**3rd Blue Planet Symposium
*The Role of the Oceans in Earth's Life-Support System*
June 6-8, 2017, USA**

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| **Symposium Scope and Objectives**The 3rd Blue Planet Symposium will be unique in addressing emerging societal information needs. Climate change is happening now and impacting the ocean to an alarming extent. Changes in the oceans are increasingly visible. Sea level rise is happening now. Investments need to be made to address the challenges associated with these changes. Science needs to provide sound guidance to decision makers so that they can make informed decisions on how to address the risks and utilize the opportunities these challenges come with. Therefore, the key focus of the symposium will be on meeting societal information needs resulting from the important role the oceans play in Earth's life-support system and the challenge of minimizing the impacts of our activities on the oceans while utilizing the resources of the oceans to meet our needs. The symposium will address four specific subthemes:1. **The changing oceans:** Climate change involves major changes in the oceans, including changes in ocean circulation and dynamic sea surface topography, a changing role in the global climate system, sea level rise, and a potentially ice-free Arctic ocean. It is important to understand the current changes and their potential future developments and impacts on the Earth's life-support system from local to global scales.
2. **Threats from pollution, warming and acidification:** The health of marine ecosystems and their productivity are exposed to threats from pollution, the warming of the oceans, and an increasing acidification. The current and future impacts of these threats on the marine biosphere and beyond, including the impacts on human societies, need to be understood, monitored, and ways to limit the threats need to be developed.
3. **Processes and life at the Interfaces with the oceans:** The oceans are integrated in the global system of systems with many interdependencies between them and the land and the atmosphere. There are many potential cascading effects, leading from disturbances and changes in one system to large impacts in the other systems. Therefore, understanding the processes on the interfaces between oceans, land and atmosphere is crucial in order to take interdependencies into consideration and avoid as far as possible cascading effects.
4. **Sustainable use of ocean resources:** Human well-being depends on a wide range of ocean resources and the economic activities that are based on using in the oceans in various ways are numerous. The changing oceans will impact humanity's use of the oceans and provide new opportunities that need caprogreful considerations. The impacts of these activities on the oceans need to be taken into account and approaches that meet our needs while safeguarding the functioning of the oceans in the Earth’s life-support system need to be developed.

The 3rd Blue Planet Symposium will provide the forum for a discussion of the science in these four subthemes and the research and monitoring needs resulting from the societal information needs. Identifying the “essential ocean variables” (EOVs) that need to be monitored in order to address the urgent scientific questions related to the societal challenges in the four subthemes is an important step towards an observing system as a basis to generate the knowledge needed by society. In a number of ocean science communities, sets of EOVs are agreed upon based on available capabilities and expertise. Equally important is a process that starts from the societal benefits and goals and identifies the space in which the EOVs sit, and the symposium will consider a road map towards such a process. Other questions to be addressed at the symposium include: Which of the EVs are measurable? Which of them could be measured if technology would evolve? The identified science, research monitoring and information needs will then be used to identify potential pilot and prototype projects for Blue Planet to focus on in the coming years. The symposium will also be a platform for the participating communities to exchange information on their activities related to observing, monitoring, modeling, and forecasting of the oceans and to explore synergies and new opportunities for collaboration across community and disciplinary boundaries. The specific objectives of the symposium related to community development are to:* Provide a forum for the ocean research and monitoring communities to interact with users;
* Explore cross-cutting issues and strengthen collaborations across groups and disciplines;
* Ensure the coordination of the Blue Planet Initiative with relevant communities.

**ANTICIPATED OUTCOMES**The symposium is expected to result in tenable outcomes relevant to the monitoring, analysis, and research activities in the participating communities. This is a working meeting with sufficient time for significant participant interactions. Specifically, it is expected that: |

* The Symposium Report will summarize the state-of-the-art related to the four subthemes and identify emerging information, research and monitoring needs;
* There will be enhanced and new joint, issue-based research activities;
* Potential pilot and prototype projects for Blue Planet will be identified;
* Linkages with new communities and users will be developed.

