1. What are your primary applications of operational ocean color data and what applications do you anticipate in the future?

Brazil
a. Environmental monitoring for oil & gas activities in Brazil.
b. Fisheries and aquaculture activities; weather and climate studies and forecast.

China
The applications include to monitor the oceanic environments (water quality, red tides), to study climate change, to support fishery centres, to support oceanographers.

Korea
For the moment, the primary applications of operational ocean color data using GOCI is the ocean environment/disaster monitoring such as red/green tide, oil spill. Fishery ground information is planned to be served as operational ocean color data in the next 1 or 2 years.

South Africa
Water quality, HABs and phytoplankton dynamics, fisheries applications e.g. state of environment reporting and potential fishing zones, long term ecosystem characterisation. Integration with phys/eco models for HABS, coastal biogeochemistry…Implementation as part of GEO.

India
see Shailesh Nayak keynote. Potential fishing zones, water quality, HABs, eutrophication…

2. What quality do you (ideally) require from these operational ocean color data e.g. resolution, revisit, timeliness of data, other needs?

Brazil

Real-time, high spatial resolution, daily revisit, atmospheric/radiometric correction, direct downlink (and/or access to onboard recording in NRT).

China

The most important of the requirements is the accuracy of the satellite products. Different applications need other requirements.

Korea

Based on the experience of GOCI, ideal requirements for the operational ocean color data are;

- Spatial Resolution : 150m or better
- Temporal Resolution : every 30 minutes or better (acceptable req. is 1 hour)
- Spectral Resolution & Range : Hyperspectral, UV/VIS/IR
- Timeliness for data processing : 5 minutes or better after the data transmission from satellite

South Africa

<12 hr max availability of NRT data; suitability of products for eutrophic waters with dynamic errors; suitability of L2 data for further algorithm application i.e. appropriate AC with no coupled AC/in-water correction; availability of open source & modular processing software

3. Any suggestions as to how you envision the Agencies and the Community achieving these requirement goals, if not currently met?

Brazil

a. Facilitate the implementation of direct download in receiving stations around the world
b. Facilitate access to recorded data in NRT
c. Also process and keep available data with "scientific quality" (with all corrections applied) for research purposes
d. share algorithms, software and in situ data for cal/val of different missions.
e. Data centre integration (e.g. having mirrors)

China

Need to strengthen the cooperation between the agencies. It is an ideal to found a company to sell the same satellite sensors for all agencies.

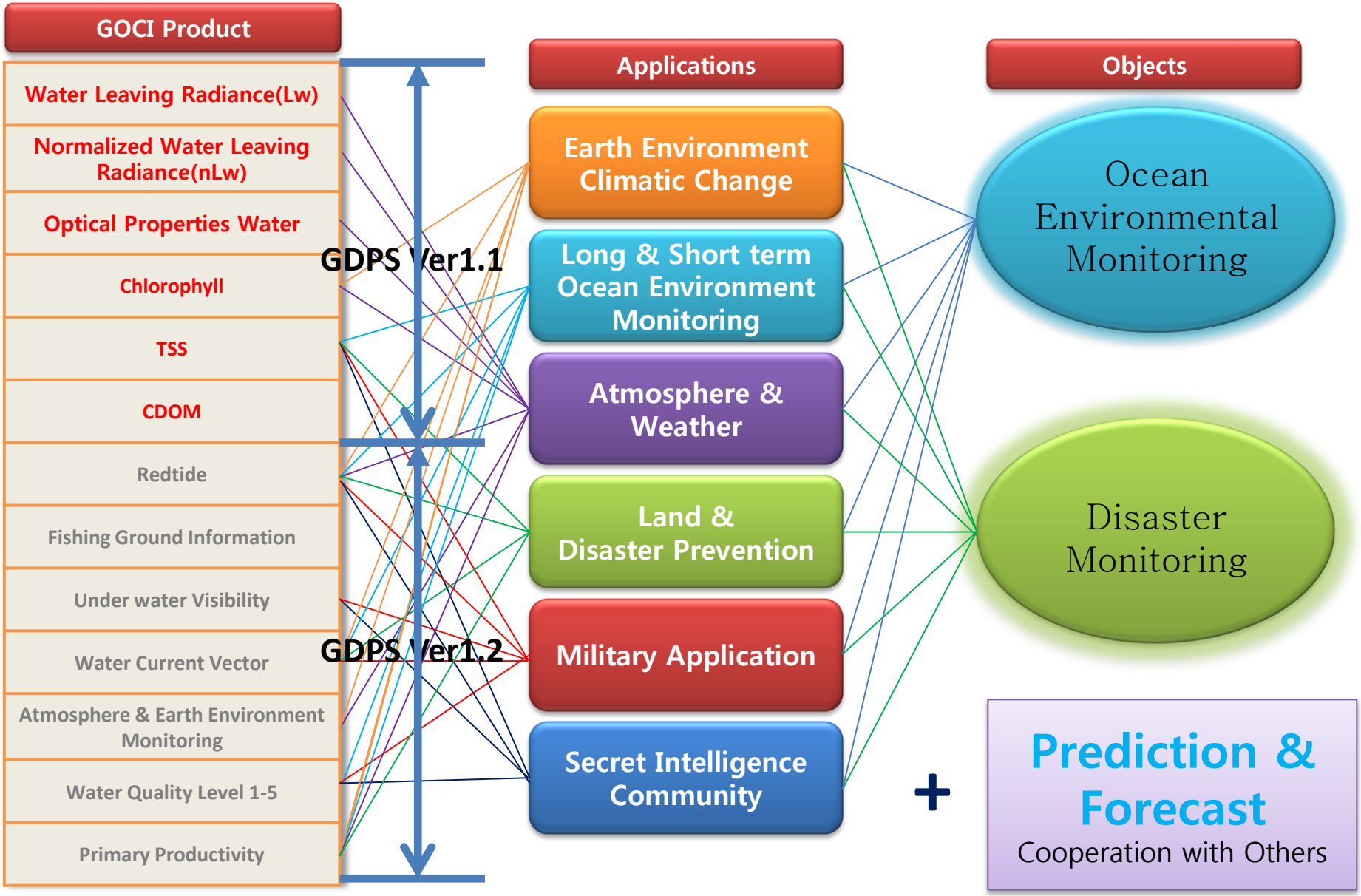
Korea

In order to fulfill the 'ideal' requirements, another data acquisition platform such as UAS(Unmanned Aircraft System) might be required. KIOST has a plan to develop a UAS (Unmanned Aircraft System) for operational ocean color data acquisition to cover the observation data gap between in-situ measurements and satellite based remote sensing.

South Africa

As for Brazil – empowering distributed users with appropriate processing software vital. Also need to create common platforms to lower activation barrier for acquisition, processing and effective use of sufficiently high quality validation data. IT for simple products from massive data sets

Mission of GOCI and GDPS version



무인항공기의 필요성

- 현재 위성관측과 현장관측간의 시공간적 관측 공백 크게 발생
- 관측 공백 해소를 위한 무인항공기 활용 필수

- 중장기적으로 무인항공기를 포함한 실시간 국가종합해양관측망 구축/운영 추진

- 위성 : 버스나 기차
- 유인항공기 : 택시
- 무인항공기 : 자가용

→ 마이카 시대 도래

→ 모니터링을 지도에 비유하면, 대축적(무인기)부터 소축적(정지궤도)까지 다양한 지도가 필요함