape algorithms	Goal is availability of products on a weekly basis	Create a standard & uniform approach for early identification of algal blooms that is useful and accessible to National Authorities Decision Makers, & general public
3		EOMAP	Water Quality services are commercially provided.	Water Research Commission, Department of Water and Sanitation, South African National Science Foundation	Thomas Heege (EOMAP) heege@eomap.de	Globally	Operational	Measurements made: turbidity, chlorophyll-a, total suspended matter, visibility (SDD), total absorption (ABS), sum	Emvisat Medium Resolution Imaging Spectrometer, Sentinel-3 Ocean and Land Colour Instrument	Maximum Peak Height (MPH) algorithm; Ocean Optics Protocols	Weekly/Daily	Directive and environmental monitoring for water environmental agencies (e.g. BAUW and LUL) Other scientists
4	The COLOURS database	Royal Netherlands Institute for Sea Research	Long-term RS-monitoring project, since August 2001, for automated determination of	Royal Netherlands Institute for Sea Research	Marcel Wernand (Royal Netherlands Institute for Sea Research): marcel.wernand@nioz.nl	The Wadden Sea	Operational	Since August 2001 these optical devices provide continuous data every 15 minutes (available for	Landsat 5/7/8, Sentinel-2a/b 20m resolution, MODIS A.T. Sent. 3, MERIS (2000-2012); 3 optical hyper-spectral sensor and two netCams	Processing system: Physics-based Modular Inversion and Processing System (MIP). Processors: Data can be used for validation; they have developed a chlorophyll a algorithm based on Rrs fluorescence peak	Daily: 500 - 250m Weekly: 30 - 10 m Up to daily on request: 5m - 1m	Supported implementation of European Water Framework Directive for many European countries. Field.
5	WISER (Water bodies in Europe; Integrative System to assess Ecological status and Recovery)	25 European research institutions	Database of water quality monitoring data (total phosphorus, water colour, temperature and	The European Union under the 7th Framework Programme, Theme 6 (Environment including	Daniel Hering, University Duisberg Essen, Daniel.Hering@uni-	Water bodies in Europe	Operational monitoring used in R&D Project	Measurements from field samples	Existing data and field data.	The project analysed existing field monitoring data from more than 20 European countries. Field.	Monthly - often just summer months, for one or more years	Supported implementation of European Water Framework Directive for many European countries. Field.
6	MARS Project (Managing aquatic ecosystems and water resources under multiple stress)	24 European research institutions and organizations representing 17 countries will address	MARS is a research project that supports European policies, such as the Water Framework Directive	Union under the 7th Framework Programme, Contract No. 603378	For Project: Prof. Daniel Hering, University Duisberg Essen, Daniel.Hering@uni-	Europe (>20 countries)	Operational monitoring & R&D Project data	Existing field measurements	Field	The project is analysing existing data from > 30 long-term lake time series (at least monthly data for 10 years) and	Monthly - often just summer months, for one or more years	Supports implementation of European Water Framework Directive for many European countries. Field.
7	EMIS (Environmental Marine Information System)	European Commission	The Marine Geoportal EMIS relies on biological and physical variables generated from both	European Commission	Nicolas Hoepffner: nicolas.hoepffner@jrc.ec.europa.eu	European Seas	Operational	EMIS relies on biological and physical variables generated from both hydrodynamic models. GMS relies on biological and physical variables generated from satellite remote sensing. A number of	Sensors MERIS, MODIS, SeaWiFS, PATHFINDER, VIIRS Hydrodynamic model: GETM	using regularly updated NASA SeaDAS software with standard Data retrieved from NASA GSFC and re-sampled at GMS grid	Monthly means & 8-Day time-series over sensor's duration	EMIS includes navigation and statistical tools for assessment of the user's identified m
8	GMS (Global Marine Information System)	European Commission	The Marine Geoportal GMS relies on biological and physical variables generated from satellite remote	European Commission	Nicolas Hoepffner: nicolas.hoepffner@jrc.ec.europa.eu	Global Ocean	Operational	GMS relies on biological and physical variables generated from satellite remote sensing. A number of	Sensors MERIS, MODIS, SeaWiFS, PATHFINDER, VIIRS	Data retrieved from NASA GSFC and re-sampled at GMS grid	Monthly time-series over sensor's duration	EMIS includes navigation and statistical tools for assessment of the user's identified m
9	GLOS (Great Lakes observing system)	GLOS - IOOS regional partner	The mission of GLOS is to connect providers	Primarily NOAA-IOOS, other federal	Kelli Paige: kpaige@glos.us	The Great Lakes and St. Lawrence River	N/A	GLOS does not directly own or operate	varied	An overview of the QA/QC processes	varied	Resource manager and policy-makers

Work Package 2

- In situ and remote sensing projects
- Freshwater & coastal
- Focused on large projects
- Includes:
 - Preoperational Operational Services
 - On Demand client services
 - Data collection efforts
 - Databases

Work Package 2

41 projects

- 17 global (or multi-regional)
- 9 U.S.
- 11 Europe
- 2 Africa
- 1 Brazil
- 1 Canada

Work Package 2

Information Included

- Project Name
- Organization
- Funding entity
- Point of contact
- Regions of interest
- Obs Measured
- Platform/sensor/equipment
- Algorithm/validation/sampling protocols
- Frequency of observations
- Applications/mandates/users supported
- Data availability
- Data distribution mechanisms
- Website/links