#### OVERVIEW OF SESSIONS

During the first two days, the program will include sessions addressing the four subthemes of the symposium, that is,

* Sustainable use of ocean resources
* Threats from pollution, warming and acidification
* The changing oceans
* Processes and life at the Interfaces with the oceans

The last day of the symposium will include parallel working sessions addressing the four thematic focus areas of Blue Planet activities:

* Services for Coastal Communities
* Healthy Ecosystems and Food Security
* The Blue Economy
* Maritime Awareness

Each theme working session should aim to identify potential prototype and pilot projects for Blue Planet based on the information gleaned on the role of the oceans in Earth’s life support system from the day 1 and 2 sessions.

#### SCHEDULE

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| **Date** |

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| **Time** | **Activity** |

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| MondayJune 5, 2017 |

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| 08:30-09:00 | Registration |
| 09:00-18:00 | Pre-Symposium Workshops and Meetings, possible Steering Committee and/or Implementation Board Meetings |

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| TuesdayJune 6, 2017 |

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| 08:30-09:00 | Registration |
| 09:00-09:45 | Opening Session |
| 09:45-11:00 | Session 1: The Changing Oceans |
| 11:00-11:20 | Coffee Break |
| 11:00-13:00 | Session 1 Continued |
| 13:00-14:00 | Lunch |
| 14:00-15:30 | Session 2: Threat from pollution, warming and acidification |
| 15:30-16:00 | Coffee Break |
| 16:00-18:00 | Session 2 continued |
| 19:00-21:00 | Symposium Dinner |

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| Wednesday June 7, 2017 |

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| 09:00-11:00 | Session 3: Processes and life at the Interfaces with the oceans |
| 11:00-11:20 | Coffee Break |
| 11:00-13:00 | Session 3 Continued |
| 13:00-14:00 | Lunch |
| 14:00-15:30 | Session 4: Sustainable use of ocean resources |
| 15:30-16:00 | Coffee Break |
| 16:00-18:00 | Session 4 continued |

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| ThursdayJune 8, 2017 |

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| 09:00-11:00 | Four parallel sessions on identification of Blue Planet projects |
| 11:00-11:20 | Coffee Break |
| 11:00-13:00 | Four parallel sessions on identification of Blue Planet projects |
| 13:00-14:00 | Lunch |
| 14:00-15:30 | Four parallel sessions on identification of Blue Planet projects |
| 16:00-18:00 | Summary and Closing Session |

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| FridayJune 9, 2017 |

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| 08:30-09:00 | Registration |
| 09:00-18:00 | Post-Symposium Workshops and Meetings, possible Steering Committee and/or Implementation Board Meetings |

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#### PARTICIPATION

The Workshop is open to scientists, researchers, students and stakeholders engaged in monitoring, understanding and managing the oceans. Preference is for those actively engaged in the communities who are jointly organizing the event and those who would like to get engaged.

#### COMMITTEES

**Program Committee:**

* Blue Planet Initiative: Sophie Seeyave
* Coastal Zone Community of Practice: Paul DiGiacomo, Hans-Peter Plag
* Research Coordination Network "OceanObs": Jay Pearlman
* Group on Earth Observations: Douglas Cripe
* GODAE-Oceanview: Paul DiGiacomo
* IGBP-SCOR Integrated Marine Biogeochemistry and Ecosystem Research (IMBER): Eileen Hofmann
* CSIRO: Andy Steven (2nd Blue Planet Symposium Chair)
* GOOS: Tim Moltmann, Chair GOOS Regional Council, University of Tasmania
* MBON: Gabrielle Canonico
* CEOS: Paul DiGiacomo
* IEEE OES: Jay Pearlman, Hans-Peter Plag
* UW: Jan Newton
* IOCCP: Maciej Telszewski

**Organizing Committee:**

* Emily Smail
* Paul DiGiacomo
* Jay Pearlman
* Hans-Peter Plag
* Jonathan Hodge
* Sophie Seeyave