



Advancing Global  
Ocean Colour  
Observations

## Plenary discussion Seed Questions

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# Seed Questions



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Observations

- 1. We have many Ocean Colour Missions in the pipeline. 'Operational' ocean colour is about to become a reality for the next 20 years. How do we ensure more missions mean better science?**
- 2. How do we facilitate broader and routine/sustained utilization of ocean color data in user-driven applications?**
- 3. How can we characterize and reduce uncertainties in ocean colour measurements - in a dynamic context?** (*ie. pixel by pixel, look at temporal stability, BioArgo, high latitudes, land-sea/land-ice adjacency...*)?
- 4. How can we make greater and more rapid progress in developing a framework/model to generate and communicate/convey uncertainties to users?**
- 5. Better assimilation into better ecosystem models to deliver better biogeochemical and ecological forecasts.**
- 6. What are the land/water/ice interface observational requirements and what are the pressing science studies needed in ecosystem-biogeochemistry dynamics? Where are we in terms of modeling these areas?**
- 7. Ocean colour and earth observation synergy: making the most of other other optical sensors that aren't 'pure' ocean colour focused** (*eg dual-view atmospheric correction techniques using Sentinel-3, ocean dynamics and sub-mesoscale dynamics; coupling with SAR*).
- 8. Refining and enhancing the GCOS ocean colour Essential Climate Variables (ECV): Priorities and opportunities?**

## Target Requirements

<b>Variable/ Parameter</b>	<b>Horizontal Resolution</b>	<b>Vertical Resolution</b>	<b>Temporal Resolution</b>	<b>Accuracy</b>	<b>Stability</b>
Water Leaving Radiance	4km	N/A	Daily	5%*	0.5%
Chlorophyll-a concentration	30km	N/A	Weekly averages	30%	3%

\*this 5% requirement is specifically for the blue and green wavelengths