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Council of Italy Meteorological and Hydrological Institute

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# **Day 5 - 19 November '21**

# AMENITY, RECREATION AND AQUACULTURE

PrimeWater Multi-User Panel Stakeholders week (15-19 Nov)

How to repurpose satellite-derived water quality data and forecasts into water industry intelligent services.

#### **ABOUT THE MULTI-USER PANEL**

The purpose of the MUP is to serve as an international panel of users providing expert feedback on Earth Observation (EO)-enabled services developed or extended in the context of PrimeWater and participate in the co-generation process itself through dialogue.

#### THE OBJECTIVES OF THE MUP STAKEHOLDERS WEEK

The main objectives of this workshop will be: (a) to provide an overview and update on the services that PrimeWater can offer to participants; (b) to understand how different sectors are using EO service to address issues such as Extreme hydrological events (EHEs) and harmful algal bloom (HAB) events and (c) to discuss the added value of PrimeWater products when addressing these issues.

# **Useful links for Day 5**

- GroupMap activity access the GroupMap here
- User preferences for Earth Observation services access the survey here
- Mentimeter
  - o 1<sup>st</sup> mentimeter: https://www.menti.com/3bnm8mpb28
  - o 2<sup>nd</sup> mentimeter: https://www.menti.com/vbbzh6y9gr

# **AGENDA**

# **SESSION 1**

19 November, 13:00 – 13:45 GMT

- Welcome and introduction Samuela Guida, IWA
- Intelligent water services for Amenity, Recreation and Aquaculture Eva Haas, EOMAP
- Short to medium term forecasting of water quality for operational applications: opportunities and limitations *Evangelos Romas*, *EMVIS*
- Q&A with audience -all

#### Mini-break

# **SESSION 2**

19 November, 13:45 – 14:30 GMT

GroupMap activity with the audience and moderated discussion

#### Panelists:

- Jennifer Dorton, SECOORA
- Merrie Beth Neely, GEO AquaWatch
- Emily Smail, NOAA
- Kerstin Stelzer, Brockmann Consult

#### Mini-break

# **SESSION 3**

19 November, 14:30 – 15:15 GMT

Introduction to survey "User preferences for Earth Observation services" - Lara Agnoli and Nikos Georgantzis, BSB

**Closing Remarks** 



#### Merrie Beth Neely, GEOAquaWatch

Dr. Neely serves as GEOAquaWatch Secretariat's Scientific Coordinator employed as a NOAA-affiliate contractor through Global Science and Technology, Inc. working for NOAA's Satellite Oceanography and Climatology Division. She is a certified program manager, phytoplankton ecologist, and oceanographer holding advanced degrees from University of Tampa and University of South Florida. With a background in harmful algal blooms and coastal, estuarine, and riverine water quality monitoring; she brings considerable knowledge of field sampling and laboratory analysis experience; including sensor operation and maintenance, managing big data, biological and nutrient water quality laboratory and observatory management, and interdisciplinary research program leadership.



#### **Jennifer Dorton, SECOORA**

Jennifer Dorton is SECOORA's Deputy Director. Jennifer is responsible for overseeing the development of SECOORA's updated regional observing plan, managing Data Management and Communications, coordinating SECOORA's Principal Investigators, and growing our observing system. Jennifer has over 13 years of experience leading grant funded programs and projects at the University of North Carolina Wilmington (UNCW). She has served as a Principal Investigator (PI) on the SECOORA funded UNCW Coastal Ocean Research and Monitoring Program and as the lead PI on the Marine Weather Portal web development project. Jennifer has worked as the Coordinator for NOAA teams such as NOAA in the Carolinas and the North Carolina Sentinel Site Cooperative. Jennifer and her husband, Jay Styron, also own and operate Carolina Mariculture Co., an oyster farm where they use off-bottom mariculture techniques to farm raise oysters.



#### **Kerstin Stelzer, Brockmann Consult**

Kerstin Stelzer holds a Diploma in Physical Geography from University of Trier, Germany (1998). She works for Brockmann Consult since 2000 as a remote sensing specialist and is leading the Geo-Information Department since 2006. Her research and working fields are ocean colour and lake water colour as well as intertidal flat and wetland remote sensing. Her work is interfacing scientific work and the design of user products for various applications and operational use. Kerstin is managing several projects and is service manager of the lake water quality products within the Copernicus Global Land service.



#### **Emily Smail, NOAA**

Emily Smail is the Executive Director of the GEO Blue Planet Initiative and a Senior Faculty Specialist at the NOAA-University of Maryland Cooperative Institute for Satellite Earth System Studies. She also serves as the co-chair of the GEO AquaWatch Initiative's outreach and user Engagement working group and supports outreach and education efforts for the NOAA CoastWatch/OceanWatch program. Previously, Dr. Smail worked in informal science Education at the Waikiki Aquarium and policy in the United States Senate through the Knauss Marine Policy Fellowship Program. She received a B.S. in Biology from the Pennsylvania State University and a Ph.D. in Biology from the University of Southern California where her research focused on water quality and marine biogeochemistry.

