

Blue Planet Symposium, Day-3 Break-out Session

C5: Ocean Climate & Carbon

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The goal of the Ocean Climate and Carbon component of Blue Planet is to advance the development and implementation of the ocean contributions to the observation systems for both Climate and Carbon, and in particular to address the issues and synergies across the climate carbon interface for the marine environment.

- Links with:
 - GCOS Implementation Plan
 - GEO Carbon Strategy
- Interface between climate & carbon communities? Which communities: implementers or policy users?
- Interface between space and in-situ observation
- Ensure sustained observations (see framework for Climate Monitoring Architecture)
- Other than the IPCC, what are the other assessment bodies and what are the political mandates e.g. WOA, CBD?
- A niche for BP to process and provide information
- What are the mechanisms to put GEO in a position to help establish an adequate observational basis. Implementation agencies are the ultimate responsible
- How can we develop an adequate information system framework/portal service?
- Link (through GHRSSST) for SST in-situ/satellite cross calibration of radiometer data (formats, etc.)
- GEO should support existing efforts for data interoperability and network linking
- Critical to understand who is leading these efforts in
- Detailed project scope and requirements for data, information and services
- Are there ECV's which do not cover the carbon climate spectrum? Relevant and missing EOVS will be part of new GCOS ECV's IP.
- Promoting interdisciplinary of data archives. How to link existing archives and data networks.

- Identification of end-users:
 - At national policy level
 - Industry & Services relying on bio-geochemical information
 - Fisheries and bio-diversity managers (downstream) and bio-geochemical modellers (upstream)
- Global Carbon Project
- Observational product: Ocean surface Carbon in-situ data
- How can we serve large observational platforms scale synthesis variables
- Scientific & R-D community – impact on pH changes on organisms

- Warning system for bio-geochemical changes in oceans Carbonate Systems (currently with only modelling, need for observational data). From local to regional to global?
 - Support for SOCCOM type programs for producing a Global ocean acidification map! Need for GEO support through BP – engagement and advocacy.
 - Example of US NW service – check what their user needs are.
 - IOC2 conference in Hobart: good place to check user needs and requirements
 - Identify which areas and which activities are at most risk?
 - Where do we look for the funding: EU 2020, DB, WB (long term)? Industry partner (short/medium term), ESA?
 - Running workshops to specifically define services based on user requirements.
 - We need to document existing use cases, what is happened, what was done, etc.
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- Move from Chl-a to Particulate organic matter and dissolved organic matter products: what can be done?
 - IOCCP and GOOS WG working on EOVS: they confirm need for particulate & dissolved organic matter.
 - Observational platform still not developed even though product is highly desirable. Raise awareness and put forward a process/framework to make this platform grow by 2019.
 - How can BP be involved? Is there an opportunity to create new EO products, calling on new sensors.
 - IOCCG looking at that, checking consistency at global level.
 - Emphasise: Not enough interaction between in-situ and satellite community: BP to play a role. Complementarity is important. E.g. Argo and Jason
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- Carbon budgets and carbon assessments – will the ocean continue acting as a major carbon absorbing mechanism. Efficiency of primary productivity of the ocean
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- Communication at a higher level – it's not just about data
 - Progress in sensor development and technology leaps is fundamental.
 - Properly invest in the data infrastructure (not creating a new one) to put together all of this data and to connect modellers to in-situ providers to users.