

OP Future Plan – brief future vision statement by co-chairs, strategy review, executive committee introduction, OPST-OPOS interactions, ..

OPST Co-chairs

Future Outlook We can't ignore AI

- AI: We can't ignore But
- Numerical Model Ocean Forecasting systems will always be needed (reanalysis and hindcast nature runs for training data)
- Good observation bases are need too
- Short term predictions may be done with AI
 - Interesting Korea presentation yesterday CNN on Surface waves and currents
 - Meteorological communities evaluating and adapting AI forecast systems with various approaches
- AI capabilities will continue to grow
- Interesting approaches to use AI to improve numerical models (Bias correction, downscaling...)

Reanalysis Intercomparison

- White paper
- Looking for participation of groups in reanalysis comparison
- Timing with AI is fortuitous
- Include regional areas
- Intercomparison:
 - Various metrics
- Ensemble / multi model reanalysis?
- Will be helpful for ocean observing/monitoring groups
- Could leverage DCC regions

Communication

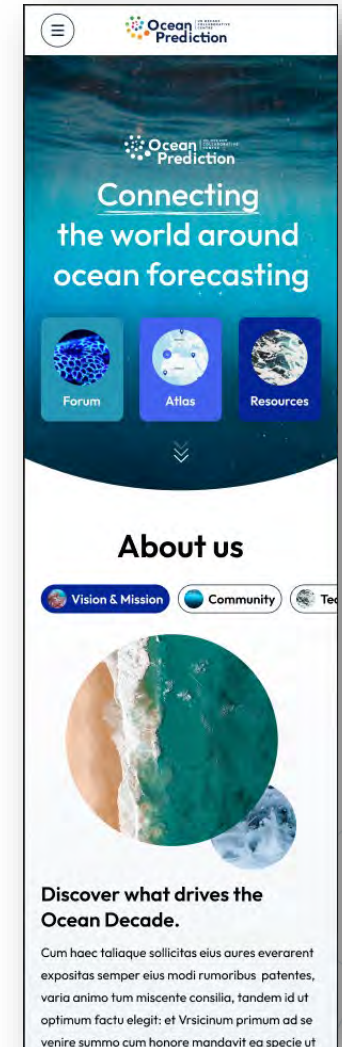
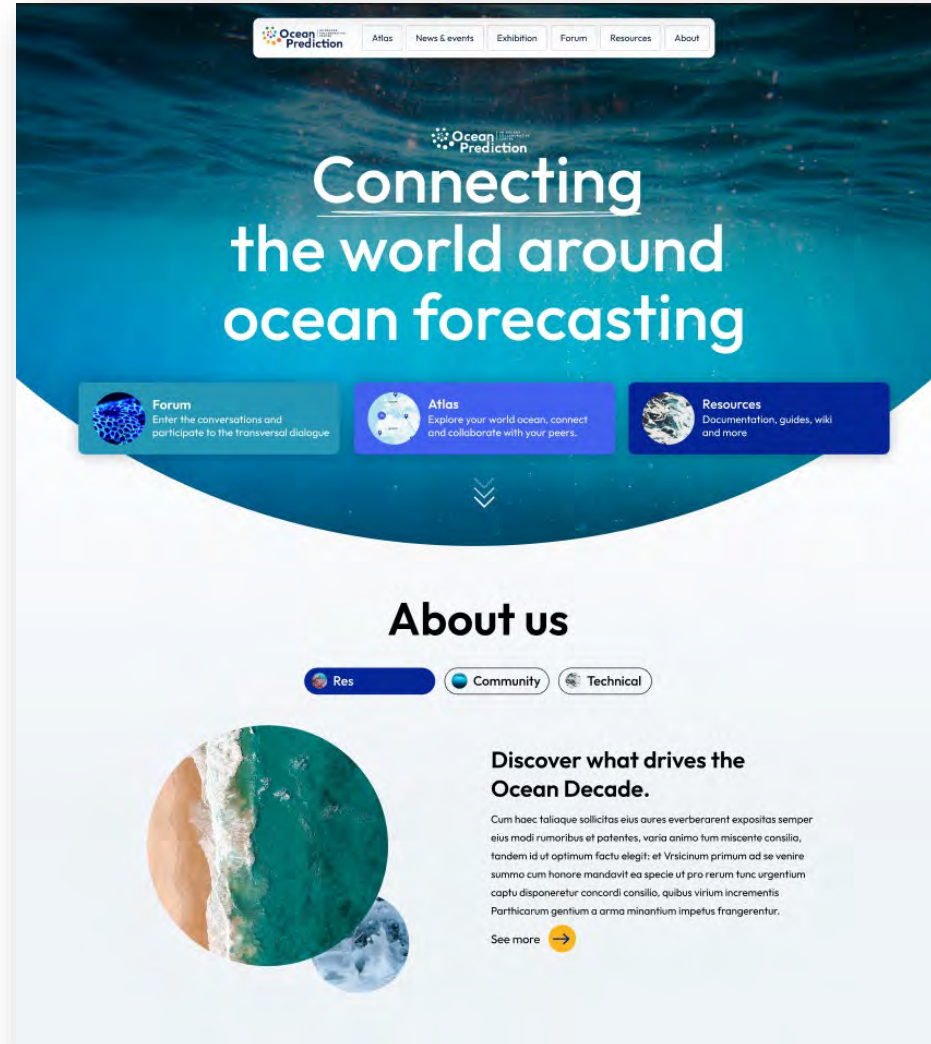
- Further exploit online seminar TT task teams and OPOS WG series
- Joint short online meetings: around
 - Blue Economy (example Economist Impact Collaboration)
 - Various joint meeting with Observation Codesign, Coast Predict when needed
- OPPOS-WG work via DCC Ocean Atlas:
 - Online presence awareness of our forecast systems
 - Lead by example for other prediction systems to join Atlas
 - How do we use OceanPredict web site and DCC tools?
- Newsletter approach from OceanPredict vis ForeSea and Regional DCC's
- OceanPredict 24: publication series of Forecast Systems