# **Presenters from PrimeWater Consortium**



#### Samuela Guida, IWA

Dr Samuela Guida is the IWA Strategic Programmes and Engagement Manager. She is responsible for coordinating IWA Strategic Programmes as well as projects, initiatives, and Communities of Practice related to the programmes. She is also responsible for the identification of and engagement with key global and regional partners who are aligned with IWA's strategic goals and for coordinating and supporting the functioning of IWA members' groups — working closely with member engagement team, regional offices, communications team, and other key staff at IWA. She has an academic background in Industrial Biotechnology and a Master's Degree from the University of Padova in Italy. In 2020, she obtained her PhD from Cranfield University (Water Science Institute, UK) with a Thesis on the removal and recovery of nutrients (ammonium and phosphorus) from wastewater through the ion exchange (IEX) process at demonstration scale.



#### **Eva Haas, EOMAP**

Eva Haas is originally from Munich, Germany, with Austrian roots and is a passionate traveller. In the past 15 years she has led and managed projects and teams at international institutions such as the European Commission and in the private sector, which allowed her to build international networks and bring satellite-derived services to the market. Her passion for mapping and monitoring aquatic environments and connecting with people was a strong motivation to become part of the EOMAP team in 2020. EOMAP is the leading service provider of global satellite-derived aquatic information. As Head of Strategic Accounts she demonstrates the value of maritime and inland water solutions to commercial and governmental clients. She believes that "the best reward is to get feedback that the Earth observation solutions have increased our customer's efficiency, saved costs and lowered their project risks."



#### **Katharine Cross, IWA**

Katharine has extensive experience in the water sector from global to local scale with a focus on climate resilience and adaptation, nature-based solutions, water-energy-food nexus, water governance and the digitalisation of the water sector. She has worked in Asia, Africa, Europe, North America, and South America with NGOs, government, and the private sector. She previously worked for the International Water Association developing and managing strategic programmes. Katharine is currently working for a number of organisations including IWA on climate-smart utilities, water wise cities and digital water, as a senior advisor for Water-Cities supporting the transition of cities towards sustainable water management, and as the Mekong Coordinator for the Australian Water Partnership.



#### **Apostolos Tzimas, EMVIS**

Apostolos Tzimas is the Managing Director of EMVIS SA (http://emvis.gr/). He has a deep knowledge of the water sector with particular focus on water infrastructure planning, development and management, working closely with public and private sector water bodies. In the field of water resources management, he provides specialized consultancy services and advisory work to competent central and regional authorities for issues related to the implementation of EU water related legislation. He is acting as technology purveyor in digital transformation projects in the water sector. He has co-ordinated the EU funded Research & Innovation project SPACE-O (http://www.space-o.eu/). Currently he is the co-ordinator of the EU flagship project for international cooperation of EU Copernicus Program PRIMEWATER (https://www.primewater.eu/) and IFOS Project (http://emvis.gr/index.php/ifos) funded by Innovation Norway. He is active member of authoritative professional associations (IWA, CIWEM, ISWA, IEMSS) and Technology Platforms (Water Europe).



#### **Evangelos Romas, EMVIS**

Evangelos Romas is a researcher in the field of hydraulic and hydroecological modelling. He is Head of the Research and Development unit of EMVIS SA with significant experience in 3D hydrodynamic and water quality models for surface water bodies, process simulation, automated calibration and data assimilation techniques, using satellite imagery and in-situ monitoring datasets. He has deep knowledge of major programming stacks and database systems, and professional experience in developing and applying customized ICT solutions in the field of water resources for the implementation of Environmental and Water related Directives. In recent EU-funded collaborative projects (SPACE-O, PrimeWater, IFOS), he has coordinated the architectural design and development of an operational platform for real-time forecasting of water quality characteristics in inland and coastal water bodies.



#### Lara Agnoli, BSB

Lara Agnoli is Associate Professor of Wine Marketing and Economics at the Burgundy School of Business in Dijon, France. She holds a Ph.D. in Wine Economics and Rural Development from the University of Florence, Italy. Her research activity is mainly focused on the analysis of consumers and customers' decision-making process, choices and behaviours.



#### **Nikos Georgantzis, BSB**

Nikos Georgantzis studied Economics at the University of Piraeus and he has an MPhil from the University of Wales (UC Swansea) and an MA and PhD from the European University Institute (Florence, Italy). He is Professor of Experimental Economics and Director of the Wine and Spirits Business Lab at the School of Wine and Spirits Business, (Burgundy School of Business) in Dijon, France. He is a founding member of the academic Spinoff, Experimentia Consulting SL, which has been awarded two nation-wide prizes (2003 and 2006) for business creation proposals. For over 10 years, he has been the director of two PhD programs (Castellón and Granada) and has been a visiting professor in various universities (Crete, Cyprus, Paris II, Economics U. in Bratislava, Chapman, Autónoma de Colombia, U. Nacional in Bogotá, etc.). He has acted as a principal investigator for over 20 research projects funded by national and private organizations in Spain, the UK, France and the EU. Research interests range over a broad spectrum of topics, including Wine Economics, Economic Psychology, Microeconomics, Industrial Organization, Behavioural Economics, Labour Economics, Environmental Economics and International Economics, among others.