

**C4 Services for Coastal Zone
Blue Planet Symposium Break-Out Session
29 May 2015**

The Component has the goal to provide observation-based intelligence required for making informed decisions concerning the coastal zone.

- Global Coastal Zone Information System
- ~~Pilot Project for Area at Risk~~
- ~~Assess Climate Change impacts on island coasts using SAR data (from CEOS)~~
- Assess observational requirements for decadal forecasts of coastal local sea level variation
- Observational requirements for coastal water quality

I. Coastal local sea level

Need to assess observational requirements

Requirements came from city managers

Coastal managers need more accurate and informative information at 5-10 years

Can we give 5-10 year warning?

Do we have that predictive capability? At what lead time?

Need report to assess societal needs

Decision maker approach requires deterministic curve

Best to use probabilistic approach – need to explain to decision makers

Multiple components and time scales contributing; Sea Level stations only monitor response

Biggest uncertainty is ice melting rates (need cryosphere presence)

Need 'smoke detector' to deal with surprises

Need monitoring service to convert 'surprise' to probabilistic assessment

Can we focus on monitoring causal components

Need Risk assessment that balances risk and probability

Has to be locally individualized

Community effort – open source framework from sea level community (or community engaged in monitoring processes leading to Sea Level Rise)

What's different about this – an operational monitoring sea level service based on evaluation of individual process assessment components (community validated)

Develop Prospectus

- Identify Need

- Describe Societal benefits

- State Observational requirements

II. Coastal Water Quality (More mature - Summit 3 weeks ago)

Towards an inland and coastal and water quality observing and forecasting service

Developing an Inland and Coastal Water Quality Community of practice

What can GEO provide re: integration

GEO – catalogue meta data about existing services (CZ info service?)

Differences between Coastal and Inland

Climatological analyses vs. near real time

Looking for opportunity for Coastal and Inland to work together

What is coordinated capability (TSM?)

Turbidity as pilot / simple / impactful

Requires demonstration of local importance

Validation easier and more accessible

Based on satellite but need to validate

Requires assessment and compilation of historical information that is not presently easy to access

Coastal Information system?

Need to do at local level – what can we bring to bear on this – ‘crowdsourcing’ at an institutional level

Create an incentivizing product

Multiple levels of Citizen Science apps

Needs accuracy/error evaluation

Working to build a Community of Practice and tools to support CoP

III. Global Coastal Zone Information System

Bidirectional information system

Interact with users

Co-design, co-creation, co-users

Integrated into one information system

GEO Information System of Systems

Workshops to come

Populating through study cases