One main focal point

OceanPrediction DCC page: Home page

- To be officially launched before the end of the year
- Several tools:
 - Atlas
 - Forum
 - News
 - Resources
- Participation of the community vital

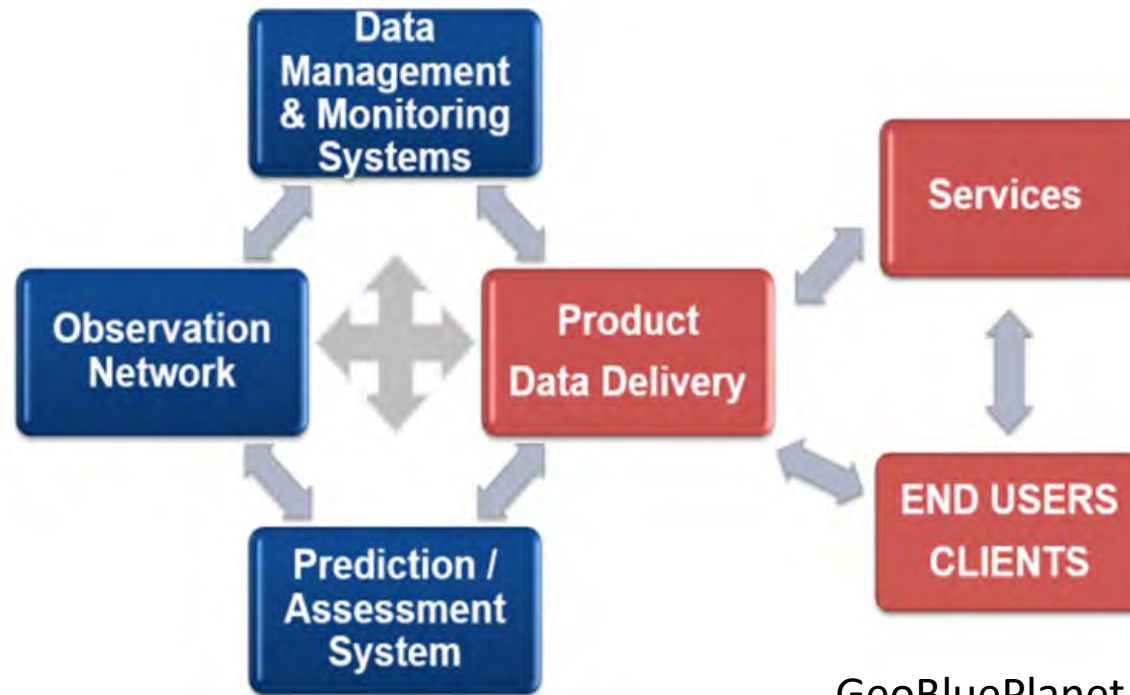


Stitching together for a seamless Value Chain in Ocean Decade

Architect: DCC

Encompassing: DITTO

GeoBluePlanet
Eumetsat, ESA,
CNES, space
agencies
GOOS
ARGO
ObsCoDesign



OPST, ForeSea

GeoBluePlanet



UNDOS Actities

UN DOS collaborations with other groups will strengthen links in the value chain

- SynObs strengthens link obs-prediction systems as those collaboration with OBScodesign
- ForeSea show cases, highlights , ocean forecasting (research, systems) and how it fits in OO value chain
- DCC provides framework, structure and infrastructure for whole value chain an important function for OP, ForeSea, SynObs....
- GEO Blue Planet and Obs. Sys. Co-design wishes to have discussion on specific tasks for collaboration with OP
- Connecting the value chain identified as a common task across decade partners
- ETOOFS provides accreditation of prediction systems
- OP- task teams advance research but also engage in Decade Programs covering the full value chain (CoastPredict)
- OP-OS WG capturing health and progress of forecasting systems , solving issues faced by forecasting systems



Task Teams (1)



Summary of task team activities from OPST meeting....

All task team co-chairs agree that interaction is necessary, all agreed to attend a one hour meeting once per quarter. In person meetings are planned this year (possibly in the framework of OP24) or the next.

OSEVAL-TT: activities are organized along the Synobs project, with clear objectives, and efforts to build links with all relevant UNDOS programmes and other OP task teams

DA-TT: New co-chair Ann Kristin Sperrevik. Issue around raising “intellectual capacities”, attracting young people in the field of data assimilation for operational oceanography systems (a degree/formal training online for DA was suggested). A lot of activities around online seminars and training.

MEAP-TT : New co-chair Liuqian Yu. Discussions are taking place to collaborate around existing projects objectives, develop common platforms and tools, explore the feasibility to forecast higher trophic levels and ecosystems. Regular online seminars are organized.



Task Team (2)



COSS-TT : New co-chair: Alexander Kuparov. 140 online seminars held since 2019, very good platform to exchange on scientific results Interest from estuaries community, increasing number of people interested in near shore processes, storm surge. COSS-TT is very much involved in Coastpredict.

New focus areas:

- Observing infrastructure in the coastal seas, integration with models and with forecasting
- COSS modelling and seamless integration with larger-scale estimates
- Land-Ocean Continuum: integration of coastal ocean and estuaries/deltas/wetlands, coastal cities
- Coastal projections & scenarios, coastal vulnerability



TASK TEAM (3)



Summary of task team activities from OPST meeting

IV-TT: Issue CLASS 4 server, comparing Class4 with system evolution (need a timeline of system status from OPOS), **Class 4 activity needs to transit from IV-TT to operational centers , approach options**

CP-TT: Good forum to discuss challenges in coupling, DA-CP TT joint 2025 meeting, themes: tropical cyclones, impact of initial conditions on coupled systems, diurnal SST cycles

OPOS-WG : Leveraging DCC Atlas infrastructure for reporting, system reporting important (see note from IV-TT), tracking system improvements/growth/end use... Establishing best practices.

Note: All groups trending for routine online seminar series

ForeSea – The Ocean prediction capacity of the future

Vision: Strong international coordination and community building of the ocean prediction capacity for the future.

Overarching goals

- Improve the science, capacity, efficacy, use, and impact of ocean prediction systems.
- Build a seamless ocean information value chain, from observations to end users, for economic and societal benefit.

=> **make ocean prediction science more impactful and relevant.**



Projects-Programs within the Decade underway, in development or needed

- A summary of our Decade involvement and plans may be useful along with benefits/outcomes
 - SynObs
 - CoastPredict, ForeSea - Observation Codesign, Exemplars
 - Best Practices for Ocean Prediction System Reporting. OPOS-WG
 - Development of ORL index for ocean forecast systems: DCC, OPOS-V



What does success look like 5 years from now ?



Starting idea:

- **A well populated and useful Atlas of Operational Oceanography prediction systems**
- **Access to ocean forecasts by anyone who has a need via Digital Twin**
- **The ability to conduct Rolling Reviews of the operational oceanography value chain.**
- **An established and used operational oceanography framework**
- **Continued improvement of prediction systems and the science behind it, but with faster more efficient science to service times**

What does success look like 5 years from now for you ?



Going Forward

- A ton of opportunity and alignment of groups for OO Value Chain is enabled by the UN Decade of Ocean Sciences
- Need to be efficient with our efforts:
 - Well informed about activities we can leverage
 - Know what we want from a collaboration, or program
 - Know where we can support other groups and advertise it
 - DCC will help with being efficient
 - Overall framework
 - Assembling the groups to work as one
 - Keep OPPO and your task team informed of relevant activities...

New ideas

- AI task team for OPST?
- Activity for metrics for evaluation/presentation of Ensemble forecast systems
- CP-TT: show case evidence of coupling impact on ocean
- Long term efforts in training legacy of needed fields
 - Book examples
 - White papers
 - Evergreen ETOOFS guide
 - INCOIS volunteering to host Summer school 2026 (recruits new scientist)
 - IOC has a facility in India leverage IOC online education tools
 - Summer school creates lecture material
 - Online degree in DA
 - Summer school could create year after year additional summer schools in different regions with same material
- BRIC ocean summer school in 2025 china, 2014 in India?

Misc

- Some "coordination" with ocean modeling groups: MOM6, NEMO would be great. Coordination on summer schools/webinars/training etc
- A webinar series on CROCO is available from 13-17 November from South Africa. Contact is J. Veitch